CCR COMPLIANCE GROUNDWATER MONITORING AND CORRECTIVE ACTION ANNUAL REPORT DUNKIRK LANDFILL

Prepared for:

Dunkirk Power LLC Dunkirk Generating Station Dunkirk, New York

Prepared by:



Aptim Environmental & Infrastructure, LLC Pittsburgh, Pennsylvania

January 2021

Table of Contents_

Γables		. ii
igures	5	. ii
Append	dices	. ji
ve Sur	mmary	i۱.
Introdu	uction	. 1
Dunkir	k Landfill	. 3
2.1	Groundwater Monitoring Network	. 3
2.2	2020 Data Collection	. 3
2.3	Alternate Source Demonstration.	. 4
2.5	2020 Corrective Actions	. 4
2.6	2021 Projected Activities	. 4
	Appendive Sur Introdu Dunkir 2.1 2.2 2.3 2.4 2.5	2.2 2020 Data Collection

Tables

Figures

Appendices

List of Tabl	List of Tables									
Table 1 Table 2	Dunkirk Landfill Groundwater Analytical Data Summary—Appendix III Constituents Dunkirk Landfill Groundwater Analytical Data Summary—Appendix IV Constituents									
List of Figu	ıres									
J										
Figure 1	Dunkirk Landfill—Location and Groundwater Monitoring System Map									
List of App	List of Appendices									
• •										
Appendix A	Lithium—Alternate Source Demonstration (Dec. 2020)									

Executive Summary

In response to the newly adopted Part A elements (effective September 28, 2020) of the Coal Combustion Residuals (CCR) Rule (or Rule), this Executive Summary has been incorporated into the annual report per the specific provisions as codified in Title 40 Code of Federal Regulations (CFR) §257.90(e)(6). These provisions require that an up-front overview of the current status (covering the immediately preceding calendar year) of groundwater monitoring and corrective action programs be provided in a concise and focused manner for each CCR unit at the facility. Accordingly, the following paragraphs document the respective groundwater monitoring status (for Calendar Year 2020) of the Dunkirk Landfill at the Dunkirk Generating Station, owned by Dunkirk Power LLC. Tables, figures and/or appendices referenced in the discussions below are included at the end of the report and further support the text (Section 2.0) in the main body of the report.

As shown on Figure 1, the Landfill maintains a CCR groundwater monitoring network comprised of five wells, including one upgradient location (Well BR-14-UG) and four downgradient locations (Wells BR-3-DG, BR-12-DG, BR-13-DG, and BR-20-DG). For Calendar Year 2020, the Landfill entered and ended the period in the Assessment Monitoring Program. The Landfill has remained in Assessment Monitoring since being transitioned in early-2018 following confirmed statistically significant increases (SSIs) for several CCR Appendix III constituents, including boron, calcium, chloride, fluoride, and total dissolved solids (TDS) in the downgradient wells (see Table 1).

Assessment Monitoring events for the current period were conducted in February, May, and October 2020 (see Table 2). During the February event, lithium in downgradient Well BR-20-DG was measured at an elevated concentration, actually marking the first detectable level of lithium in this well since the inception of the CCR monitoring program. This result was subsequently identified as a statistically significant level (SSL) above the corresponding CCR groundwater protection standard (GWPS), and required notification provided to the New York State Department of Environmental Conservation (NYSDEC) in early-April 2020. A second consecutive elevated lithium concentration in Well BR-20-DG was reported during the May 2020 monitoring event, and shortly thereafter, notification was provided to the NYSDEC in early-July 2020 that an Assessment of Corrective Measures (ACM) had been initiated. Data and information gathered prior to and post-initiation of the ACM was continually evaluated and ultimately provided sufficient evidence to support development of an Alternate Source Demonstration (ASD).

The ASD was completed in early-December 2020, in lieu of the ACM, and showed that damming (caused by beaver activity) of the permitted receiving stream (Van Buren Bay Creek) had caused transient alterations in the flowpath of effluent (landfill leachate containing lithium) from the Sedimentation Basins at Outfall 002. The alterations resulted in ponding of the discharged effluent

and subsequent percolation of this accumulated backwater into the groundwater proximate to Well BR-20-DG. Corrective actions taken to circumvent the dammed area alleviated the ponding conditions, and the October 2020 Assessment Monitoring event showed a return to non-detect levels for lithium in Well BR-20-DG. Moving into 2021, and based on successful completion of the ASD, Assessment Monitoring at the Landfill will continue. Aside from lithium, other CCR Appendix IV constituents, including barium, fluoride, and radium remain elevated in several of the downgradient wells (see Table 2). A copy of the noted ASD is provided in Appendix A.

Summarizing the above discussion with specific regard to the new criteria established in §257.90(e)(6), the following elements are noted:

- §257.90(e)(6)(i) At the beginning of the current annual reporting period, the Dunkirk Landfill was operating under the CCR Assessment Monitoring Program.
- §257.90(e)(6)(ii) At the conclusion of the current annual reporting period, the Dunkirk Landfill remained in the CCR Assessment Monitoring Program.
- §257.90(e)(6)(iii) The following SSIs for Appendix III constituents were observed in the downgradient wells during the current annual reporting period:
 - Well BR-3-DG calcium and chloride
 - Well BR-12-DG calcium, chloride, and TDS
 - Well BR-13-DG boron, chloride, and fluoride
 - Well BR-20-DG boron, chloride, and fluoride.

This same general subset of Appendix III constituents triggered the Dunkirk Landfill into the CCR Assessment Monitoring Program in early-2018, wherein it has since remained.

- §257.90(e)(6)(iv) Lithium was measured at an SSL in downgradient Well BR-20-DG during the February and May 2020 monitoring events. This SSL was subsequently attributed to another source per the ASD completed in December 2020.
- §257.90(e)(6)(v) The Dunkirk Landfill is not currently subject to corrective action or any associated remedy selection under §257.97.
- §257.90(e)(6)(vi) The Dunkirk Landfill is not currently subject to corrective action or any associated remedy implementation under §257.98.

1.0 Introduction

Title 40 Code of Federal Regulations (CFR) §257.90 mandates that existing Coal Combustion Residuals (CCR) landfills and surface impoundments, also known as CCR units, be subject to groundwater monitoring and corrective action requirements as further detailed in §257.91 through §257.98. These requirements are part of the overall CCR Rule (or Rule) which was published in the Federal Register on April 17, 2015 and which became effective on October 19, 2015. Specific obligations for Owners and Operators of existing CCR units regarding the preparation of "Annual Groundwater Monitoring and Corrective Action Reports (Annual Report)" are outlined in §257.90(e)(1-5). The first Annual Report was completed on January 31, 2018, and provided information, per the Rule, to address the following aspects for the preceding calendar year:

- Document the status of the groundwater monitoring and corrective action program for the respective CCR units;
- Summarize key actions completed;
- Describe any problems encountered and actions taken to resolve the problems; and
- Offer a projection of key activities for the upcoming year.

At a minimum, the Annual Report must contain the following information to the extent applicable and available, and beginning with the current report, must also address the items contained in §257.90(e)(6) in the form of an Executive Summary:

- A map, aerial image, or diagram showing the CCR unit and all background/upgradient and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program;
- Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;
- In addition to all the monitoring data obtained under §257.90 through §257.98, a summary including the number of groundwater samples that were collected for analysis for each background/upgradient and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;
- A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels); and
- Any other information required to be included as specified in §257.90 through §257.98.

The Dunkirk Generating Station, owned by Dunkirk Power LLC, is a coal-fired power plant located in Dunkirk, New York. The facility was mothballed and ceased electric generating operations in early-2016, subsequent to the effective date of the Rule. The Rule applies to this facility due to the management/disposal of CCR materials resulting from the previous coal combustion activities. Accordingly, the Station's captive disposal site, located in Pomfret, New York and identified as the Dunkirk Landfill, has been designated as an existing CCR unit. This unit has a dedicated groundwater monitoring well network that meets the requirements of §257.91 with regard to number and appropriate locations of wells (certification previously provided under separate cover).

In summary, this fourth Annual Report has been prepared to comply with the requirements of §257.90(e) with respect to documenting the groundwater monitoring and corrective actions undertaken during Calendar Year 2020 for the Dunkirk Landfill CCR unit. This Annual Report and all subsequent reports thereto will be placed in the Station's operating record per §257.105(h)(1), noticed to the State Director per §257.106(h)(1), and posted to the publicly accessible internet site per §257.107(h)(1).

The previously prepared third Annual Report (covering the 2019 Calendar Year reporting period) was completed on January 31, 2020 and placed into the facility operating record on this same date. Subsequent notification to the State Director and posting to the publicly accessible website was completed on March 1, 2020.

2.0 Dunkirk Landfill

2.1 Groundwater Monitoring Network

The CCR groundwater monitoring system for the Dunkirk Landfill is comprised of five wells, including Well BR-14-UG (upgradient), and Wells BR-3-DG, BR-12-DG, BR-13-DG, and BR-20-DG (downgradient). The locations of the wells are shown on the attached Figure 1, along with depiction of the generalized groundwater flow direction in the area of the landfill. Each of these wells was already existing, and no new wells were added nor were any existing wells abandoned/replaced during the 2020 reporting period.

2.2 2020 Data Collection

Following its transition in early-2018, the Dunkirk Landfill continued in the CCR Assessment Monitoring Program during the 2020 reporting period. Accordingly, samples were collected and analyzed for Appendix III and Appendix IV constituents as required, during the February, May, and October monitoring events. Results from the 2020 sampling events are summarized in Tables 1 and 2, covering Appendix III and Appendix IV constituents, respectively. As shown in Table 2, lithium in downgradient Well BR-20-DG was measured at an elevated level (0.139 milligrams per liter [mg/L]) during the February event, leading to determination that the result represented a statistically significant level (SSL) above the site-specific groundwater protection standard (GWPS) of 0.05 mg/L. Specific notification of this finding was provided to the New York State Department of Environmental Conservation (NYSDEC) in early-April 2020. Lithium was again detected at an elevated level (0.266 mg/L) above the GWPS during the May 2020 event, and subsequent notification provided to the NYSDEC in early-July 2020 that an Assessment of Corrective Measures (ACM) was being initiated.

Information gathered prior to and post-initiation of the ACM ultimately provided ample evidence to support the development of an Alternate Source Demonstration (ASD). This ASD was successfully completed in early-December 2020, and identified beaver dam activity along Van Buren Bay Creek (the NPDES-permitted receiving stream for Outfall 002 effluent, containing landfill leachate) as being responsible for impeding flow and creating backwater areas that ultimately percolated into localized groundwater near Well BR-20-DG. With placement of temporary piping to circumvent the beaver dam to alleviate the ponded conditions, lithium in Well BR-20-DG returned to non-detect levels during the October 2020 monitoring event (see Table 2). Based on the successful ASD, and with several other Appendix IV constituents (barium, fluoride, and radium) remaining above background levels, the Dunkirk Landfill will remain in the CCR Assessment Monitoring Program in 2021.

2.3 Alternate Source Demonstration

As noted above, an ASD was successfully completed and resolved the observed SSL for lithium in downgradient Well BR-20-DG. This ASD, which was completed in early December 2020 and certified by APTIM's qualified professional engineer, provided the necessary documentation to confirm that the Dunkirk Landfill is not creating unacceptable impacts to groundwater in the context of the CCR Rule. A complete copy of the ASD is included in Appendix A.

2.4 2020 Monitoring Program Transitions

During 2020, there were no transitions between monitoring programs, with the Dunkirk Landfill remaining in the CCR Assessment Monitoring Program.

2.5 2020 Corrective Actions

During 2020, there were no corrective actions undertaken as specifically defined by the CCR Rule. However, measures were taken by Huntley Station personnel to address the ponded conditions in Van Buren Bay Creek created by the aforementioned beaver dam activities. This principally included installation of a temporary piping to circumvent the dammed area of the stream and restore the flowpath for effluent discharged from NPDES-permitted Outfall 002. Moving forward and as documented in the ASD, best management practices will be established to include monthly visual inspections of the relevant reaches of Van Buren Bay Creek to proactively identify and address potential beaver-related issues.

2.6 2021 Projected Activities

As noted, it is anticipated that Assessment Monitoring activities will continue for the Dunkirk Landfill during 2021, with continued review of Appendix III/Appendix IV constituent concentrations and comparison against calculated background and established groundwater protection standards.



Table 1 Dunkirk Power LLC Dunkirk Landfill – Groundwater Analytical Data CCR Appendix III Constituents

Monitoring Well	Date Sampled	Total Boron (mg/L)	Total Calcium (mg/L)	Total Chloride (mg/L)	То	otal Fluoride (mg/L)	Total Dissolved Solids (mg/L)	Sulfate (mg/L)	pH (S.U.)
VVGII	Sampleu		•	Calo	culated	d Background			
		0.270	135	5.1		0.22	699	254	5.79-8.38
	17-Nov-15	0.183	100	3.6	<	0.20	370	82	7.53
	9-Feb-16	0.200	89	3.4	<	0.20	435	78	6.56
	11-May-16	0.164	86	3.1		0.22	430	73	7.24
	30-Aug-16	0.185	87	3.6	<	0.20	470	87	6.98
	9-Nov-16	0.160	92	4.1	<	0.20	575	159	7.33
	14-Feb-17	0.175	108	4.3	<	0.20	480	133	7.17
	16-May-17	0.157	81	3.5	<	0.20	460	91	7.42
	15-Aug-17	0.228	111	3.4		0.21	505	128	6.42
BR-14-UG	2-Oct-17	0.154	103	4.0	<	0.20	570	147	7.10
(Upgradient)	9-May-18	0.121	80	2.5	<	0.20	385	51	7.29
	9-Oct-18	0.199	81	3.4		0.22	440	78	7.29
	11-Mar-19	0.254	97	3.0	<	0.20	465	62	7.37
	15-May-19	0.170	89	2.9	<	0.20	425	52	7.30
	1-Oct-19	0.190	91	3.5	1	0.23	500	95	7.31
	11-Feb-20	0.195	90	2.9	<	0.20	355	58	7.21
	13-May-20	0.164	92	2.8	<	0.20	420	67	7.38
	20-Oct-20	0.181	106	3.4	<	0.20	610	155	7.31
	17-Nov-15	0.098	141	45.9	<	0.20	545	159	7.23
	9-Feb-16	0.078	119	32.8	<	0.20	590	155	7.50
	11-May-16	0.098	111	23.0	<	0.20	560	137	7.16
	30-Aug-16	0.096	114	28.8	<	0.20	585	159	7.01
	9-Nov-16	0.088	115	84.9	<	0.20	705	152	7.13
	14-Feb-17	0.092	151	99.7	<	0.20	590	161	7.19
	16-May-17	0.062	113	58.1	<	0.20	580	150	6.55
BR-3-DG	15-Aug-17	0.135	139	69.4		0.27	600	158	6.98
(Downgradient)	2-Oct-17	0.095	134	77.4		0.38	700	165	7.32
(Downgradion)	9-May-18	0.068	145	34.9	<	0.20	585	147	7.12
	8-Oct-18	0.109	106	33.5		0.22	565	155	7.24
	11-Mar-19	0.097	157	24.3	<	0.20	600	166	7.48
	15-May-19	0.125	125	19.0	<	0.20	500	153	7.03
	1-Oct-19	0.150	140	26.2		0.25	635	153	6.99
	11-Feb-20 12-May-20	0.137 0.097	129 140	19.9 21.5	<	0.20	520 625	163 230	6.93 7.52
	20-Oct-20	0.097	132	25.5	<	0.20	665	191	7.32
	17-Nov-15	0.163	197	319	<	0.20	825	66	6.94
	9-Feb-16	0.104	177	263	<	0.20	920	151	7.00
	11-May-16	0.083	156	158	<	0.20	780	168	7.29
	30-Aug-16	0.173	166	329	<	0.20	1040	70	7.23
					<		1260		
	9-Nov-16	0.179	222	375	+	0.20		62	7.00
	14-Feb-17	0.117	241	422	<	0.20	1030	109	7.07
	16-May-17	0.068	160	299	<	0.20	1100	139	6.54
BR-12-DG	15-Aug-17	0.181	174	299	<	0.20	1030	83	6.99
(Downgradient)	2-Oct-17	0.163	196	421	<u> </u>	1.04	1250	70	6.94
	9-May-18	0.061	205	260	<	0.20	950	147	6.69
	8-Oct-18	0.169	171	382	<	0.20	1120	71	6.91
	11-Mar-19	0.073	244	213	<	0.20	920	154	7.16
	15-May-19	0.066	175	188	<	0.20	945	156	6.91
	1-Oct-19	0.142	241	323	1	0.29	1340	85	6.91
	11-Feb-20	0.092	181	224	<	0.20	785	147	6.78
	12-May-20	0.079	179	183	<	0.20	815	194	7.05
	20-Oct-20	0.176	196	395	<	0.20	1470	67	7.09

See notes at end of table.

Table 1 (cont'd) **Dunkirk Power LLC Dunkirk Landfill – Groundwater Analytical Data CCR Appendix III Constituents**

Monitoring Well	Date	Date (mg/L) Total Boron (mg/L) (mg/L) Total Chloride (mg/L) (mg/L) (mg/L)			Total Dissolved Solids (mg/L)	Sulfate (mg/L)	pH (S.U.)							
vveii	Sampled		Calculated Background											
		0.270	135	5.1		0.22	699	254	5.79-8.38					
	17-Nov-15	0.223	109	8.8	<	0.20	495	67	7.23					
	9-Feb-16	0.162	109	7.9	<	0.20	560	129	7.25					
	11-May-16	0.151	115	7.1	<	0.20	620	161	7.23					
	30-Aug-16	0.304	118	8.6	<	0.20	560	59	7.09					
	9-Nov-16	0.164	85	7.3	<	0.20	560	127	7.20					
	14-Feb-17	0.144	113	7.6	<	0.20	545	140	7.21					
	16-May-17	0.103	97	7.1	<	0.20	585	142	6.79					
DD 40 DO	15-Aug-17	0.274	103	8.4		0.21	500	60	7.03					
BR-13-DG (Downgradient)	2-Oct-17	0.240	96	8.4	<	0.20	565	41	7.19					
(Downgradient)	9-May-18	0.109	131	6.7	<	0.20	540	108	7.05					
	8-Oct-18	0.252	89	8.9	<	0.20	555	72	7.09					
	11-Mar-19	0.172	126	8.2	<	0.20	545	122	7.07					
	15-May-19	0.134	123	7.8	<	0.20	585	137	7.11					
	1-Oct-19	0.278	94	8.7		0.26	615	29	7.13					
	11-Feb-20	0.173	115	8.5	<	0.20	470	99	6.78					
	12-May-20	0.153	125	7.9	<	0.20	545	159	7.21					
	20-Oct-20	0.322	102	9.0		0.27	500	32	7.56					
	17-Nov-15	1.42	26	2.8	<	0.20	670	102	7.61					
	9-Feb-16	1.40	24	12.2		0.35	725	< 2.0	7.74					
	11-May-16	1.44	22	33.0		0.35	720	< 2.0	7.85					
	30-Aug-16	1.39	24	25.4		0.36	685	< 4.0	6.97					
	9-Nov-16	1.35	19	15.5		0.22	675	< 2.0	7.69					
	14-Feb-17	1.56	25	16.5		0.39	635	< 2.0	7.69					
	16-May-17	1.37	21	15.5	<	0.20	675	< 2.0	7.71					
DD 00 DO	15-Aug-17	1.42	25	38.3		0.41	655	< 2.0	7.58					
BR-20-DG (Downgradient)	2-Oct-17	1.24	22	21.6		0.42	720	< 4.0	7.32					
(Downgradient)	9-May-18	1.09	21	21.3		0.40	650	< 4.0	7.49					
	8-Oct-18	1.41	21	14.9		0.39	640	< 2.0	7.58					
	12-Mar-19	1.35	22	19.8		0.42	725	< 4.0	7.54					
	15-May-19	1.27	24	23.7		0.33	765	< 4.0	7.71					
	1-Oct-19	1.45	22	17.7		0.42	575	< 4.0	7.73					
	11-Feb-20	1.47	25	28.3	<	0.20	630	< 4.0	7.73					
	12-May-20	1.47	26	18.1		0.31	635	< 4.0	7.52					
	20-Oct-20	1.42	25	31.0		0.44	650	< 2.0	7.92					

- Notes:

 1. Cells with "<" are represented as non-detects. Values shown correspond to the laboratory reporting limit.
- 2. Background values based on statistical evaluation of initial eight rounds (Nov. 2015 through Aug. 2017) of groundwater sampling data for Well BR-14-UG.

Table 2 Dunkirk Power LLC Dunkirk Landfill – Groundwater Analytical Data CCR Appendix IV Constituents

	CCR Appendix IV Constituents															
		Total Antimony (mg/L)	Total Arsenic (mg/L)	Total Barium (mg/L)	Total Beryllium (mg/L)	Total Cadmium (mg/L)	Total Chromium (mg/L)	Total Cobalt (mg/L)	Total Fluoride (mg/L)	Total Lead (mg/L)	Total Lithium (mg/L)	Total Mercury (mg/L)	Total Molybdenum (mg/L)	Total Selenium (mg/L)	Total Thallium (mg/L)	Total Radium-226 and 228 (pCi/L)
Monitoring	Date							Ca	laulated Backgrou	und						(
Well	Sampled	0.0025	0.009	0.68	0.004	0.005	0.005	0.05	alculated Backgrou 0.22	0.005	0.05	0.000001	0.01	0.005	0.0007	1.25
		0.0023	0.009	0.00	0.004	0.003	0.003		lwater Protection S		0.03	0.000001	0.01	0.003	0.0007	1.23
		MCL	MCL	MCL	Background	MCL	MCL	Background	MCL	RSL	Background	MCL	RSL	MCL	MCL	MCL
		0.006	0.01	2	0.004	0.005	0.1	0.05	4.0	0.015	0.05	0.002	0.10	0.05	0.002	5
	17-Nov-15	< 0.060	0.009	0.21	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.23
	9-Feb-16	< 0.060	< 0.005	0.33	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.24
	11-May-16	< 0.060	< 0.005	0.20	< 0.005	< 0.005	< 0.005	< 0.050	0.22	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.18
	30-Aug-16	< 0.060	0.008	0.24	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	0.0000005	< 0.010	< 0.005	< 0.010	1.25
	9-Nov-16	< 0.060	< 0.005	0.05	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.23
	14-Feb-17	< 0.060	< 0.005	0.09 0.11	< 0.005	< 0.005 < 0.005	< 0.005	< 0.050 < 0.050	< 0.20 < 0.20	< 0.005	< 0.050 < 0.050	< 0.0000005	< 0.010 < 0.010	< 0.005	< 0.010	0.22 0.33
	16-May-17 15-Aug-17	0.0010 0.0025	< 0.005 < 0.005	0.11	< 0.004 < 0.004	< 0.005 < 0.005	< 0.005 < 0.005	< 0.050	0.20	< 0.005 < 0.005	< 0.050 < 0.050	< 0.0000005 < 0.0000010	< 0.010	< 0.005 < 0.005	< 0.0007 < 0.0007	< 1.22
BR-14-UG	29-Mar-18	< 0.0023	< 0.005	0.13	< 0.004	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000010	< 0.010	< 0.005	< 0.0007	0.00
(Upgradient)	9-May-18	Not Analyzed	Not Analyzed	0.12	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	1.29
	9-Oct-18	Not Analyzed	Not Analyzed	0.14	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.22	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	1.29
	11-Mar-19	< 0.0004	0.005	0.20	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0003	0.63
	15-May-19	Not Analyzed	< 0.01	0.20	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	< 0.003	Not Analyzed	0.0000016	Not Analyzed	Not Analyzed	Not Analyzed	0.77
	1-Oct-19	Not Analyzed	< 0.005	0.12	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.23	< 0.005	Not Analyzed	0.0000007	Not Analyzed	Not Analyzed	Not Analyzed	0.43
	11-Feb-20	< 0.0004	< 0.005	0.17	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0003	0.87
	13-May-20	< 0.0004	Not Analyzed	0.18	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed	< 0.050	0.0000008	Not Analyzed	Not Analyzed	Not Analyzed	1.23
	20-Oct-20	< 0.0004	Not Analyzed	0.12	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20 < 0.20	Not Analyzed	< 0.050	0.0000006	Not Analyzed	Not Analyzed	Not Analyzed	0.76
	17-Nov-15	< 0.060 < 0.060	0.008 < 0.005	0.05 0.04	< 0.005	< 0.005 < 0.005	< 0.005 < 0.005	< 0.050 < 0.050	< 0.20	0.006 < 0.005	< 0.050 < 0.050	< 0.0000005 < 0.0000005	< 0.010 < 0.010	< 0.005 < 0.005	0.012	0.22 0.22
	9-Feb-16 11-May-16	< 0.060	< 0.005	0.04	< 0.005 < 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010 < 0.010	0.76
	30-Aug-16	< 0.060	0.005	0.03	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	1.23
	9-Nov-16	< 0.060	< 0.005	0.04	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.28
	14-Feb-17	< 0.060	0.005	0.03	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.28
	16-May-17	0.0016	< 0.005	0.03	< 0.003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0007	1.28
	15-Aug-17	0.0040	< 0.005	0.05	< 0.004	< 0.005	< 0.005	< 0.050	0.27	< 0.005	< 0.050	< 0.0000000	< 0.010	< 0.005	< 0.0007	1.23
BR-3-DG	29-Mar-18	< 0.0004	< 0.005	0.04	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0003	0.00
(Downgradient)	9-May-18	Not Analyzed	Not Analyzed	0.03	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	1.20
	8-Oct-18	Not Analyzed	Not Analyzed	0.03	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.22	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	1.58
	11-Mar-19	< 0.0004	< 0.005	0.03	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	0.006	< 0.050	0.0000030	< 0.010	< 0.005	< 0.0003	0.54
	15-May-19	Not Analyzed	< 0.01	< 0.20	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	< 0.003	Not Analyzed	0.0000028	Not Analyzed	Not Analyzed	Not Analyzed	3.48
	1-Oct-19	Not Analyzed	< 0.005	0.04	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.25	< 0.005	Not Analyzed	0.0000016	Not Analyzed	Not Analyzed	Not Analyzed	0.81
	11-Feb-20	< 0.0004	< 0.005	0.03	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	0.0000014	< 0.010	< 0.005	< 0.0003	1.19
	12-May-20	< 0.0004	Not Analyzed	0.03	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed	< 0.050	0.0000009	Not Analyzed	Not Analyzed	Not Analyzed	0.89
	20-Oct-20	0.0007	Not Analyzed	0.03	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed	< 0.050	0.0000006	Not Analyzed	Not Analyzed	Not Analyzed	0.03
	17-Nov-15	< 0.060	0.006	0.07	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	0.014	0.35
	9-Feb-16	< 0.060	< 0.005	0.06	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.16
	11-May-16	< 0.060	< 0.005	0.04	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.31
	30-Aug-16	< 0.060	0.009	0.09	< 0.005	< 0.005	< 0.005	< 0.050 < 0.050	< 0.20	< 0.005	< 0.050 < 0.050	< 0.0000005	< 0.010	< 0.005 < 0.005	< 0.010 < 0.010	1.61
	9-Nov-16 14-Feb-17	< 0.060 < 0.060	< 0.005 < 0.005	0.08	< 0.005 < 0.005	< 0.005 < 0.005	0.045 < 0.005	< 0.050 < 0.050	< 0.20 < 0.20	< 0.005 < 0.005	< 0.050 < 0.050	< 0.0000005 < 0.0000005	< 0.010 < 0.010	< 0.005	< 0.010 < 0.010	0.45 1.22
	16-May-17	0.0022	< 0.005	0.04	< 0.003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0007	0.22
	15-Aug-17	0.0045	< 0.005	0.08	< 0.004	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000010	< 0.010	< 0.005	< 0.0007	0.32
BR-12-DG	29-Mar-18	< 0.0004	< 0.005	0.05	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0003	0.00
(Downgradient)	9-May-18	Not Analyzed	Not Analyzed	0.04	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.32
	8-Oct-18	Not Analyzed	Not Analyzed	0.07	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	1.67
	11-Mar-19		< 0.005	0.03	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0003	1.16
	15-May-19	Not Analyzed	< 0.01	< 0.20	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	< 0.003	Not Analyzed	< 0.0000005	Not Analyzed	Not Analyzed	Not Analyzed	1.49
	1-Oct-19	Not Analyzed	< 0.005 < 0.005	0.06	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.29	< 0.005 < 0.005	Not Analyzed	< 0.0000005	Not Analyzed	Not Analyzed	Not Analyzed	0.89
	11-Feb-20 12-May-20	< 0.0004 < 0.0004	< 0.005 Not Analyzed	0.05 0.04	< 0.0003 Not Analyzed	< 0.005 Not Analyzed	< 0.005 Not Analyzed	< 0.050 Not Analyzed	< 0.20	< 0.005 Not Analyzed	< 0.050 < 0.050	< 0.0000005 < 0.0000005	< 0.010 Not Analyzed	< 0.005 Not Analyzed	< 0.0003 Not Analyzed	1.34 0.47
	20-Oct-20	< 0.0004	Not Analyzed Not Analyzed	0.04	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed Not Analyzed	< 0.050	< 0.0000005	Not Analyzed	Not Analyzed	Not Analyzed	1.77
See notes at end of t		5.000∓	11017111019200	0.00	1101/11/01/200	11017111019200	11007111019200	11007111019200	0.20	11017111019200	0.000	0.5000000	11007111019260	11007111019200	11007111019200	1

See notes at end of table.

Table 2 (cont'd) Dunkirk Power LLC Dunkirk Landfill – Groundwater Analytical Data CCR Appendix IV Constituents

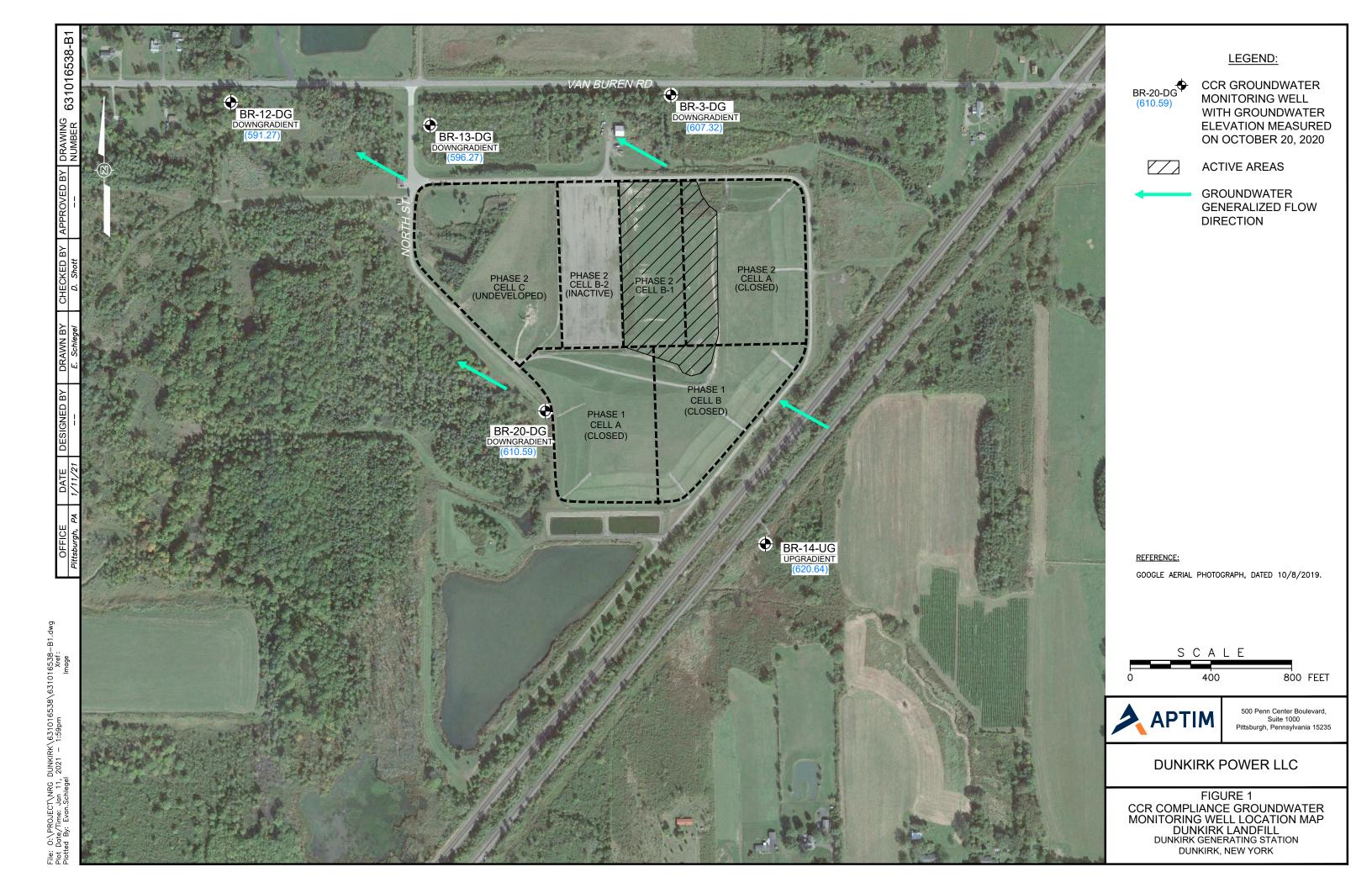
								Appendix IV 00	- Inditidation							4
		Total Antimony (mg/L)	Total Arsenic (mg/L)	Total Barium (mg/L)	Total Beryllium (mg/L)	Total Cadmium (mg/L)	Total Chromium (mg/L)	Total Cobalt (mg/L)	Total Fluoride (mg/L)	Total Lead (mg/L)	Total Lithium (mg/L)	Total Mercury (mg/L)	Total Molybdenum (mg/L)	Total Selenium (mg/L)	Total Thallium (mg/L)	Total Radium-226 and 228 (pCi/L)
Monitoring	Date							C	alculated Backgrou	nd						
Well	Sampled	0.0025	0.009	0.68	0.004	0.005	0.005	0.05	0.22	0.005	0.05	0.000001	0.01	0.005	0.0007	1.25
		0.0020	0.000	0.00	0.001	0.000	0.000	1 1 1	dwater Protection S		0.00	0.00001	0.01	0.000	0.0001	1120
		MCL	MCL	MCL	Background	MCL	MCL	Background	MCL	RSL	Background	MCL	RSL	MCL	MCL	MCL
		0.006	0.01	2	0.004	0.005	0.1	0.05	4.0	0.015	0.05	0.002	0.10	0.05	0.002	5
	17-Nov-15	< 0.060	< 0.005	0.08	< 0.004	< 0.005	< 0.005	< 0.050	< 0.20	0.015	< 0.050	< 0.0000005	< 0.010	< 0.005	0.002	0.36
	9-Feb-16	< 0.060	< 0.005	0.08	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.012	0.45
				0.08												
	11-May-16	< 0.060	< 0.005		< 0.005	< 0.005	< 0.005	0.000	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.44
	30-Aug-16 9-Nov-16	< 0.060 < 0.060	0.008 < 0.005	0.11 0.05	< 0.005 < 0.005	< 0.005 < 0.005	< 0.005 < 0.005	< 0.050 < 0.050	< 0.20 < 0.20	< 0.005 < 0.005	< 0.050 < 0.050	< 0.0000005 < 0.0000005	< 0.010 < 0.010	< 0.005 < 0.005	< 0.010 < 0.010	1.39 0.33
	14-Feb-17	< 0.060	< 0.005	0.06	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20 < 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.17
	16-May-17	0.0015	< 0.005	0.05	< 0.004	< 0.005	< 0.005	< 0.050		< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0007	0.24
BR-13-DG	15-Aug-17	0.0030	< 0.005	0.09	< 0.004	< 0.005	< 0.005	< 0.050	0.21	< 0.005	< 0.050	< 0.0000010	< 0.010	< 0.005	< 0.0007	0.34
(Downgradient)	29-Mar-18	< 0.0004	< 0.005	0.07	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0003	0.00
, ,	9-May-18	Not Analyzed	Not Analyzed	0.06	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	1.37
	8-Oct-18	Not Analyzed	Not Analyzed	0.09	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	1.87
	11-Mar-19	< 0.0004	0.006	0.07	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0003	1.12
	15-May-19	Not Analyzed	< 0.01	< 0.20	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	< 0.003	Not Analyzed	< 0.0000005	Not Analyzed	Not Analyzed	Not Analyzed	1.09
	1-Oct-19	Not Analyzed	< 0.005	0.09	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.26	< 0.005	Not Analyzed	< 0.0000005	Not Analyzed	Not Analyzed	Not Analyzed	1.13
	11-Feb-20	< 0.0004	< 0.005	0.08	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0003	0.65
	12-May-20	< 0.0004	Not Analyzed	0.08	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	< 0.20	Not Analyzed	< 0.050	< 0.0000005	Not Analyzed	Not Analyzed	Not Analyzed	1.18
	20-Oct-20	< 0.0004	Not Analyzed	0.10	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.27	Not Analyzed	< 0.050	< 0.0000005	Not Analyzed	Not Analyzed	Not Analyzed	1.21
	17-Nov-15	< 0.060	0.006	1.50	< 0.005	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	1.53
	9-Feb-16	< 0.060	< 0.005	1.83	< 0.005	< 0.005	< 0.005	< 0.050	0.35	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	1.71
	11-May-16	< 0.060	< 0.005	1.57	< 0.005	< 0.005	0.006	< 0.050	0.35	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	2.13
	30-Aug-16	< 0.060	0.006	1.93	< 0.005	< 0.005	< 0.005	< 0.050	0.36	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	2.04
	9-Nov-16	< 0.060	< 0.005	1.25	< 0.005	< 0.005	< 0.005	< 0.050	0.22	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	0.61
	14-Feb-17	< 0.060	< 0.005	1.88	< 0.005	< 0.005	< 0.005	< 0.050	0.39	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.010	2.20
	16-May-17	0.0014	< 0.005	1.53	< 0.004	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0007	0.99
BR-20-DG	15-Aug-17	0.0016	< 0.005	1.84	< 0.004	< 0.005	< 0.005	< 0.050	0.41	< 0.005	< 0.050	< 0.0000010	< 0.010	< 0.005	< 0.0007	0.77
(Downgradient)	29-Mar-18	< 0.0004	< 0.005	2.00	< 0.0003	< 0.005	< 0.005	< 0.050	0.36	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0003	2.01
(Downgradiont)	9-May-18	Not Analyzed	Not Analyzed	1.51	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.40	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	2.02
	8-Oct-18	Not Analyzed	Not Analyzed	1.58	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.39	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.87
	12-Mar-19	< 0.0004	< 0.005	1.51	< 0.0003	< 0.005	< 0.005	< 0.050	0.42	< 0.005	< 0.050	< 0.0000005	< 0.010	< 0.005	< 0.0003	1.24
	15-May-19	Not Analyzed	< 0.01	1.60	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.33	< 0.003	Not Analyzed	0.0000008	Not Analyzed	Not Analyzed	Not Analyzed	1.89
	1-Oct-19	Not Analyzed	< 0.005	1.38	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.42	< 0.005	Not Analyzed	0.0000008	Not Analyzed	Not Analyzed	Not Analyzed	1.22
	11-Feb-20	0.0004	< 0.005	1.84	< 0.0003	< 0.005	< 0.005	< 0.050	< 0.20	< 0.005	0.139	< 0.0000005	< 0.010	< 0.005	< 0.0003	1.43
	12-May-20	0.0005	Not Analyzed	1.95	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.31	Not Analyzed	0.266	0.0000024	Not Analyzed	Not Analyzed	Not Analyzed	1.07
	20-Oct-20	< 0.0004	Not Analyzed	1.99	Not Analyzed	Not Analyzed	Not Analyzed	Not Analyzed	0.44	Not Analyzed	< 0.050	< 0.0000005	Not Analyzed	Not Analyzed	Not Analyzed	2.33
					ala aanaidarad an atunic		A !! 0040					4.1 11				

= Result from April 10, 2019 re-analysis; prior result from March 11, 2019 sample considered an atypical value (0.339 mg/L). April 2019 re-analysis result (< 0.050 mg/L) deemed representative and consistent with historical values for this well.

Notes

- 1. Cells with "<" are represented as non-detects. Values shown correspond to the laboratory reporting limit.
- 2. Background values based on statistical evaluation of initial eight rounds (Nov. 2015 through Aug. 2017) of groundwater sampling data for Well BR-14-UG.
- 3. As indicated, Groundwater Protection Standards are either published MCLs or risk-based Regional Screening Levels (RSLs). For constituents where calculated background exceeds either the MCL or RSL, the background value is used.





Appendix A
Lithium Alternate Source Demonstration (Dec. 2020)



CCR COMPLIANCE ALTERNATE SOURCE DEMONSTRATION DUNKIRK FLY ASH LANDFILL

Prepared for:

Dunkirk Power LLC Dunkirk Generating Station Dunkirk, New York

Prepared by:

Aptim Environmental & Infrastructure, LLC St. Charles, Illinois

December 2020

Table of Contents

List of	Tables	i	ίij
List of	Figures	i	iii
List of	Appendices	i	iii
List of	Acronyms & Abbreviations	i	V
1.0	Introduction		1
2.0	2.1 Location and Setting2.2 Description of CCR Unit	ng	3
3.0	3.1 Groundwater Monitoring Netwo3.2 Detection/Assessment Monitor	nggnificant Level Above Groundwater Protection Standards	5 5
4.0	 4.1 Supplemental Well Monitoring. 4.2 CCR Monitoring. 4.3 Water Level Survey. 4.4 Surface Water Sample at Beau 	Determinationer Dam	7 7 7 8
5.0	5.1 Possible Leak from Landfill Lin5.2 Surface Water Runoff from Lar5.3 Leaching from Soils	er	9 0 1
6.0	Conclusions	1	3
7.0 Figure Appen	es .	ication1	4

List of Tables	

- 3.1-1 CCR Groundwater Monitoring Network Details
- 3.2-1 CCR Assessment Monitoring Results—February 2020 Sampling Event

List of Figures _____

Figure 1	Site Features & Locations Map
Figure 2	Piper Diagram (MH-1 and BR-20-DG)
Figure 3	Regionalized Lithium Concentrations in Surface Soils (≤ 2 inches)
Figure 4	Regionalized Lithium Concentrations in Surface Soils (≤ 24 inches)
Figure 5	Beaver Dam
Figure 6	Lithium Concentration Progression (September 29, 2020 Sampling Event)
Figure 7	Piper Diagram (September 29, 2020 Sampling Event Comparison)

List of Appendices_____

Appendix A	Notifications to NYSDEC
Appendix B	Boring Logs
Appendix C	1st Quarter 2020 CCR Assessment Monitoring Report (February 2020)
Appendix D	Laboratory Results for SSL Confirmation (March 2020)
Appendix E	April-May 2020 Supplemental Sampling Events
Appendix F	2 nd Quarter 2020 CCR Assessment Monitoring Report (May 2020)
Appendix G	Water Level Survey Report (June 2020)
Appendix H	Laboratory Results for Beaver Dam Surface Water (July 2020)
Appendix I	Soil Sampling Report (September 2020)
Appendix J	Groundwater/Surface Water Sampling Report (September 2020)

List of Acronyms & Abbreviations_

ACM Assessment of Corrective Measures

APTIM Aptim Environmental & Infrastructure, LLC

ASD Alternate Source Demonstration

bgs below ground surface
CCR coal combustion residuals

CCR Rule or Rule Disposal of Coal Combustion Residuals from Electric Utilities Final Rule

CFR Code of Federal Regulations
COPC constituent of potential concern

Dunkirk Power LLC

Frontier Frontier Technical Associates, Inc.

GWPS groundwater protection standard

GZA GZA GEOEnvironmental of New York

mg/L milligram per liter
msl mean sea level

MW megawatt

NRG NRG Energy, Inc.

NYSDEC New York State Department of Environmental Conservation

PPE personal protective equipment

ppm parts per million PVC polyvinyl chloride

SPDES State Pollutant Discharge Elimination System
SPLP synthetic precipitation leaching procedure

SSI statistically significant increase
SSL statistically significant level
Station Dunkirk Generating Station

USGS United States Geological Survey

1.0 Introduction

Title 40 Code of Federal Regulations (CFR) mandates that existing Coal Combustion Residuals (CCR) landfills and surface impoundments, also known as CCR units, be subject to groundwater monitoring and corrective action requirements as further detailed in §257.91 through §257.98. These requirements are part of the overall CCR Rule (or Rule) which was published in the Federal Register on April 17, 2015 and became effective on October 19, 2015. The Dunkirk Generating Station's (Station) Landfill, owned and maintained by Dunkirk Power LLC (Dunkirk), a subsidiary of NRG Energy, Inc. (NRG), is subject to the aforementioned groundwater monitoring and corrective action requirements. The Station ceased electric generating operations in early-2016, subsequent to the effective date of the Rule.

Groundwater samples have been routinely collected at the Dunkirk Fly Ash Landfill, in accordance with the obligations for Detection Monitoring and Assessment Monitoring outlined in §257.94 and §257.95, respectively. Based on data generated from the first round of Detection Monitoring (October 2017), it was determined that one or more CCR Appendix III constituents were present in each of the downgradient monitoring wells at levels representing a statistically significant increase (SSI) above corresponding background concentrations. As a result, the Landfill transitioned into the CCR Assessment Monitoring program in early-2018.

Subsequent rounds of groundwater monitoring in 2018 and 2019 showed several CCR Appendix IV constituents to be at levels above background, but still below the corresponding groundwater protection standards (GWPS). However, the 1st Quarter 2020 CCR Assessment Monitoring Event, conducted on February 11, 2020, revealed an elevated lithium concentration in downgradient well BR-20-DG. Following a limited evaluation to rule out possible laboratory influence or other anomalies, this detection was tentatively deemed to represent a statistically significant level above the calculated site-specific Lithium GWPS of 0.05 milligram per liter (mg/L). Notification of this determination was provided to the New York State Department of Environmental Conservation (NYSDEC) on April 6, 2020. A copy of the notification is included in Appendix A.

Additional investigative activities and data gathering pursuant to §257.95(g)(1-3) were undertaken during April thru June 2020, and eventually led to the decision to initiate an Assessment of Corrective Measures (ACM) per §257.96. As required, notification of the ACM initiation was provided to the NYSDEC on July 6, 2020, and which included mention of continuing data collection that could still possibly support the development of an Alternate Source Demonstration. A copy of the notification is included in Appendix A. Per the provisions of §257.96(a), correspondence was prepared shortly thereafter to document the need for a 60-Day extension relative to completion of the ACM (extending the completion date to December 6, 2020), with justification tied to ongoing parallel efforts again in consideration of potential ASD development.

A copy of this extension request was entered into the Dunkirk operating record on August 3, 2020, and is also included in Appendix A.

In support of the ACM, continued data collection/evaluation and supplemental field sampling/investigation proceeded over the course of August thru October 2020. This work ultimately yielded sufficient evidence to determine that a source other than the Landfill was responsible for the elevated Lithium concentrations in Well BR-20-DG. Accordingly, the information compiled during the nature and extent characterization and supplement field efforts has been assemble into the ASD as presented herein and completed in accordance with §257.95(g)(3)(ii), which includes provisions such that:

"The owner or operator may demonstrate that a source other than the CCR unit caused the contamination, or that statistically significant increase resulted from error in sampling, analysis, statistical evaluation, or natural variation in groundwater quality."

This ASD has been certified by a qualified professional engineer, and will be included as part of the forthcoming Annual Groundwater Monitoring and Corrective Action Report to be completed no later than January 31, 2021, documenting CCR activities for the 2020 Calendar Year. Per the further provisions of §257.95(g)(3)(ii), preparation of a successful ASD will allow the Dunkirk Fly Ash Landfill to remain in the CCR Assessment Monitoring Program.

2.1 Location and Setting

The Station is a coal-fired power plant located in Dunkirk, New York. The facility ceased electric generating operations in-early 2016, subsequent to the effective date of the Rule. The Rule applies to this facility due to the management/disposal of CCR materials resulting from the previous coal combustion activities. Accordingly, the Station's captive disposal site, located in Pomfret, New York and identified as the Dunkirk Fly Ash Landfill, has been designated as an existing CCR unit. The Landfill is situated on a 339.6-acre tract located at 5145 Van Buren Road in Pomfret, New York.

Currently observable site features within the property limits of the Landfill area include the following and are shown on Figure 1:

- <u>CCR Landfill (approximately 53.8 acres):</u> The landfill was constructed for acceptance of CCR materials resulting from coal combustion activities at the Station. The Landfill includes one active filling area, several inactive cells, and one additional constructed cell for which there is no planned use (See Section 2.2).
- <u>Sedimentation Basins (approximately 1.7 acres):</u> Two sedimentation basins (designated as 1A and 1B) have been constructed and are used to manage leachate collected from the Landfill. Effluent flows from Basin 1B discharge into a mixing zone and ultimately a receiving stream via SPDES-permitted Outfall 002 (Permit No. NY-0202711).
- <u>Hydraulic Basin (approximately 11.7 acres):</u> A hydraulic basin containing fresh surface water has been constructed and provides additional flows for transport and mixing with the landfill leachate exiting the sedimentation basins.
- <u>Groundwater Monitoring Network:</u> A groundwater monitoring network has been constructed around the perimeter of the landfill in order to monitor and ensure that the landfill is performing as intended and is not impacting localized groundwater.
- <u>Leachate Detection and Collection Network:</u> A leachate detection and collection network has been constructed throughout the landfill footprint. This network allows for the potential detection of leachate leaks in the landfill liner and for the collection of leachate, which is routed to the sedimentation basins.

The remaining acreage surrounding these features consists of site access roads and generally undeveloped areas with wooded and vegetative cover.

2.2 Description of CCR Unit

Although the Station is idled, the Dunkirk Fly Ash Landfill is permitted by the NYSDEC to accept CCR materials generated by the Station through May 22, 2021 (Permit ID No. 9-0658-

00021/00008). As shown on Figure 1, there is an active area of the landfill that principally includes Phase 2 Cell B-1 and the western portion of Phase 2 Cell A. Inactive landfill areas include Phase 1 Cells A and B and the eastern portion of Phase 2 Cell A. Phase 2 Cell B-2 is constructed, but no ash has been received to date. GZA GeoEnvironmental of New York's (GZA) most recent annual inspection of the landfill indicates that at the end of 2019, the landfill had 278,921 cubic yards of remaining available volume. The landfill did not accept any CCR waste in 2019 nor thus far in 2020.

2.2.1 Environmental Sampling

Ongoing groundwater monitoring is performed at the Site based on two regulatory programs:

- Part 360 Permit Monitoring: The facility's NYSDEC Part 360 Permit requires regular monitoring of five on-site groundwater monitoring wells, including one upgradient location (Well OB-2-UG) and four downgradient locations (Wells OB-4-DG, OB-7-DG, OB-19-DG, and OB-20-DG). This monitoring program does not require lithium analysis, nor does it include Well BR-20-DG.
- <u>CCR Monitoring:</u> Groundwater is routinely sampled at five on-site monitoring wells and analyzed for the Appendix III and Appendix IV constituents as a requirement of the CCR Rule. This monitoring network (further discussed in Section 3.0) includes one upgradient location (Well BR-14-UG) and four downgradient locations (Wells BR-3-DG, BR-12-DG, BR-13-DG and BR-20-DG).

3.0 CCR Groundwater Sampling

3.1 Groundwater Monitoring Network

The originally established CCR groundwater monitoring network for the Landfill is comprised of five wells, including Well BR-14-UG (upgradient) and Wells BR-3-DG, BR-12-DG, BR-13-DG, and BR-20-DG (downgradient). These well locations are shown on Figure 2. The depth to groundwater in the uppermost aquifer varies, but is generally 5 to 10 feet below ground surface (bgs). The ground surface elevations in and around the area of the Landfill range between approximately 600 to 640 feet above mean sea level (msl). Installation details and boring logs for the wells are contained in Appendix B, with pertinent information summarized below.

	Table 3.1-1: CCR Groundwater Monitoring Network Details											
Monitoring Well No.	Hydraulic Position	Casing Diameter (inches/material)	Top of PVC Casing Elevation (feet msl)	Well Total Length (feet)	Top/Bottom Elevations of Screened Interval (feet msl)							
BR-14-UG	Upgradient	4-inch polyvinyl chloride (PVC)	629.01	26.25	611.90 / 606.90							
BR-3-DG	Downgradient	4-inch PVC	618.20	18.75	609.08 / 604.08							
BR-12-DG	Downgradient	2-inch PVC	600.62	17.37	588.00 / 584.00							
BR-13-DG	Downgradient	4-inch PVC	607.41	19.21	593.70 / 588.70							
BR-20-DG	Downgradient	2-inch PVC	625.74	35.99	601.50 / 591.50							

3.2 Detection/Assessment Monitoring

As previously noted, the Dunkirk Fly Ash Landfill was transitioned into the CCR Assessment Monitoring Program in early-2018. Subsequent monitoring events performed during 2018 and 2019 showed detections of several Appendix IV constituents, but at levels remaining below corresponding GWPS. However, and as shown in Table 3.2-1, data from the 1st Quarter 2020 monitoring event indicated lithium in downgradient Well BR-20-DG at a concentration of 0.139 mg/L, preliminarily representing a value above the site-specific GWPS of 0.05 mg/L. The complete 1st Quarter 2020 CCR Assessment Monitoring Report is included in Appendix C.

Table 3.2-1: Selected CCR Assessment Monitoring Results February 11, 2020 Sampling Event											
Parameter	Concentration (mg/L) unless noted										
Parameter	BR-14-UG	BR-3-DG	BR-12-DG	BR-13-DG	BR-20-DG	GWPS					
Appendix III											
pH (S.U.)	7.21	6.93	6.78	6.78	7.73						
Boron	0.195	0.137	0.092	0.173	1.47						
Calcium	90	129	181	115	25						
Chloride	2.9	19.9	224	8.5	28.3						
Fluoride	< 0.20	<0.20	< 0.20	<0.20	< 0.20						
Total Dissolved Solids	355	520	785	470	630						
Sulfate	58	163	147	99	<4.0						
Appendix IV											
Arsenic	< 0.005	<0.005	< 0.005	< 0.005	< 0.005	0.01					
Barium	0.17	0.03	0.05	0.08	1.84	2.0					
Chromium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.1					
Fluoride	< 0.20	<0.20	< 0.20	<0.20	<0.20	4.0					
Lithium	< 0.05	<0.05	< 0.05	<0.05	0.139	0.05					

3.3 Determination of Statistically Significant Level Above Groundwater Protection Standards

Following receipt of the 1st QTR 2020 result and as a preliminary confirmation, the laboratory reanalyzed the February 11, 2020 sample and verbally reported a lithium value of 0.143 mg/L on March 10, 2020. Subsequent to this initial re-analysis, Well BR-20-DG was re-sampled (including collection of a field duplicate sample) on March 12, 2020. The lithium concentrations were reported at 0.193 mg/L and 0.197 mg/L, respectively, for the sample and the duplicate. Information and laboratory results from this re-sampling are included in Appendix D.

On March 31, 2020, Frontier Technical Associates, Inc (Frontier) performed a down-well camera inspection over the entire depth of Well BR-20-DG. This inspection did not reveal any obvious breaks in the well casing nor foreign objects in the well, and the well did not appear to have any appreciable sediment buildup on the bottom. In conjunction with the inspection Frontier again sampled Well BR-20-DG for lithium, with a value of 0.253 mg/L being reported. Information and laboratory results from this sampling event are also included in Appendix D.

Based on the above, a determination was made that the lithium concentration in Well BR-20-DG did represent an SSL above the corresponding site-specific GWPS. As previously noted, notification of this finding was made to the NYSDEC on April 6, 2020 (copy included in Appendix A), and subsequent field investigation/characterization efforts initiated as required per §257.95(g)(1-3). Additional discussion of these post-SSL determination activities is provided in Section 4.0.

4.0 Further Actions Taken Following SSL Determination

4.1 Supplemental Well Monitoring

Immediately following submittal of the NYSDEC notification, an expanded field sampling effort was conducted on April 8, 2020 to encompass Well BR-20-DG and neighboring monitoring wells (Wells OB-19-DG and OB-20-DG; see Figure 1), along with manholes used for leachate collection/leak detection. The lithium concentration for Well BR-20-DG was reported at 0.198 mg/L, and further reported as 2.00 mg/L at Manhole MH-1 (shown on Figure 1 and representing landfill leachate upgradient of Well BR-20-DG within the lined landfill footprint). Information and laboratory results from this sampling event are included in Appendix E.

On May 12-13, 2020 and in conjunction with the 2nd QTR 2020 CCR Assessment Monitoring Event (discussed below in Section 4.2), a much broader investigation of on-site groundwater monitoring wells was performed. The investigation included Well BR-20-DG and ten other wells, and focused on lithologies of water-bearing zones, groundwater elevations and flow trends, as well as evaluation of lithium concentrations at each of the monitoring wells. The lithium concentration measured at Well BR-20-DG during this event was 0.208 mg/L. Information and laboratory results from this sampling event are also included in Appendix E, along with a map showing the location of the other wells sampled.

During the May 12-13, 2020 supplemental field effort, Frontier also obtained a leachate sample from Manhole MH-1 for geochemical comparison against the groundwater in Well BR-20-DG (see further discussion in Section 5.1). Laboratory results for this sample are included in Appendix E.

4.2 CCR Monitoring

The 2nd Quarter 2020 CCR Assessment Monitoring Event was performed on May 12-13, 2020 (concurrent with the above), and included sampling for Appendix III and selected Appendix IV parameters, including lithium. The lithium result for Well BR-20-DG was reported at 0.266 mg/L, and the field duplicate sample for Well BR-20-DG showed a concentration of 0.292 mg/L. The complete 2nd Quarter 2020 CCR Assessment Monitoring Report is included in Appendix F.

4.3 Water Level Survey

On June 22, 2020, Frontier performed a water level survey of features that might in some way be potentially influencing the groundwater quality at Well BR-20-DG. Corresponding water elevations were then graphically represented. The Water Level Survey Report is included in Appendix G.

4.4 Surface Water Sample at Beaver Dam

On July 16, 2020 a surface water sample was taken downstream of the discharge mixing zone (where the sedimentation basin and hydraulic basin discharges come together) near the location where beavers had created a dam along the outgoing stream (see further discussion in Section 5.4). This stream (identified as Van Buren Bay Creek) serves as the permitted discharge pathway for effluent flows from the sedimentation basins via SPDES Outfall 002. The lithium concentration in the surface water sample was measured at 0.799 mg/L. The associated laboratory report is included in Appendix H.

4.5 Site Visit and Additional Sampling

APTIM Environmental and Infrastructure, LLC (APTIM), along with representatives from NRG and Frontier, conducted a site reconnaissance of the Landfill on September 22, 2020. The visit included visual examination of the leachate collection/leak detection network; the sedimentation basins; the hydraulic basin; well pad area for Wells OB-19-DG, OB-20-DG, and BR-20-DG; the landfill sideslopes and local stormwater runoff control features (including a rip-rap lined ditch); along with the discharge mixing zone and the beaver dam downstream of the discharge mixing zone. Shortly after this visit and based upon the observed conditions, an additional round of sampling was conducted by Frontier on September 29-30, 2020 to include near-surface soils/sediments, groundwater, surface water and landfill leachate.

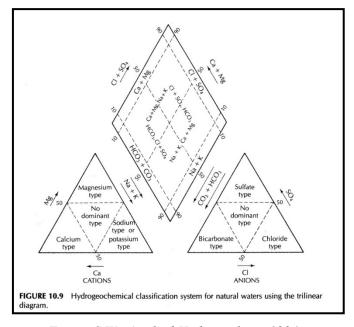
Specifically, near-surface soil samples were collected in proximity to the BR-20-DG well pad and from the lined stormwater ditch, which extends between the well pad area and the discharge mixing zone. A sediment sample from the discharge mixing zone below Outfall 002 was also collected. The soil and sediment samples were analyzed for total lithium and were then subjected to a synthetic precipitation leaching procedure (SPLP) for lithium. Results for total lithium for soil/sediment samples near the BR-20-DG well pad, along the lined ditch, and from the discharge mixing zone were 41.4, 125, and 74.3 parts per million (ppm), respectively. SPLP results for lithium were non-detect (<0.5 mg/L) in all three locations. Information and laboratory results from the soil/sediment sampling are included in Appendix I.

Also during the September 29-30 field efforts, groundwater samples were collected at Wells OB-20-DG and BR-20-DG. Surface water samples were collected from Sedimentation Basins 1A and 1B, the hydraulic basin, the lined ditch and from near the beaver dam. Flows from Manholes MH-1, MH-3, and MH-5 (leachate and leak detection) were also collected. All collected samples were analyzed for anions and cations needed for geochemical analysis, as well as for landfill leachate indicator parameters, including lithium. Information and laboratory results for the groundwater, surface water, and manhole samples are included in Appendix J.

5.1 Possible Leak from Landfill Liner

A geochemical comparison of Well BR-20-DG groundwater and Manhole MH-1 leachate (directly upgradient of Well BR-20-DG within the landfill footprint) was performed utilizing the analytical data collected on May 12 and 13, 2020 (Appendices E and F) along with that collected on September 29, 2020 (Appendix J). To support this comparison, a Piper diagram was created. A Piper diagram employs a methodology that is used to compare a known/suspected source to other sampling locations, based on the classification and visualization of hydrochemical data. This methodology builds on the recognition that almost 90 percent of dissolved solids in groundwater are attributed to eight ions: Ca²⁺, Cl⁻, CO₃²⁻, HCO₃⁻, K⁺, Mg²⁺, Na⁺, and SO₄²⁻.

A Piper diagram normalizes the eight ions into cations and anions. The normalized data are then plotted in three areas, including a center diamond which shows the composition of the sample with respect to both cations and anions, and two triangles that represent either cations or anions in the data. A Piper diagram also combines the concentrations of the anions CO_3^{2-} and HCO_3^{-} and cations Na^+ and K^+ , which allows all the major ions to be plotted on one diagram.



Fetter, C.W., Applied Hydrogeology, 1994.

The illustration above shows the hydrochemical classification system used to construct a Piper diagram. Samples that have been impacted by a source would shift away from upgradient background composition and toward the source composition.

The Piper diagram created for the current evaluation is presented in Figure 2. Review of the diagram indicates that the geochemical composition of the groundwater at Well BR-20-DG is not similar to that of the source composition (landfill leachate). Further, there is no appreciable shift in the composition of the groundwater at Well BR-20-DG away from the source composition between May 13, 2020 (when the lithium concentration at BR-20-DG was 0.266 mg/L) and September 29, 2020 (when the lithium concentration at BR-20-DG was <0.05 mg/L). This observation additionally indicates that the lithium in Well BR-20-DG was from a source other than the landfill and that a potential local breach in the liner system was not a likely cause.

Beyond the Piper diagram evaluation, it is noted that lithium levels in the leachate from Manhole MH-1 were seen to have increased from 2.00 mg/L on April 8, 2020 to 3.03 mg/L on September 29, 2020. Conversely, lithium levels in Well BR-20-DG over this same time period have fallen from 0.198 mg/L on April 8, 2020 to <0.05 mg/L on September 29, 2020 (see Appendices E and J). If the lithium in Well BR-20-DG was from a landfill source directly upgradient, one would expect the lithium level at Well BR-20-DG to increase as the lithium levels within the leachate increase. This was, however, not the case.

5.2 Surface Water Runoff from Landfill

Representing another potential pathway, possible contaminated surface water runoff from other parts of the landfill leading to and infiltrating near Well BR-20-DG was examined, including natural downward migration and aspects related to a broken or damaged well seal/casing.

During APTIM's September 22, 2020 site visit, it was noted that the stormwater runoff system in this area of the landfill diverted flows from the perimeter road and landfill sideslope down to and past the location of Well BR-20-DG. Due to the close proximity of runoff to Well BR-20-DG, the perimeter road, landfill stormwater ditches, and landfill sideslopes were visually inspected for any signs of seeps, pop-outs, or other sources for potential leachate leaks. No issues or items of concern were discovered during the visual inspection.

The wellpad containing Well BR-20-DG and adjacent nested Well OB-20-DG was visually inspected for integrity, and near-surface features of the wells (cap, locks, protective casing) were also inspected. No issues or items of concern were discovered during the visual inspection. From a downhole perspective and as previously discussed, Well BR-20-DG was subjected to a downwell video camera inspection on March 31, 2020, whereupon the subsurface integrity of the well was confirmed.

Additionally, it should be noted that lithium is naturally occurring in the regional soils. According to the United States Geological Survey (USGS) (see Figures 3 and 4), naturally-occurring lithium concentrations in the regional soils range from 36 to 300 ppm in near-surface soils and from 37 to 315 ppm at depths up to 2 feet bgs.

As previously acknowledged in Section 4.5, near-surface soils proximate to Well BR-20-DG and along the lined ditch were collected on September 29, 2020 and analyzed for total lithium; sediments from the discharge mixing zone were also collected and analyzed (see Appendix I). The lithium result for the sample close to well BR-20-DG was 41.4 ppm (reported as $\mu g/g$), which is at the low end of naturally-occurring levels. Conversely, the samples from the lined ditch and the discharge mixing zone (where lithium is present in the surface discharge water from Outfall 002) had total lithium results of 125 ppm and 74.3 ppm, respectively. Had contaminated stormwater runoff infiltrated the ground near Well BR-20-DG, one would have expected lithium levels in the soil to be elevated similarly to those of the lined ditch and the discharge mixing zone.

5.3 Leaching from Soils

In view of the above discussion, consideration was given to the possibility of naturally-occurring lithium leaching from the soils into the groundwater near Well BR-20-DG. To assess this aspect, the three soil/sediment samples collected on September 29, 2020 were further subjected to lithium testing via the Synthetic Precipitation Leaching Procedure (SPLP). The SPLP application attempts to pull constituents from the matrix being tested (soil samples) using low-pH extraction fluids, and in turn provides information on the propensity of the constituents to remain bound in the soils matrix or mobilize to the fluid phase.

Results of the SPLP analysis showed non-detect results for all three samples (see Appendix I), indicating the lithium present in the soils/sediments does not readily transfer/mobilize to the groundwater phase. Accordingly, it was concluded that lithium in Well BR-20-DG was not likely to be sourced from leaching of this constituent from local soils/solid matrices into the groundwater.

5.4 Groundwater Infiltration from Discharge Mixing Zone

Based on discussions with Station personnel, ongoing since the lithium concentration was initially deemed as an SSL in Well BR-20-DG, APTIM was made aware that a beaver dam had been constructed and first noticed during early-2020. As shown on Figure 5 (and also Figure 1), this dam is located along the stream (Van Buren Bay Creek) which receives the permitted landfill discharge from Outfall 002. Observations from Station personnel confirmed that this dam has created a backwater area along the stream and other reaches extending from the discharge mixing zone northward along the lined ditch in the direction of Well BR-20-DG. This backwater contains lithium as a direct result of the Outfall 002 discharge, and represented an obviously persistent ponding condition prior to its discovery, and believed sufficient enough to allow for percolation of the accumulated surface water into the groundwater proximate to Well BR-20-DG.

Once discovered, efforts were taken to alleviate the ponding and backwater creation by installation of "bypass" pipe to circumvent the beaver dam (see Figure 5). These efforts, combined with seasonally drier weather, have greatly reduced the ponding conditions to a point whereupon the

lithium concentrations in Well BR-20-DG (and adjacent Well OB-20-DG) have since returned to non-detect levels (See Appendix J).

The water level survey performed at the Site on June 22, 2020 (see Section 4.3 and Appendix G) indicated that surface water to groundwater flow was downgradient from the leachate collection network to the sedimentation basins, then to the discharge mixing zone, and ultimately to Well BR-20-DG. This pathway of downgradient flow is also responsible for increased mixing and dilution of the leachate discharges. This pathway specifically conveys leachate from the landfill to the sedimentation basins, and then into the discharge mixing zone where it is mixed with fresh water from the hydraulic basin. From the discharge mixing zone, the combined flows continue to move downstream via Van Buren Bay Creek and partially infiltrate to the groundwater where further dilution takes place. Based on this flow path and progressively greater mixing/dilution, it is logical that corresponding lithium concentrations should be affected in the same manner. More clearly, Figure 6 illustrates this anticipated progression, with a plot of the analytical data generated from the September 29, 2020 sampling event (See Appendix J) showing a steady and predicted decline in the lithium concentrations. Under more persistent and widespread ponding conditions (such as were created by the beaver dam), this progression would still appear but with less distance/time for dilution before affected groundwater reached the Well BR-20-DG area. This would enhance the probability for elevated lithium concentrations (above the CCR GWPS) to be measured in Well BR-20-DG, as was the case during the 1st QTR and 2nd QTR CCR Assessment Monitoring events.

In similar fashion, a geochemical comparison should also show the progressive mixing and dilution of the leachate. To this end, a Piper diagram was constructed using analytical data from the September 29, 2020 sampling event. As shown in Figure 7, plotting the data from samples collected from leachate manholes, the sedimentation basins, the lined ditch adjacent to the discharge mixing zone, and Wells OB-20-DG and BR-20-DG yields the predicted outcome. This diagram clearly shows the dilution of the leachate in a straight-line trend from the leachate manholes to the sedimentation basins. Then, the leachate is mixed with fresh water from the hydraulic basin which alters the chemistry of the leachate to a chemistry more like fresh water. This is depicted on the Piper diagram as the straight-line trend changes direction when the fresh water is added. The new straight-line trend then moves directly to the monitoring wells, as one would expect with further dilution of the leachate through the addition of groundwater.

6.0 Conclusions

The dilution of lithium in the groundwater between the discharge mixing zone and Well BR-20-DG under normal circumstances is sufficient that lithium is not detected at the well location. However, if ponding and creation of a more expansive backwater area occur, there is less distance between the point of groundwater infiltration and Well BR-20-DG. Under these conditions, there is less time for dilution of lithium in the groundwater before it reaches Well BR-20-DG. These latter conditions were in fact created by the construction of the beaver dam, which caused ponding and backup of the Outfall 002 receiving stream (Van Buren Bay Creek) into areas proximate to Well BR-20-DG. With discovery of the beaver dam and actions taken by Station personnel to alleviate the ponding situation, this transient occurrence has now subsided and lithium has returned to typical non-detect levels in Well BR-20-DG. Moving forward, this portion of the Landfill and receiving stream area will be closely monitored via monthly inspections for possible ponding and identification of other potential impediments to surface water flow downgradient from Outfall 002. Any such conditions will be appropriately remedied upon discovery.

7.0 Qualified Professional Engineer Certification

In accordance with §257.95(g)(3)(ii) of the Rule, I hereby certify based on a review of the information contained herein, that the technical and investigatory methods utilized in this Alternate Source Demonstration are accurate and appropriate. These methods' application have provided the necessary evidence to conclude that the Dunkirk Fly Ash Landfill is not the source of the SSL observed during the February 2020 CCR Assessment Monitoring event.

Certified by:

Professional Engineer:

Richard Southorn, P.E., P.G.

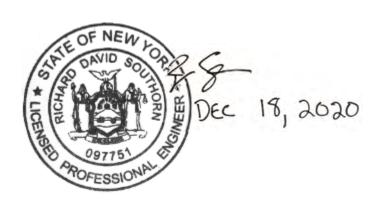
Company:

Aptim Environmental & Infrastructure, LLC

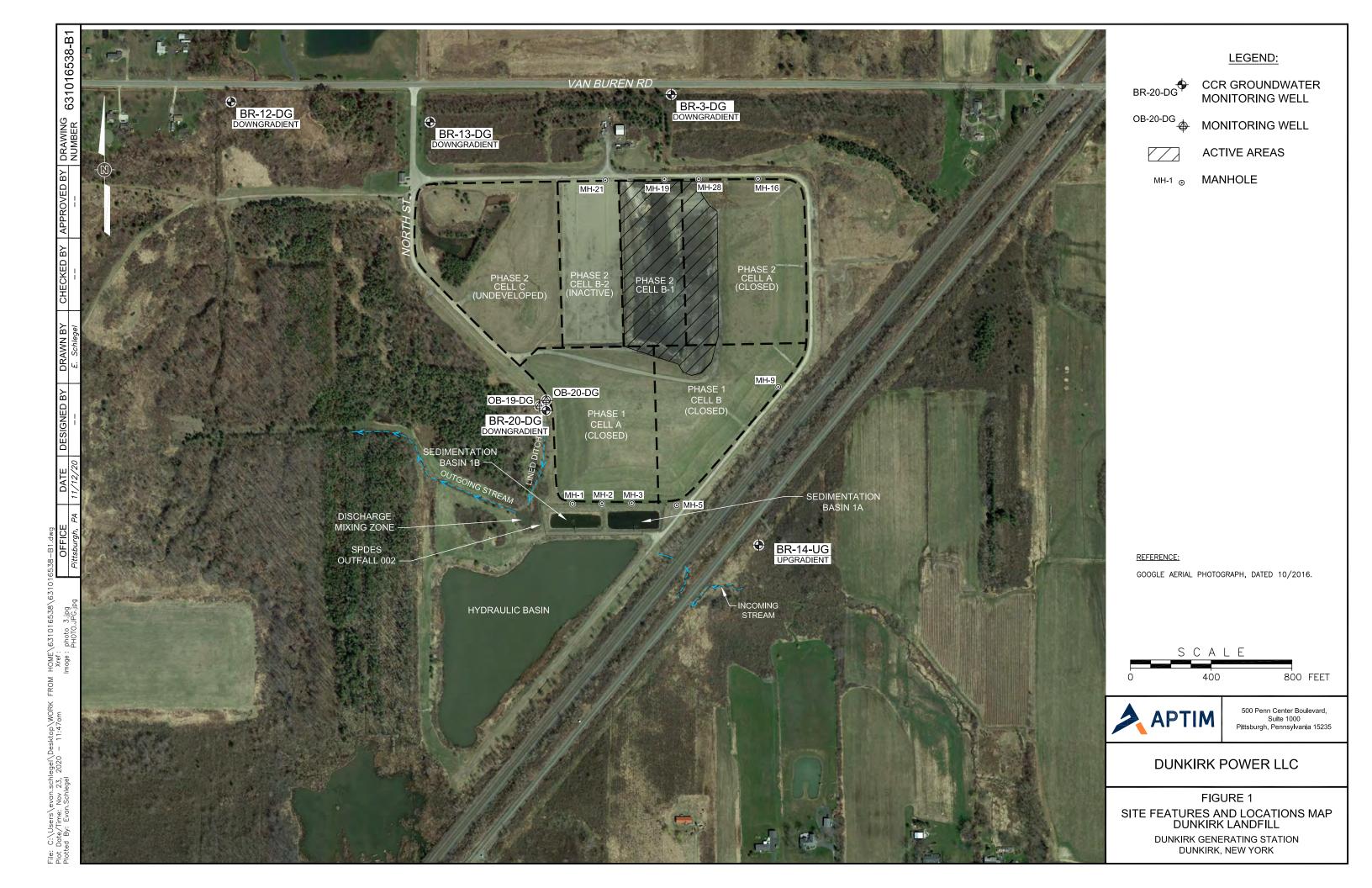
New York PE Registration Number:

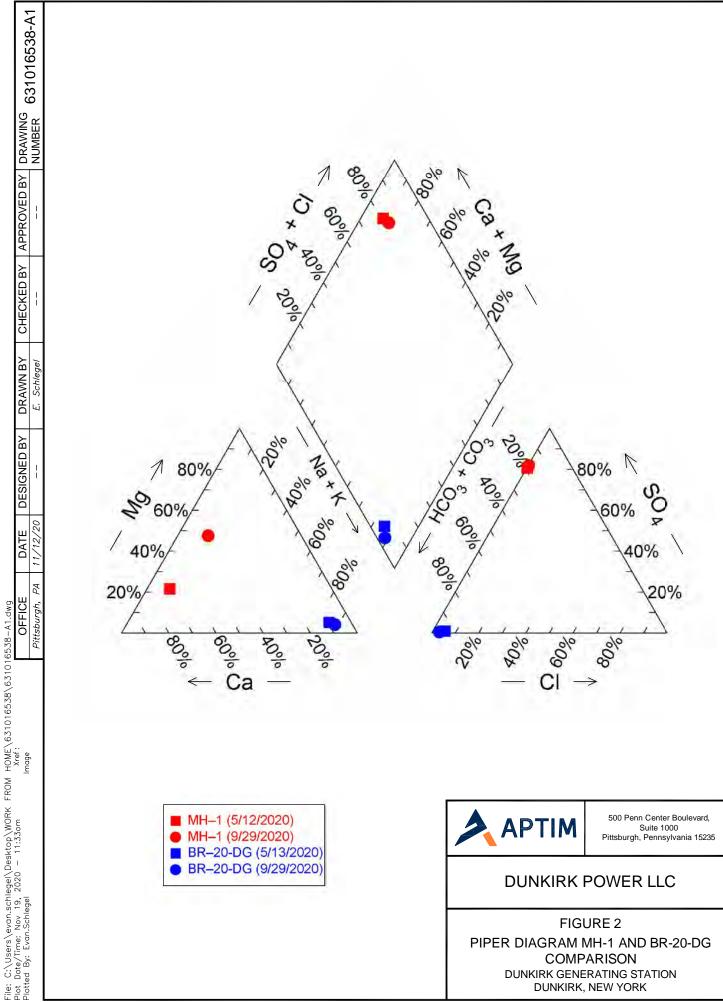
97551

Professional Engineer Seal:







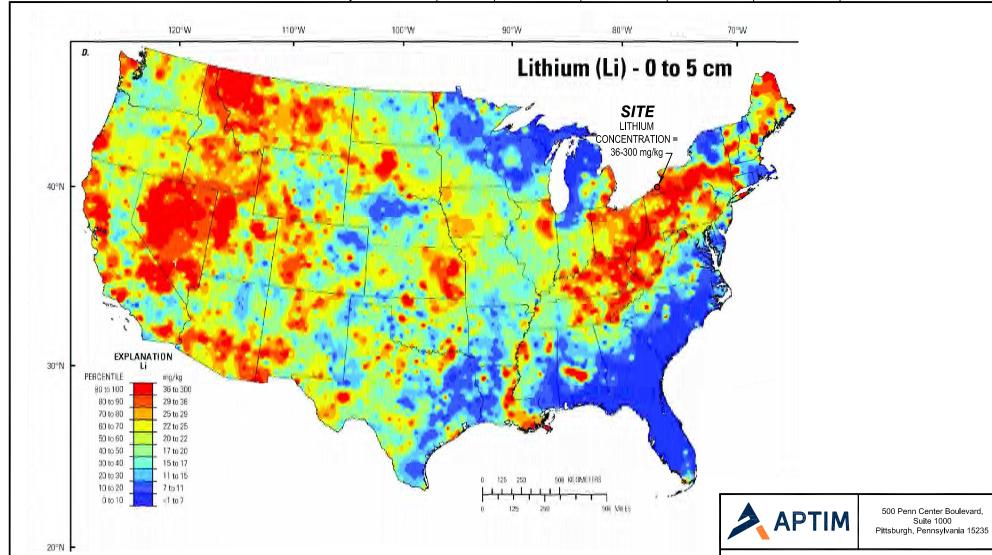


COMPARISON DUNKIRK GENERATING STATION DUNKIRK, NEW YORK

File: C:\Users\evan.schlegel\Desktop\WORK FROM HOME\631016538\631016538-A2.dwg

Plot Date/Time: Nov 19, 2020 - 8:50am Xref: **OFFICE** Plotted By: Evan.Schlegel Image

APPROVED BY DRAWING DATE **DESIGNED BY** DRAWN BY CHECKED BY 631016538-A2 NUMBER Pittsburgh, PA 11/16/20 E. Schlegel



DUNKIRK POWER LLC

Suite 1000

FIGURE 3 **REGIONALIZED LITHIUM CONCENTRATIONS IN SURFACE SOILS** (≤ 2 INCHES)

DUNKIRK GENERATING STATION DUNKIRK, NEW YORK

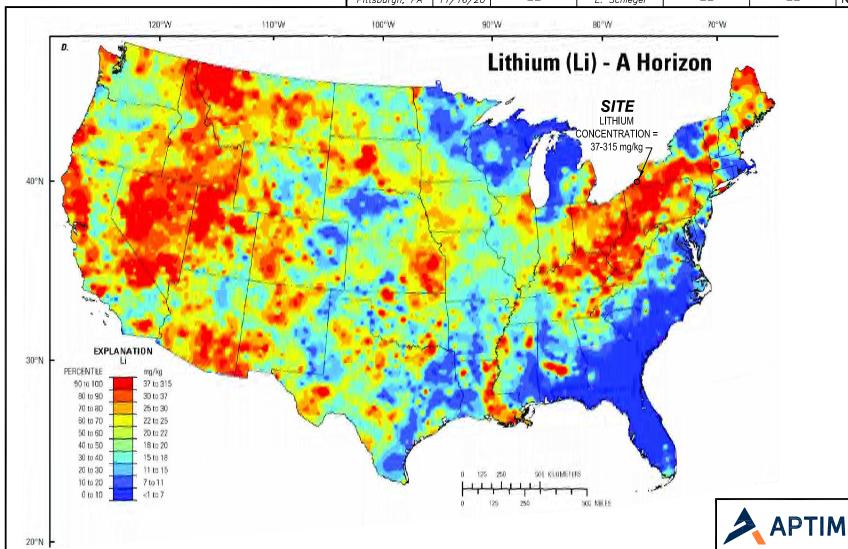
REFERENCE:

BASE MAP FROM U.S. GEOLOGICAL SURVEY DIGITAL DATA. LAMBERT CONFORMAL CONIC PROJECTION STANDARD PARALLELS 33'N AND 45' N CENTRAL MERIDIAN 96'W DATUM NAD 1983

File: C:\Users\evan.schlegel\Desktop\WORK FROM HOME\631016538\631016538-A3.dwg

Plot Date/Time: Nov 19, 2020 - 8:55am
Plotted By: Evan.Schlegel

OFFICE DATE DESIGNED BY DRAWN BY CHECKED BY APPROVED BY NUMBER 631016538-A3



DUNKIRK POWER LLC

500 Penn Center Boulevard, Suite 1000 Pittsburgh, Pennsylvania 15235

FIGURE 4
REGIONALIZED LITHIUM
CONCENTRATIONS IN SURFACE SOILS
(≤ 24 INCHES)
DUNKIRK GENERATING STATION

DUNKIRK GENERATING STATION DUNKIRK, NEW YORK

REFERENCE:

BASE MAP FROM U.S. GEOLOGICAL SURVEY DIGITAL DATA. LAMBERT CONFORMAL CONIC PROJECTION STANDARD PARALLELS 33'N AND 45'N CENTRAL MERIDIAN 96'W DATUM NAD 1983

File: C:\Users\evan.schlege\Desktop\WORK FROM HOME\631016538\631016538-A4.dwg Plot Date/Time: Nov 23, 2020 - 11:49am Xref: OFFICE Plotted By: Evan.Schlegel











500 Penn Center Boulevard, Suite 1000 Pittsburgh, Pennsylvania 15235

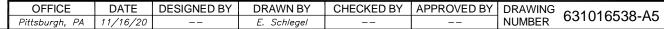
DUNKIRK POWER LLC

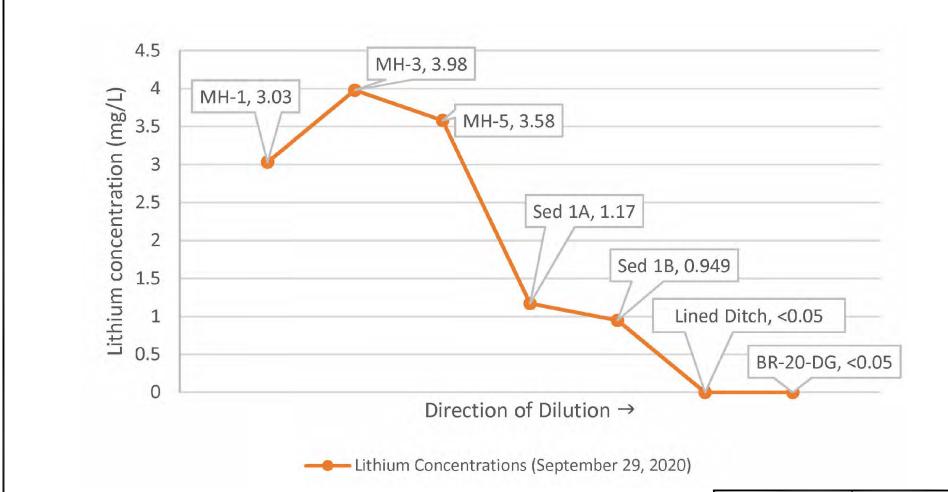
FIGURE 5

BEAVER DAM

DUNKIRK GENERATING STATION DUNKIRK, NEW YORK

OFFICE **DESIGNED BY** DATE Plotted By: Evan.Schlegel Image







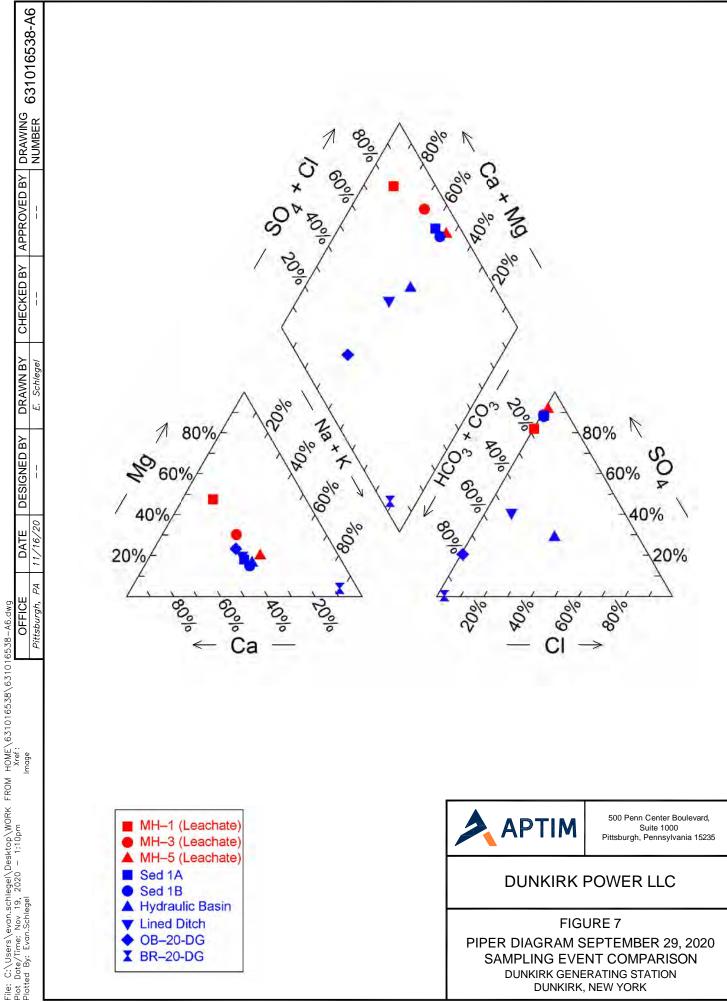
500 Penn Center Boulevard, Suite 1000 Pittsburgh, Pennsylvania 15235

DUNKIRK POWER LLC

FIGURE 6

LITHIUM CONCENTRATION PROGRESSION

DUNKIRK GENERATING STATION DUNKIRK, NEW YORK

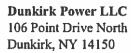


SAMPLING EVENT COMPARISON **DUNKIRK GENERATING STATION** DUNKIRK, NEW YORK

X BR-20-DG

Appendix A

Notifications to NYSDEC





April 6, 2020

Mr. David Vitale New York State Department of Environmental Conservation Division of Materials Management Director 625 Broadway Albany, NY 12233-7250

RE:

CCR Rule Notice
Dunkirk Power LLC

Dear Mr. Vitale:

Pursuant to the EPA's CCR Rule (40 CFR Part 257) and in accordance with the specific provisions of §257.95(g) and the associated requirements of §257.106(h)(6), Dunkirk Power LLC is notifying the New York State Department of Environmental Conservation that one or more Appendix IV constituents has been detected at a Statistically Significant Level (SSL) above an established Groundwater Protection Standard (GWPS) at the Dunkirk Landfill (Solid Waste Management Facility, Permit ID 9-0658-00021/00008).

This determination is based on initial results received from the ongoing Assessment Monitoring Program, specific to the recent 1st QTR 2020 CCR groundwater sampling event, and entails the detection of Lithium at concentrations greater than the associated GWPS of 50 µg/L in downgradient Well BR-20-DG. In addition to the State Director noticing requirements under §257.106(h)(6), this determination has been entered into the facility operating record per §257.105(h)(8), and will be posted to the publicly accessible website per §257.107(h)(6) at http://www.nrg.com/legal/coal-combustion-residuals/.

At this juncture and in accordance with the provisions of §257.95(g)(3)(ii), Dunkirk Power LLC is conducting a preliminary evaluation to identify if a potential alternate source may exist and be the cause for the Lithium levels presently observed in the subject well. Should this preliminary evaluation deem an alternate source as unlikely, efforts will transition to characterize the nature and extent of the SSL impacts per §257.95(g)(1)(i-iv), in order to further support the subsequently required Assessment of Corrective Measures per §257.95(g)(3)(i) and §257.96(a).

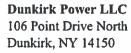
Should you require additional information, please contact George Streit at (716)-200-2797 or George Streit@nrg.com.

Respectfully submitted,

George T. Streit

Environmental Coordinator

cc: Peter Grasso, P.E., 270 Michigan Ave., Buffalo, NY 14203





July 6, 2020

Mr. David Vitale
New York State Department of Environmental Conservation
Division of Materials Management Director
625 Broadway
Albany, NY 12233-7250

RE:

CCR Rule Notice Dunkirk Power LLC

Dear Mr. Vitale:

Pursuant to the EPA's CCR Rule (40 CFR Part 257) and in accordance with the specific provisions of §257.95(g) and the associated requirements of §257.106(h)(6), Dunkirk Power LLC notified the New York State Department of Environmental Conservation on April 6, 2020 that one or more Appendix IV constituents had been detected at a Statistically Significant Level (SSL) above an established Groundwater Protection Standard (GWPS) at the Dunkirk Landfill (Solid Waste Management Facility, Permit ID 9-0658-00021/00008). There are characterization activities and other efforts currently being performed, and which may ultimately support a potential Alternate Source Demonstration for the listed CCR unit. However, in consideration of the SSL being valid and representative, an Assessment of Corrective Measures for the affected CCR unit is being initiated per §257.95(g)(5) and §257.96(a).

Should you require additional information, please contact George Streit at (716)-200-2797 or George.Streit@nrg.com.

Respectfully submitted

George T. Streit

CC:

Environmental Coordinator

Peter Grasso, P.E., 270 Michigan Ave., Buffalo, NY 14203

CCR ASSESSMENT OF CORRECTIVE MEASURES Dunkirk Generating Station

August 3, 2020

George Streit Dunkirk Power LLC 106 Point Drive North Dunkirk, NY 14150

VIA E-MAIL

Re: CCR Assessment of Corrective Measures Time Extension Request

Dunkirk Generating Station—Dunkirk Landfill

Dunkirk, New York

Dear Mr. Streit,

As you are aware, Title 40 Code of Federal Regulations (CFR) Part 257 Subpart D addresses the management of coal combustion residuals (CCR) in landfills and surface impoundments. As an acknowledged feature formerly used for the management of CCR materials, the Dunkirk Landfill at the Dunkirk Generating Station is subject to the provisions of the CCR Rule. Per notification provided to the State Director (NYSDEC) on April 6, 2020, lithium was measured in a downgradient CCR monitoring well (Well BR-20-DG) at a statistically significant level (SSL) above its corresponding site-specific groundwater protection standard. This determination, in turn, has triggered an Assessment of Corrective Measures (ACM) which commenced on July 6, 2020, per §257.95(g)(3)(i) and §257.96(a). As required, notice of the ACM initiation was also provided to the State Director.

In consideration of continuing efforts to potentially identify an alternate source for the detected lithium in Well BR-20-DG, it is anticipated that substantive work directly in support of the ACM will be slightly deferred until definitive findings can be established. As such, a 60-day extension of the ACM due date is being applied in accordance with provisions under Section 257.96(a) of the CCR Rule. Accordingly, the ACM (if necessary) will be completed by December 6, 2020.

Respectfully submitted,

David Shott, CHMM

APTIM

Richard Southorn, P.E., P.G.

APTIM

cc: David Bacher, NRG Tony Shea, NRG

Daniel J. Shoot

CERTIFICATION

In accordance with Section 257.96(a) of the CCR Rule, I hereby certify based on a review of the information contained within this time extension request dated August 3, 2020, that the information contained is accurate to the best of my knowledge.

Certified by:

Richard Southorn, P.E., P.G.

New York Professional Engineer Registration No.: 97551

APTIM

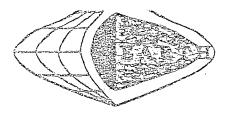
Signature:

Date: 8/03/2620

Seal:

Appendix B

Boring Logs



Test Bozings and Logs

East Aurora, New York 14052 . (716) 655-1717

SCRE CORE MITORING WELL

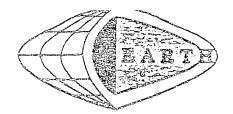
BR3DG & OB4DG

SURF. D.FV. 619.08

LOCATION Near hanger and Van Buren Road Flyash disposal site investigation Airport site, VanBuren Rd., Th. of Pomfret 4KR3c Niagara Mohask Power Corp. 7/30/84 COMPLETED 7/31/84 DATE STARTED CLIENT BLOWS ON ELFRANK WELL males 1777 7 151772 PM SECTION & CLASSICATION perin BR3DG íest Slightly maist dark gray silt loam (CLAYEY-SILT) topsoil, granular 11 soil structure, very stiff 22 Moist distinctly mottled olive brown 2.0 32 shaly silty clay loam (CLAYEY-SILT) with 15 to 40% mostly subangular and 28 angular shale gravel & occasional channer, hard with nearly vertical 34 gray desiccation cracks cutlining (3) 35 prismatic soil structure 3 | 13 5.0 5 33 --- grades downward to --- 5.0 pape 51 Moist distinctly nottled olive brown Silty shaly 100/3 very shaly silt loam (CLAYEY-SILT) glacial till 4 1.00/55 with 40 to 60% mostly angular shale 7.0 feet ove channer, hard, weak platy soil 18 shale bedroc structure 51 --- grades downward to - . . 7.0 to end of 121 Inch 70 coring. Extremely moist becoming wet at 8.0 62 feet gray shale bedrock, soft, bed-Shelby tube 6 | 32 rock can be crushed between finder taken between F00/3/# .. with some effort into a CLAYEY-SILA 2.0 and 4.0 individual beds 1/15 to 1/8 inch thick 10.0 fort depth i 10 ---- clear transition to -- 10.0 monitoring w 5B. acreer Gray shale bedrock, moderately hard, Runes 0 feet shale bedrock cannot be etched with (1) Bentonite finger nail but with knife, beds U Recovery 4.5 ft. cellets. slotted PVC 20 slotted separated into 1-5 inch lengths, N ROD = 1.6 fest (2) Cement-benton little evidence of weathering grout. (3) 4" slotted PV screen. 15.0 15.0 15 Water table at 7.8 feet as Coring completed to 15.0 feet. completion of soil sampli Water table 2.4 feet below surface next morning after coring with water the prethe day

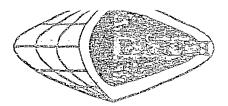
N = NUMBER OF BLOWS TO DRIVE 2 "SPOON 12 "WITH 140 ID WT. FALLING 30 "PER BLOW.

TEN LOGGED BY Donald W. Owens/Soil Scientist curry 1 or 1



Test Borings and Logs East Aurers, New York 14082 • (716) 656-1717

MAT	TORIN	G W		BR	120	G	23				SUR	5. E.EV598.0			
	PROJE 4K83	Çî j	M <u>an</u> Pra	jto Dos	ric ed	g w Íly	ell dec	_d	nstallation LOCATION 60' so	o dit	th of VapPuter Road				
	CTEM		N12	gar	a M	cha	uk -	Po	DATE STARTED 4	4/88		OMPLETED <u>6/4/84</u>			
		2		왕. 도	DET ALER	CN M	engregorien.			1.775	e v	TO THE PRODUCTION OF T			
	cer feet	S.A.P.U.	6	THE RESERVE AND ADDRESS OF THE PERSON NAMED IN	of Taxable Printers	18/ 18	N		encentam & Categration	Will:	II.	Wase a remains			
		1	2		ļ	 			Extremely moist dark brown silt loam			Topsoil to 0.5			
				5_		-	15 ا	1	(CLAYEY-SILT) topsoil 0.5			over silty lake			
			_	J.	10	-			Extremely modest highly most bed olive			sediment to 1.5			
						114		ſ,	brown silt leam (CIAVEY-SILT) with	Į.		over shaly silts			
*		2	3						2 to 5% fine size black shale gravel very stiff, blocky soil structure 1.5	•		glacial till to			
vymili mystratyti sineki	THE THE PERSON NAMED IN	6	The same	5	-	-		1	clear transition to 1:5-			feet over soft b			
		-	-	<i>H</i>	14		20	١	Extremely moist distinctly motified		3	weathered shale bedrock to end o boring.			
		1000	-		125	Anna Samuel	-	Å.	olive brown silt losm (CIAYEY-SILT)	1	31.0	bring.			
•			-	ļ	-	31		1,	with 5 to 15% mostly subangular black		1	be also ded one o			
		13_	115			DRUGHER	-	↓ `	\ shake gravel, hard with nearly vertice		ement/bentonite				
Terraneous mais sentiti	5			25			54		/ gray desiccation cracks	7	18	(1) Bentonite p			
				<u> </u>	28	<u> </u>		}.	clear transition to 3.5		E E	seal			
]		44		,	Extremely moist dark brown shalv	o o	8	مه وعيضونه			
		4	28			1	Ì	1.	. silty clay losm (CIAYEY-SILT) with	pdfd	4				
			-	1	-	-		1	20 to 40% mostly subangular black	1	5				
		-		33			171	à	shale gravel a cocasional cobble,	P. C.	en				
		-		 -	38	-	-	Λ	hand meading and structure	D ₄	Ö				
			-			25		1	clear transition to 5.0	ெ	THE PROPERTY OF	8.0			
		5	29] \	Moist to extremely moist distinctly	bul	(3)				
				45				1	mottled olive brown shally silty clay	18.	(1)	2.0			
					100	1/3	1	ñ	\ lean (CLAYEY-SILT) with 25 to 40%	100		A CONTRACTOR CONTRACTO			
	10					2000		\mathbb{N}	mostly angular & subangular black			10.0			
entimentalisms of the Co		~ · · · · · · · · · · · · · · · · · · ·	24			-countra	-	1	shale gravel & coessional comble,	TOP IN THE		enatedale de			
		3-	129	\			<u> </u>	$\{\ \ \}$	hard, massive soil structure 7.0						
			-	53			C4	1	Moist to extremely moist olive gray	22					
					51			1	alaly silty clay loss (CLAYEX-SILT)		and				
	ļ			ļ		76			with 25 to 40% mostly angular & sub-	ted	83				
			<u></u>		-				angular black shale gravel & oppra-	8 B	9				
									ional cobble, hard, messive soil	s lott	alze				
	İ						WHAT THE	1		10U	3				
			-						Moist black soft weathered thinly	35	4	14.0			
	ŀ								bedded shale bedrock that can be	<u></u>		14.V			
	}							/	pressed between fingers into a (CLAYE	1					
	_15				<u> </u>			\	SILT), becomes extremely moist with alternating beds of gray & black						
]								weathered shale below 10.0 feet 14.0						
	Į								14.0 180 14.0	+					
	ſ								Boring completed at 14.0 feet.	1.1~	- دیخ	table at 13.5 fee			
	Ì									ŧ		surface at			
	ŀ											tion, rose to 7.7			
0474			الــــــــــــــــــــــــــــــــــــ							<u>ب پ ب</u>	عد لج				



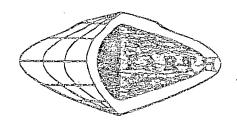
Test Boxings and Logs East Aurora, New York 14082 • (716) 685-1717

	881304	3
MONTTORING		MOTERN SCHOOL

SURF. BLEV. 604.7

PROJECT	Flyash disposal site investigation LOCATION 1100 ft, west of easterly drive												
4%33c	Airport site.	VanSuren Rd. In. of Roufret past har	ger, 20	Oft. south of Ve									
CNEM _	Niagara Mohask	POWER COIP. DATE STARTED 10/	18/84	COMPLETED 10/25/84									
		agues a	- Kingara Charles	- Contractive									
	elows on	от в при	The section of the se	And the recommendation of the second control of the second									
PANA MARIA	SAMPLE	PERESPYDON & CLASSIFICATION	WEIL	CHARGE & BLEAT SETARY									
feet	0 e 12 12 12 N	Sylandamore (1909) on Carry Light 10 Paries	BR13DG	TO NOTICE TO SERVICE OF THE SECTION									
	2		101/2000	of meanwrith the production of the section of the s									
		Moist dark gray silt loss (CIAYEY-		Loamy lake sedin									
	2 12	SIII) topsoil, soft, gramular soil		to 2.0 feet over									
		511111112		silty lake sedin									
-	15	Moist distinctly sottled olive brown		to 5.0 feet over									
2	10	losm (SAMD-SILI-CLAY), stiff, blocky soil structure with gray pad faces		dense shaly glac									
	19 48			till to 12.0 fee									
	29	2.0		over shale bedro									
	30	Moist distinctly mottled olive brown		to end of coring									
3	18	silt losm (CLAYEY-SILT), hard, thinly	rout	Dadmak anna									
5	27	laminated with very thin coarse silt		Runl - 13.0-15.0									
	45 72	5.0	0.	Recovery - 4.6 f									
	102	Slightly moist distinctly mottled	1,5	ROD = 26.0%									
 	74	olive brown sively silt loss (Claver-	8 5										
4	MATERIAL STREET, STREE	SILT) with 15 to 40% mostly soft sub-	pipe	Advanced 6 inch									
	0.00/3=	argular ard argular shale gravel, hard		roller bit to 13 feet prior to co									
THE RESIDENCE OF THE PARTY OF T		platy soil structure		reer brior to co.									
<u></u>		8.0	Inch										
5_	16	Moist gray shaly silt loss (CLAYEY	B 15										
	18 49	SILT) with 15 to 40% mostly subangular	40 -accor	9.0									
	31	and angular shale gravel a occasional	1/31										
10	30	channer, very stiff, massive soil	(1)	10.0									
6	7	stricture											
	he la		1	11.0									
	47	•		an calculate Manifestrates									
	000/55	7											
7 1	00/19	$\frac{12.0}{1}$		(1) Bentonite									
	<u> </u>	•	eerted reested rd	pellets.									
		Ministratally hand blank to	T GOT	periecs.									
		inderately hard, black thinly bedded	an an	(2) Bedrock cut!									
		shale bedrock, bedrock becomes slightly harder with depth. Most breaks in											
		core show evidence of weathering.	PWAP	No water at comp									
15	Rm I	Core is mostly separated into 1-4 inch	IDP B.1	of soil sampling Water table at 5									
		lengthe !	1 7 1	below surface on									
			Z 850	16.0 10.24.84.									
		•		and the state of t									
1			(2)										
I8		Coring completed at 18.0 feet.	and the same of th	18.0									

N = NUMBER OF BLOWS TO DRIVE 2 " SPOON 12" WITH 140 Ib. WT. FALLING 30 " PER BLOW.



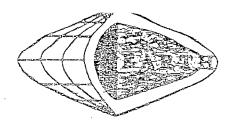
Test Borings and Logs East Aurora, New York 14052 • (716) 655-1717

MINITORING WELL BRIADG

SURF. ELEV. 628.4

Soil	PROJECT 4K83c	Airmit site.	VanBuren Rd Th. of Ponfret	SE of ra	ilroad	tracks		
SET 1 1 2 Set 1 2 Set 1 1 2 Set 1 1 2 Set 1 1 2 Set 1 2 Set 1 1 2 Set 1 2 Set 1 2 Set 1 1	QUEVT .	Niagara Mohaw	k Power Corp. DATE STARTE	D <u>10/29</u>	<u> </u>	COMPLETED <u>10/29/8</u>		
Sample S	feet second	CA MARIES	SECURIOS & CASETA ATOM					
	10 6	5 8 8 12 24 12 5 10 29 36 27 40 80 47 8 16 26 0 35 15 44 45 17 28 50 A 50	Moist distinctly mottled olive silty clay loam (CLAYEY-SILT), stiff with nearly vertical grades desiccation cracks	brown very y 4.0 tled SULT), ith 5.0 brown with ile 6.0 Livet 10.0 25 27 27 26 26 26 26 26 26 26 26 26 26 26 26 26	S E Cement bentonite	sampling. (1) Bentonite pellets. (2) #4 size sand. (3) 4" slotted PV screen. (20 slotted)		

N = NUMBER OF BLOWS TO DRIVE ___ 2 "SPOON __ 12 " WITH __ 140 ID. WT. FALLING ___ 30 " PER BLOW.



Test Borings and Logs East Aurers, New York 14082 • (718) 686-1717

TLO:	QU.	WE	L-	BR:	14D	G .			S	URF. ELEV. 528.4
	PROJE	(CT	F1	yas Uro	h d	lis. sit	osa e	Laita investigation LOCATION <u>SE of r</u> VanBuran Rd. Th. of Pomfret	ومالنو	ad tracks
									9/84	COMPLETED 10/29/84
THE STREET, ST	52773	O. O.	-	HO SEPCIA ELFALLE			and the second	ESCRETTON & CLASSIFICATION	terrar	LI WARRE BESAR & RECARDS
encial sensored	epth feet	1.83	0/3	12	12/13	18/24	N	Employee 1 stand Co.	ER141	JG
								Wet gray shale bedrock, thinly bedded	ا ا	Di la
					-	<u> </u>		soft and very soft, bedrock can be crushed between fingers into	1	gand
A MAGNETURE FINA	20							CLAYEY-SILT	英	Bize
		10	مدا	30	 					♥
				Company of the Party of the Par	50/	7 7			20	म निम्ना राज्य विकास
		11	73		۶۲≅		-			3 1 22 3
				دهانست سیست				Sampling completed at 22.2 feet.	Water	r table at 12.2 feet
					<u> </u>	-			below	v surface at comple
	~-									
	25			32 M WEST SHAP						
•				Pareta museu			-			
							CHECKE STREET,			
er Mark Blood Strong and Market Annual Strong St	SECURITY NOTES AND			et mention	*******					
								·		
*										
(~ (~)	_30						Tanana San	•		
			a====							
-										
	35	_								
-										ور ومستوندر و بعيس المراجع بين والمستون و المستون و

N - NUMBER OF BLOWS TO DRIVE 2 "SPOON 12 "WITH 140 ID WT. FALLING 30 " PER BLOW.

monald W number (Cott) contamint of



Soil Investigations and Natural Resource Assessments

Roycroft Campus, 31 S. Grove St. • East Aurora, NY 14052 • (716) 655-1717

LOCATION

BR20DG HOLE NO.

SURF. ELEV.

PROJECT

Monitoring well installation

Southern most well in cluster,

4K83d

Solid waste facility. Town of Pomfret, NY

located along western side abandoned N-S runway, 1000 ft sour of abandoned E-W runway. ED _7/10/87 COMPLETED _7/10/87

CLIENT

NIAGARA MOHAWK POWER CORP.

DATE STARTED

DEPTH						<u> </u>							
DEPTH	NO P	0	SA 6	MPLI 12	18	N		DESCRIPTION & CLASSIFICATION		ELL			
feet	Š	6	12	18	24				BR.	<u> 20100</u>			
	4	1	J					Advanced augers without sampling 0-2.0 foot depth			Silty lake sedi-		
	\vdash		dya: aug		1			party of the first map on			ments to 4.5 feet over coarse silty		
	1							Moist distinctly mottled			lake sediments		
	1	3						olive brown silt loam (CLAYEY	-		to 5.4 feet over		
			4			. 9		SILT), stiff with nearly nearly vertical gray desic-			shaly glacial till to end of split		
		<u> </u>		5				cation cracks			spoon sampling.		
	<u> </u>	_			6			4 5		İ			
5	2	2	3		_			grades downward to 4.3	er	:	Hard augering at 5.5 foot depth		
		 	-3	7		10		Wet distinctly mottled olive brown silt loam (SANDY-SILT)	rise	1	to 16.2 foot depth.		
		T			16		`\	with little to some very fine					
	3	-6					\	size sand, loose, material	pine	2			
		ļ	13		<u> </u>	35	`\	tends to liquify when disturbed, thinly bedded	1				
				22		33		grades downward to - 5.4	PVC	t l			
	-	-	-		25	-			1	1 6	,		
	\vdash	\vdash			 				diameter				
								Extremely moist faintly mot-	l e	ite			
10								tled olive brown shaly silty clay loam (CLAYEY-SILT) with	ja	u o			
	<u></u>	<u> </u>		L_	ļ			15 to 40% mostly angular	1	ent			
	<u> </u>	 	<u> </u>	-				shale gravel, dense, massive	ide	ڄ			
	-	+		-		-		soil structure	inside	nt.			
	-	I^-	 	 	-	 							
								Advanced augers below 8.0	inch	Ce			
								foot depth without sampling	1	1			
		<u> </u>		<u> </u>				to 16.2 foot depth. Refer to Monitoring Well BR20DG for des-	OW.F.	-	13.8		
		1_	<u> </u>	<u> </u>				cription of glacial till and	Ľ	1			
15	-	+-	\vdash			-		shale bedrock to top of		(1)	(1) Bentonite pellets		
	-	+-	 	 	-			coring depth at 16.2 feet.					
16.2		\vdash	\vdash	<u> </u>	 	-		Gray shale bedrock, moderately hard					
	H	RI	IN	#1				core can be easily etched with	ľ				
	口		Ľ					knife, core separated into 1-2 inch		<u> </u>	Continued on sheet 2.		
								rename 10.2					

N = NUMBER OF BLOWS TO DRIVE _____ " SPOON ____ 12 __ " WITH ___ 14.0 __ Ib. WT. FALLING ____ 30 __ " PER BLOW.

bls LOGGED BY Donald W. Owens/Soil Scientist

SHEET ____ OF ___3____



Soil Investigations and Natural Resource Assessments

Roycroft Campus, 31 S. Grove St. • East Aurora, NY 14052 • (716) 655-1717

SURF. ELEV.

MONITORING	WELL	
HOLENO	BR20DG	

PROJECT

4K83d

CLIENT

Southern most well in cluster,

Monitoring well installation LOCATION located along western side of
Solid waste facility. Town of Pomfret,NY abandoned N-S runway, 1000 ft

NIAGARA MOHAWK POWER CORP. DATE STARTED 7/10/87 COMPLETED 7/10/87

	۳.	BLOWS ON SAMPLER 0 0 6 12 18 24 N		Π		T	1.7172	T T								
DEPTH	¥2	0/	6/12		18/	N	1	DESCRIPTION & CLASSIFICATION	1		ււ DDG	WATER TABLE & REMARKS				
_fee	<u> </u>	6	12	18	24		K		╅			17.				
			N	#1			/	Gray shale bedrock, very soft, bed rock can easily be crushed between fingers into CLAYEY-SILT 16. Gray shale bedrock, moderately hard, core can be easily etched		ser pip		B∈	(1)		ets g summa	
20	₩	-				_	┨	\ \ with knife, core separated into 1-	4	ri		RUN	DEPTH	LENGTH.	PECON SE	
21.2	×							inch lengths Gray shale bedrock, very soft bedrock can easily be crushed between fingers into CLAYEY-SILT, occasional thin moder-	t,	" ID I			16.2- 21.2' 21.2- 26.2' 26.2-	5.0'	5.0'	0
					ļ		Λ	\ately hard interbed \frac{1}{4} - \frac{1}{2} inch thick 18.3		7	1	3	31.2'	5.01	5.0	32"
25		R	UN	#2				thick Gray shale bedrock, moderately hard, core can be easily etched with knife, core separated in 1-3 inch lengths Gray shale bedrock, alterately and shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, moderately shale bedrock, moderately shale bedrock, moderately shale bedrock, moderately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale bedrock, alterately shale s		3.2		4 RU #	31.2- 36.2' N RQD	5.0'	5.0'	
26.2	X	R	JN	#3				nating soft and moderately hard layers 1-3 inches thick 23.2 Gray shale bedrock, moderately hard, core can be easily etched with knife, core separated into 1-3 inches lengths 24.0	2	PVC screen	size sand	$\begin{bmatrix} \frac{1}{2} \\ \frac{3}{4} \end{bmatrix}$	50	용		
30	$ \uparrow \uparrow $	f^-	 	<u> </u>	\vdash	ļ ——	1	Gray shale bedrock, moder- ately hard, core can be		2,"	4					
31.2	H	X					# 	easily etched with knife, core separated into 1-6 inch lengths, noticed nearly ver- tical joint 25.5-27.0 foot depth with slight evidence of weathering grades downward to -27.6		#10 slotted	Number					
		_	<u> </u>	<u> </u>	<u> </u>		1	-	-			33.	₹			
	H	R	UN	#4			-	See next sheet								
35	H	\perp					_					Co	ntinu	ed on	shee	t 3

N = NUMBER OF BLOWS TO DRIVE	" SPOON " WITH Ib. WT. FALLING	 " PER BLOW



									Soil Investigations and I	vaturat kesource	Assess	ments			
									Roycroft Campus, 31 S. Grove	St. • East Aurora	1, NY 140	952 • (716) 655-1717			
MON:	HOL	JECT B3d)	BR Mon Sol:	20D ito	ri vast	ng te f	we. aci	nued ll installation lity, Town of Pomfret K POWER CORP.	LOCATION 100	SURF. ELEV. uthern most well in cluster, cated along western side of abar ned N-S runway, 1000 ft south abandoned E-W runway. 7/8/87 COMPLETED 7/10/87				
DEPTH feet	SAMPLE NO.	0 6		DWS C		N			DESCRIPTION & CLASSIFICAT	ION	WELL	WATER TABLE & REMARKS			
36.2	•	RU	N_#	4					Gray shale bedrock ately hard, core of easily etched with core separated into lengths, occasions shale interbed 1/8	can be n knife, to 2-9 inch nl very soft		36.2			
40								/;	Gray shale bedrock difficult to etch knife, core separations lengths Gray shale bedrock ately hard, core ceasily etched with core separated into lengths, with very beds 1/8-½ inch the colear transit	c, hard, core with ated into 6 c, moder- can be a knife, to 2-3 inch b soft inter aick ation to	31.2				
40)							/;	inch lengths Gray shale bedrock ately hard, core of easily etched with core separated into lengths, with very beds 1/8-½ inch th	c, moder- can be n knife, to 2-3 inch y soft inter nick tion to c, hard,					

difficult to etch core with knife, separated into 1-9 inch lengths 36.2 Core completed at 36.2 feet. No water loss during coring 45

N = NUMBER OF BL	ows to drive		ON	" WITH <u></u> lb.	WT. FALLING		_" PER BLOW.
ls LOGGED BY Dona	ld W. Owe	ns/Soil Sci	entist	SHE	ET3	OF <u>3</u>	



1st QTR 2020 Assessment Monitoring Report (February 2020)



ATTORNEY CLIENT PRIVILEGED

QUARTERLY SAMPLING AND ANALYSIS REPORT FOR CCR PARAMETERS DUNKIRK FLYASH LANDFILL (First Quarter 2020)

FTA Report CCR-D-20-01 DUN LF CCR 1 QTR 2020

March 2, 2020

Prepared for:

Mr. Gregory M. Brown, Esq. BROWN DUKE & FOGEL, P.C. 100 Madison Street, AXA Tower 1, Ste. 1820 Syracuse, New York 13202

Prepared by:

Frontier Technical Associates, Inc. 8675 Main Street
Williamsville, New York 14221

The analytical test results reported herein were performed to professional standards of the NYSDOH ELAP program. The analytical data are for management use only, and except for regulatory compliance reporting, are not intended for any other purpose.



TABLE OF CONTENTS

Item		Page
Introduction		1
Scope		1
Data Quality Objectives		4
Site History		4
Monitoring Locations		5
Groundwater Elevations		5
Sampling Personnel		5
Sampling Equipment and Containers		5
Monitoring Point Assessment		7
Well Purging		7
Laboratories		7
Field Information		7
Analytical Testing		7
QA/QC		9
Results		9
Summary		9

Appendix

Graphical Representation of Groundwater Elevations Monitoring Point Assessment Forms Monitoring Field Forms Laboratory Data Chain-of-Custody Records



QUARTERLY SAMPLING AND ANALYSIS REPORT DUNKIRK FLYASH LANDFILL (First Quarter 2020)

INTRODUCTION

NRG Dunkirk Power, LLC owns and operates the Dunkirk Solid Waste Management Facility (Dunkirk Flyash Landfill) for their exclusive use in the Town of Pomfret, New York. Wastes received at the landfill were limited to flyash, bottom ash, pyrites and wastewater treatment sludges from NRG Dunkirk fossil fuel combustion facilities.

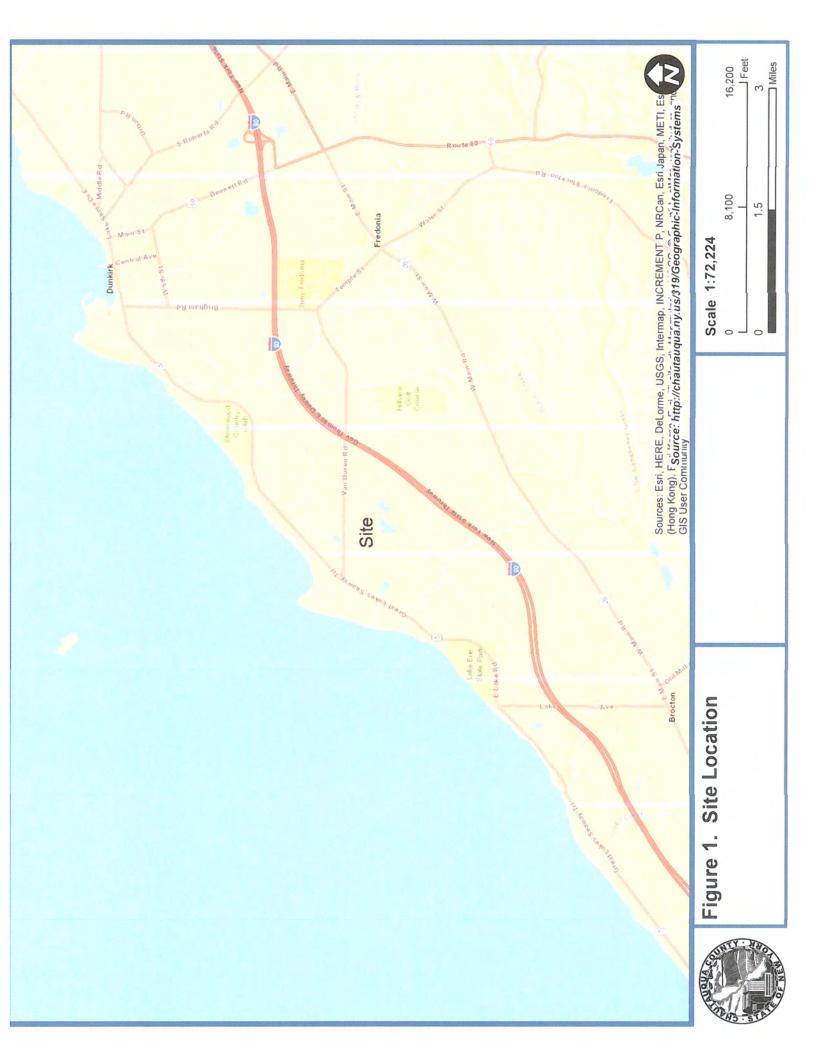
The landfill is located on a 339.6 acre property (9 parcels) of land at the location shown on Figure 1. Figure 2 is an aerial photograph of the site. The landfill is on the south side of Van Buren Road and is surrounded by railroads, industrial, farmland and vacant properties. Landfill activities in the southern portion of the site as shown are complete as these cells are closed (Phase 1). The active cells (Phase 2) are in the north side of the site.

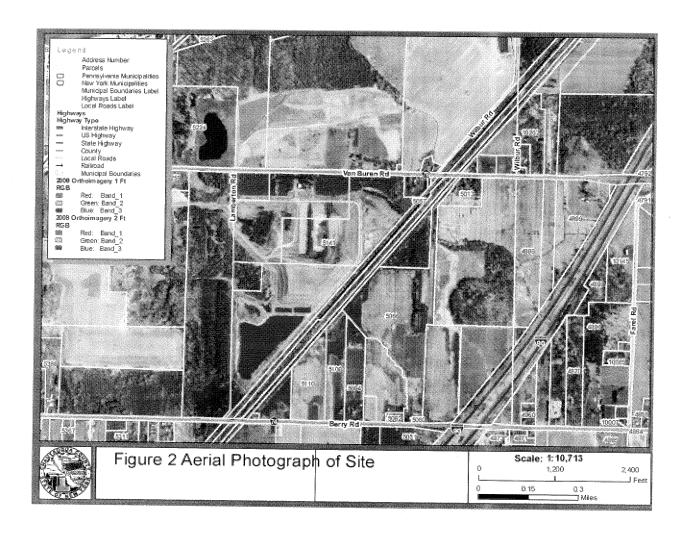
In response to the requirements of the EPA Coal Combustion Residue requirements, Frontier Technical Associates, Inc. has completed groundwater monitoring report for the First Quarter of 2020 for the Dunkirk Landfill. This analytical data report provides the information for reporting to the USEPA and NYSDEC. The monitoring included five monitoring wells.

SCOPE

This report presents the sampling and analytical results for the quarterly monitoring event at the NRG Dunkirk Landfill. Groundwater sampling and field measurements were performed by Frontier Technical Associates, Inc. and laboratory measurements were performed by Adirondack Environmental Services, Inc. Adirondack Environmental Services is a NYSDOH ELAP certified laboratory (ELAP No. 10709). Pace Analytical performed the radium testing and they are a NYSDOH ELAP certified laboratory (ELAP No. 10888). This report includes the following elements:

- Figures showing the location of the sampling points.
- Field data sheets showing the purging and sampling information and field measurements for pH, specific conductance, temperature and turbidity.





- Analytical methods and laboratories used.
- Data summary tables.
- Quality control and quality assurance data.
- Chain-of-custody records.
- Monitoring Point Assessment Forms

DATA QUALITY OBJECTIVES

The primary data quality objectives of the monitoring program are to obtain representative samples and accurate analytical results of the groundwater at the Dunkirk Landfill. The results are to be used in the assessment of the groundwater.

SITE HISTORY

NRG Dunkirk has operated this facility since 1999 and prior to that the site was owned and operated by Niagara Mohawk from 1988 to 1999. Over its operating history the facility has been developed in phases. Phase I of the facility located in the southern portion of the site consists of two cells. The two cells A & B, approximately 18.8 acres, have been filled to capacity and are closed and capped. Phase I is monitored by three (3) wells, OB-19-DG, OB-20-DG, and BR-20-DG, all located in a cluster northwest of Phase I.

Phase II is located immediately north of the Phase I development and consists of approximately 35 acres which is divided into three (3) cells. Phase II Cell A consists of approximately 11.4 acres and was constructed in 1993. This cell is nearing its capacity and was partially capped in 2001 and 2008. Phase II Cell B-1 was constructed in 2004 and Phase II Cell B-2 was constructed in 2010. The total acreage of Cell B is 11.6 acres and it is adjacent to and west of Phase II Cell A. Leachate from both Phase I and Phase II development drains to the sedimentation basins on the south side of the site.

MONITORING LOCATIONS

The locations of the monitoring points are shown on Figure 3. These wells are also used for monitoring under the NYSDEC Part 360 requirements. The NYSDEC monitoring includes additional soil profile wells, leachate collection monitoring, leachate monitoring and surface water

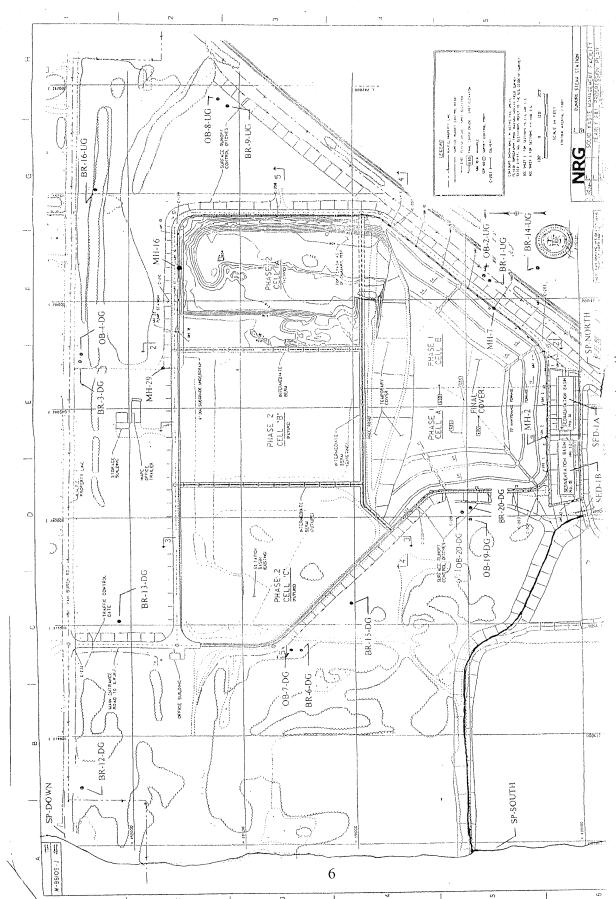


Figure 3- Monitoring Locations

monitoring. This additional data is reported to the NYSDEC under the provision of the Landfill Permit. The groundwater monitoring is sampled at the following locations:

BR-14-UG (up-gradient well of Phase 1 and Phase 2) – Bedrock Well

Downgradient Wells

BR-20-DG	Bedrock Well
BR-3-DG	Bedrock Well
BR-12-DG	Bedrock Well
BR-13-DG	Bedrock Well

GROUNDWATER ELEVATIONS

Groundwater elevations are measured quarterly in each of the wells. Table 1 is a summary of the groundwater elevations this quarter. Well BR-14-UG is the up-gradient well. Graphical representation of historical groundwater elevations can be found in the Appendix.

SAMPLING PERSONNEL

Field Crew – Kathy Wager and David Harty Frontier Technical Associates, Inc.

SAMPLING EQUIPMENT AND CONTAINERS

The sampling equipment is constructed of inert materials. Dedicated tubing is used to obtain the samples. The tubing used is polyethylene food grade tubing. The tubing is stored in the well casing.

The sample containers are polyethylene or glass as required by the analytical protocols and are prepared by the laboratory performing the analysis. The samples are preserved as required by the analytical methods immediately in the field. The samples collected are placed under chain-of-custody and a chain-of-custody record is shipped with the samples. The sample date, time of collection, analytical parameters to be tested, sampler identification and times of possession are marked on the chain-of-custody record.

TABLE 1 GROUNDWATER ELEVATION DATA NRG DUNKIRK LANDFILL FIRST QUARTER 2020

MONITORING WELL	DATE	CASING ELEVATION (feet)	DEPTH TO WATER (feet)	WATER ELEVATION (feet)	WELL LENGTH (feet)	HEIGHT OF WATER COLUMN (feet)
BR-14-UG	2/11/2020	629.01	4.34	624.67	26.25	21.91
BR-3-DG	2/10/2020	618.20	3.35	614.85	18.75	15.40
BR-12-DG	2/10/2020	600.62	4.79	595.83	17.37	12.58
BR-13-DG	2/10/2020	607.41	3.86	603.55	19.21	15.35
BR-20-DG	2/10/2020	625.74	11.28	614.46	35.99	24.71

MONITORING POINT ASSESSMENT

Prior to purging and sampling at each of the wells, a physical assessment of the well is made to determine if the well is suitable. These monitoring point assessment forms are presented in the Appendix. All wells were determined to be in good condition.

WELL PURGING

The wells were purged with a peristaltic or submersible pump prior to sampling. The wells were purged to remove three standing well volumes of water or to dryness. The well purging information is recorded on the Field Observations Forms in the Appendix.

LABORATORIES

In accordance with the requirements of this project and the NYSDEC, Adirondack Environmental Services, Inc., (ELAP No. 10709) a NYSDOH ELAP certified laboratory, was contracted to perform the analyses for the samples collected. The EPA and Standard Methods analytical methods used are present in the laboratory report. The radium 226 and radium 228 are determined by Pace Analytical Services, Greensburg PA (ELAP No. 10888) under contract to Frontier Technical Associates.

FIELD INFORMATION

Field analyses were completed for pH, specific conductance, Eh, temperature and turbidity for each of the samples. These field data are summarized on Table 2. In general, the field parameters, pH, specific conductance, Eh, temperature and turbidity were typical of previous sampling episodes.

ANALYTICAL TESTING

The analytical parameters, results and test methods used are summarized in the Appendix. The appendices provide the following information:

- Laboratory Data Sheets
- QA/QC Documentation
- Field Data Sheets
- Chain-of-Custody Records

The complete data laboratory report for this sampling event is attached.



TABLE 2 SUMMARY OF ANALYSIS OF CCR PARAMETERS NRG Dunkirk Landfill FIRST OUARTER 2020 - February 11, 2020

FIRST QUARTER 2020 - February 11, 2020							
	CONCENTRATION (mg/l) unless noted						
	BR-14-UG	BR-3-DG	BR-12-DG	BR-13-DG	BR-20-DG	Field Dup BR-13-DG	
Casing Elevation (feet)	629.01	618.20	600.62	607.41	625.74	*	
Depth to Water (feet)	6.90	3.35	4.79	3.86	3.11	*	
Water Elevation (feet)	622.11	614.85	595.83	603.55	622.63	*	
Well Length (feet)	26.25	18.75	17.37	19.21	35.99	*	
Height of Water Column (feet)	19.35	15.4	12.58	15.35	32.88	*	
pH (SU)	7.21	6.93	6.78	6.78	7.73	*	
Specific Conductance (umhos/cm)	539	596	778	625	937	*	
Temp (F)	48	45	45	46	49	*	
Turbidity (NTU)	28.3	32.1	34.4	2.88	2.12	*	
Eh (MV)	-110	-94	-111	-172	12	*	
Chloride	2.86	19.9	224	8.53	28.3	8.52	
Fluoride	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	
Sulfate	58	163	147	99.1	< 4.00	99.3	
TDS	355	520	785	470	630	570	
Antimony	< 0.0004	< 0.0004	< 0.0004	< 0.0004	0.0004	< 0.0004	
Arsenic	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Barium	0.168	0.034	0.049	0.078	1.84	0.080	
Beryllium	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	
Boron	0.195	0.137	0.092	0.173	1.47	0.177	
Cadmium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Calcium	89.6	129	181	115	25.2	116	
Chromium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Cobalt	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	
Lead	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Lithium	< 0.050	< 0.050	0.057	< 0.050	0.139	< 0.050	
Mercury, ng/l	< 0.5	1.4	< 0.5	< 0.5	< 0.5	< 0.5	
Molybdenum	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	
Selenium	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	
Thallium	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	< 0.0003	
Radium 226, pCi/l	0.171	0.687	0.456	0.449	0.851	0.094	
Radium 228, pCi/l	0.697	0.499	0.888	0.200	0.575	0.716	

^{*:} See parent sample

QA/QC

The elements of the QA/QC program for this round of sampling include the following:

- Case Narrative (See Appendix)
- Blind Duplicate (Well BR-13-DG)
- Method Blanks
- Matrix Spike/Matrix Spike Duplicate (Well BR-14-UG)

The impact these quality control samples had is discussed in the Case Narrative (See Appendix).

RESULTS

The analytical results are summarized in Table 2. The well samples were analyzed for the CCR Appendix IV parameters. The QA/QC on the data is acceptable. The data is to be evaluated after all the data under this program is gathered.

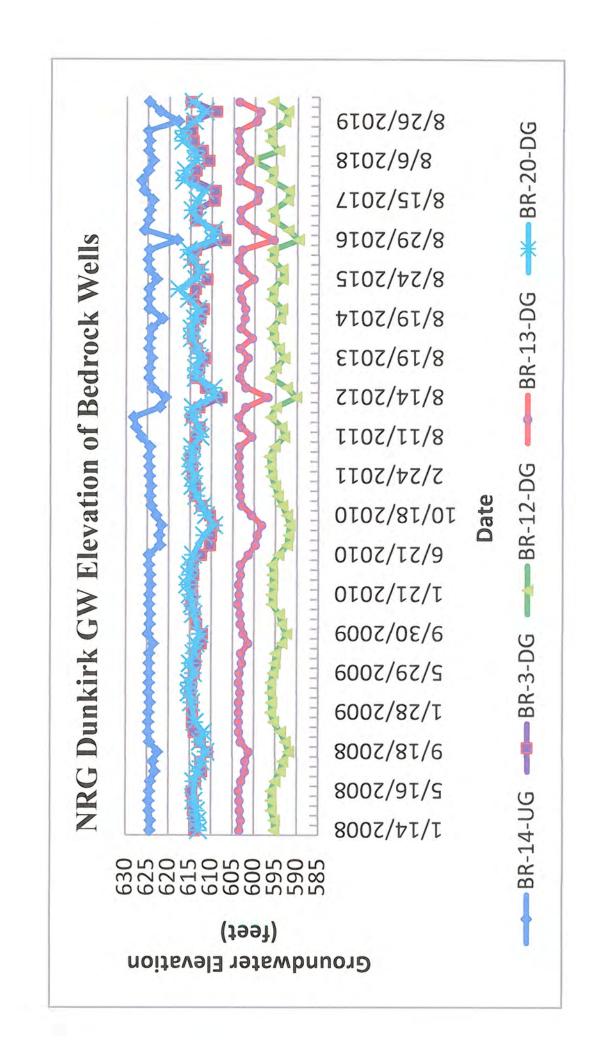
SUMMARY

The well monitoring was completed in accordance with the agreed on scope of work. The data will be summarized further for use under the CCR requirements.



APPENDIX

Graphical Representation of Groundwater Elevations
Well Monitoring Field Forms
Laboratory Reports
Chain-of-Custody Records





8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	NRG Du	ınkirk Land	dfill Phas	e II We	I_Proje				
Sample Point	: I.D.:	BR-3-	DG		Dat	e: <u>}</u>	11012	0	
Purge Inforn	nation		Purge N	/lethod:	Bailer, P	eristalt	ie Pump	<u>)</u>	
Depth to Bott	om of We	II: <u>18.75</u>	_ ft				-		
Depth to Wat	er Surface	e: 3.35	_ ft	4'	well = 0	.66 gal	lons pei	foot	
Depth of Wat				Ε	evation	of Casi	ng: <u>'618.</u>	<u>15</u>	
Volume of Sta	anding Wa	ater in We	II: <u>10 -</u>	u g	allons				
Start of Purge			0708						
End of Purge	- Time:		1.31						
Total Volume	Purged:		30.4	g	allons W	ell Purg	ged Dry:	Yes	No
Parameters	Meter	Method	Initial	Accumu	lated Volu	me Purg	ed (gallo	ns)	Sample
			Sample		10.2	20.4	30,4		3/11/20
Time		7-	10.08		10:08	10:50	11:31		1315
рН	Oakton pH 300	SM 18-20 4500HB	7.66		7,18	7.12	7.14	-	6.93
Spec.	Oakton COM 5	EPA 120.1	885		864	804	797		596
Conductance Temperature	Oakton	SM 18-20	110		46	48	48		105
Eh	COM 5 ORP	2550B ASTM	71			LL			- GU
	tester	D1498	-132		-178	-177	-204		17
Turbidity	Hach 2100P	EPA 180.1	113		103	299	14.3		32.1
Appearance			tan		SITAH	tan	dia		Stown
NYSDOH ELAF Depth to Wat	ter:	(.05	_ ft.	Sample	Method:	Bailer	Perist	altic Pu	ımp
Meters Calib	rated: <u>Ye</u>	s_Dedica	ted Samı	ple Equ	pment:_	<u>res</u>			
Notes/Weath	er:	125 ed	lin						
Sampling Pe			Athy	L W	dy.				



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location:	NRG Du	nkirk Land	fill Phase		t No.: <u>ET-1066</u>		
Sample Point	I.D.:	BR-12		Date			
Purge Inform	nation		Purge M	ethod: <u>Bailer,</u> Fe			
Depth to Bott	om of Wel	l: <u>17.37</u>	_ ft	2" well = 0.	17 gallons per	foot	
Depth to Wat	er Surface	: <u>4.79</u>	_ ft				
Depth of Wat			_ ft	Elevation o	of Casing: <u>'600.</u>	<u>65</u>	
Volume of Sta				gallons			
Start of Purge			9:47				
End of Purge			1000				
Total Volume			<u> </u>	gallons We	ell Purged Dry:	Yes	(No)
Parameters	Meter	Method	Initial	Accumulated Volu	me Purged (gallo	ns)	Sample ,
			Sample	2.1	4.2	6.3	Hille
Time			9:48	9:52	9.56	10:00	12:03
рН	Oakton pH 300	SM 18-20 4500HB	7.09	6.92	6.52	6.90	6.78
Spec.	Oakton	EPA	1342	1316	1312	1313	778
Conductance Temperature	CON 5 Oakton	120.1 SM 18-20	46	47	47	44	45
	CON 5 ORP	2550B ASTM	-(φ				-111
Eh	tester	D1498	-117	-175	-180	-186	
Turbidity	Hach 2100P	EPA 180.1	4.35	3.78	1.41	1.62	34.4
Appearance			Clean	Clean	dear	day	Elesa
NVSDOH ELA	P No. 10475	5 Values in	parenthes	is are duplicate valu	Jes		
Depth to Wa	ater:	1130	п.	Sample Method.	Ballet	taltid Pu	<u>imp</u>
Meters Calib	orated: <u>Ye</u>	es_Dedica	ated Sam	ple Equipment:_	<u>Yes</u>		
Notes/Weat	her:	H25	oder				,
			17 11	11 /			
Sampling P	ersonnel:		Cathy	WASI			
Sampling P			Ka	the work			
I- 1				1 (1			



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	: NRG DL	ınkirk Land	dfill Sed.	Basin			ect No.	: ET-106	<u>36</u>
Sample Point	t I.D.:	BR-13	B-DG		Dat	e:	7/10/3	}	
Purge Inforn	nation		Purge N	1ethod	: <u>Bailer, P</u>	eristalt	i) Pum	Б	
Depth to Bott	om of We	ll: <u>19.21</u>	_ ft						
Depth to Wat	er Surface	3.84	_ ft	4	l" well = 0	.66 ga	llons pe	er foot	
Depth of Wat				Ε	Elevation of	of Casi	ng: <u>'607</u>	.42	
					gallons				
Time 13:10 13:37 1:05 1:35 11:36 14:10 13:37 1:05 1:35 11:36 15:10 13:10 13:37 1:05 1:35 15:10 13:10 13:10 13:10 16:10 13:10 13:10 1:35 16:10 13:10 13:10 1:35 16:10 13:10 1:35 1:35 16:10 13:10 1:35 1:35 16:10 13:10 1:35 1:35 16:10 13:10 1:35 1:35 16:10 13:10 1:35 1:35 16:10 13:10 1:35 1:35 16:10 13:10 1:35 1:35 16:10 1:35 1:35 1:35 16:10 1:35 1:35 1:35 16:10 1:35 1:35 1:35 16:10 1:35 1:35 1:35 16:10 1:35 1:35 1:35 16:10 1:35 1:35 1:35 16:10 1:35 1:35 1:35 16:10 1:35 1:35 1:35 16:10 1:35 1:35 1:35 16:10 1:35 1:35 16:10 1:35 1:35 16:10 1:35 1:35 16:10 1:35 1:35 16:10 1:35 1:35 16:10									
			30.3	9	gallons We	ell Purç	ged Dry	Yes (No
Parameters	Meter	Method		Accum	ulated Volu	me Purg	ged (gallo	ons)	
			Sample		10-1	20.2	30.3		2/11/20
Time			19:70		12:37	1.05	1135		11:50
рН		SM 18-20 4500HB	6.89 64.88)	6.99	7.06	6.93		6.78
	Oakton	EPA		/	873	865	81,4		625
		SM 18-20							t
Fh			,						
	tester	D1498	-151		-180	-315	-191		112
Turbidity	Hach 2100P	EPA 180.1	7.88		2.31	147	1.04		3,8 g
Appearance			dear		dear	deir	diac		Olion
NYSDOH ELAF Depth to Wa	No. 10475 ter: %	, Values in えら	parenthesi ft.	s are du Sample	plicate value Method:	es Bailer	Peris	taltic)Pu	mp 📏
Meters Calib	rated: <u>Ye</u>	s_Dedica	ted Samı	ple Equ	uipment: <u>\</u>	<u>′es</u>			
Notes/Weath	ner: Hz	s oder							
Dup)	1							
Sampling Pe	ersonnel: _	Y	Athy	WA	315	Note that the same of the same			
Sampling Pe		•	'Co	th	Worn				
				1	- ()				



FRONTIER TECHNICAL ASSOCIATES INC. 14221 (716) 634-2293. Fax (716) 634-2344

8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	: NRG D	unkirk Lan	dfill Phas	<u>se I & II Well</u> Proj		066	
Sample Poin	t I.D.:	BR-14	1-UG	Date:	: 2/11/) <u>U</u>	
Purge Inforr	nation		Purge N	Method: <u>Bailer, Pe</u>	ristaltic Rump	2)	
Depth to Bot						-	
Depth to Wa	ter Surface	e: <u> </u>	∮ ft	4" well = 0.6	66 gallons per	rfoot	
Depth of Wa				Elevation of	Casing: <u>'629</u>	01	
Volume of St	anding W	ater in We	II: <u>14</u>	gallons			
Start of Purg	e – Time:		9:54				
End of Purge	e – Time:		10: 18!	M			
Total Volume	e Purged:		23.5	gallons Wel	l Purged Dry:	(Yes No	
Parameters	Meter	Method	Initial	Accumulated Volum	e Purged (gallo		
			Sample	14.5		23.5	
Time			9:55	10:07		10:18	
рН	Oakton pH 300	SM 18-20 4500HB	7.08	7.06		7.21(7	21)
Spec.	Oakton	EPA	658	<4a		539	
Conductance	CON 5	120.1	W3 0	- 1			
Temperature	Oakton CON 5	SM 18-20 2550B	47	48		48	
Eh	ORP tester	ASTM D1498	41	-159		-110	
Turbidity	Hach 2100P	EPA 180.1	1.71	2.04		28.3	
Appearance			chaj	dea		SI. clous	
NYSDOH ELAF Depth to Wa	P No. 10475 ter:	/ 8 alue y in	parenthesi ft	s are duplicate values Sample Method: <u>B</u>	ailer Perista	altic Pump	
Meters Calib			ted Samı	ple Equipment: <u>Ye</u>	<u>es</u>		
Notes/Weath	ner: <i>[</i>]	ys lais d		AND AND AND AND AND AND AND AND AND AND			
Sampling Pe	rsonnel: _	4	ally l	WAS!		QUANTIT	
Sampling Pe	rsonnel S	ignature:_	Cal	thagy			

Site Location	n: <u>NRG Di</u>	<u>unkirk Lan</u>	dfill Phas	se I Well_I	Projed	ct No.:_	<u>ET-1066</u>	i -	
Sample Poin	nt I.D.:	BR-2()-DG		Dat	:e: <u>2</u> /	110/26	2	
Purge Infor	mation		Purge N	Method: <u>Ba</u>	iler, P	eristall	ic Pump)	
Depth to Bot	tom of We	II: <u>35.99</u>	_ ft	2" we	ell = 0	.17 gal	lons per	foot	
Depth to Wa	ter Surface	e: <i>11.28</i>	_ ft						
Depth of Wa	ter Columi	n: 24,71	_ ft	Eleva	ation (of Casi	ng: <u>'625.</u> 4	<u>43</u>	
Volume of St	tanding Wa	ater in We	II: <u>4.9</u>	ع gallo	ons				
Start of Purg	e – Time:		1:31						
End of Purge	e – Time:		:42					_	
Total Volume	e Purged:		-0	gallo	ns W	ell Purç	ged Dry:	Ves _	No
Parameters	Meter	Method	Initial	Accumulate	d Volu	me Purg	ged (gallon	ıs)	Sample
			Sample	9	1,2				2/11/20
Time			11:32	$ _{\mathcal{U}}$	1239				11:30
рН	Oakton pH 300	SM 18-20 4500HB	7.59		G3				7, 43
Spec.	Oakton	EPA							
Conductance	CON 6+	120.1	105	8	91				937
Temperature	emi 550	SM 18-20 2550B	78	5	2				49
Eh	ORP tester	ASTM D1498	73		2				12
Turbidity	Hach 2100P	EPA 180.1	10,8		1,8				
Appearance			Clear		lear				2,12 Clear
NYSDOH ELAF Depth to Wa	No. 10475, ter: 17,	Values in p		s are duplicat Sample Met			Rerista	ltie Pui	mp
Meters Calib	rated: Yes	<u>Dedicat</u>	ed Samp	ole Equipme	ent: <u>Y</u>	<u>'es</u>			
Notes/Weath	ier:								
			A 1.5 1	r					
Sampling Pe	rsonnel: _	Davio	Hart	4					
Sampling Pe	rsonnel Si	anature. C	+ DIV						



8675 Main Street, Williamsville, New York 14221 (716) 634-2293

Monitoring Point: BP-3-DG-	Date: 2/10/26
Inspectors Name (Print): LATAY WA Inspector's Company: Frontier Technical As Address: 8675 Main Street, Williamsville, Ne	ssociates, Inc.
Well Locked:	Yes No NA
Lock Functioning:	Yes No NA
Bailer and Rope OK:	Yes No NA
Tubing OK:	Yes No NA
Protective Casing OK:	(Yes) No NA
Concrete Pad in Good Condition:	Yes No NA
Heaving of Well or Casing:	Yes No NA
Well Sand in Purge Water:	Yes (No) NA
Well Constricted:	Yes No NA
Debris in Well:	Yes No NA
Insects in Well:	Yes No NA Type:
Wind Blown Dust inside Protective Casing:	Yes NA NA
Other Observations or Details on Conditions	Identified Above:
Inspector's Signature: Wath Wo	34



8675 Main Street, Williamsville, New York 14221 (716) 634-2293

Address: <u>8675 Main Street, Williamsville,</u> Well Locked:	(Ves) No NA
Lock Functioning:	Yes No NA
Bailer and Rope OK:	Yes No NA
Tubing OK:	(Yes) No NA
Protective Casing OK:	Ves No NA
Concrete Pad in Good Condition:	Yes No NA
Heaving of Well or Casing:	Yes No NA
Well Sand in Purge Water:	Yes No NA
Well Constricted:	Yes No NA
Debris in Well:	Yes No NA
Insects in Well:	Yes No NA Type:
Wind Blown Dust inside Protective Casing:	Yes No NA
Other Observations or Details on Conditio	ns Identified Above:



8675 Main Street, Williamsville, New York 14221 (716) 634-2293

Monitoring Point: <u>DV-10-PC</u> Inspectors Name (Print): <u>Ahy U</u> Inspector's Company: <u>Frontier Technical As</u> Address: 8675 Main Street, Williamsville, Ne	
Well Locked:	Yes No NA
Lock Functioning:	(Yes) No NA
Bailer and Rope OK:	Yes No (NA)
Tubing OK:	Yes No NA
Protective Casing OK:	(Yes No NA
Concrete Pad in Good Condition:	Ves No NA
Heaving of Well or Casing:	Yes No NA
Well Sand in Purge Water:	Yes No NA
Well Constricted:	Yes NA
Debris in Well:	Yes No NA
Insects in Well:	Yes (No) NA Type:
Wind Blown Dust inside Protective Casing:	Yes NA
Other Observations or Details on Conditions	Identified Above:
Inspector's Signature: Latty Way	2 4



8675 Main Street, Williamsville, New York 14221 (716) 634-2293

Monitoring Point: BK-14-UG	Date: <u>2/11/20</u>
Inspectors Name (Print): MH WA Inspector's Company: Frontier Technical As Address: 8675 Main Street, Williamsville, Ne	sociates, Inc.
Well Locked:	Yes No NA
Lock Functioning:	Yes No NA
Bailer and Rope OK:	Yes No NA
Tubing OK:	(Yes) No NA
Protective Casing OK:	Yes No NA
Concrete Pad in Good Condition:	Yes No NA
Heaving of Well or Casing:	Yes No NA
Well Sand in Purge Water:	Yes No NA
Well Constricted:	Yes No NA
Debris in Well:	Yes No NA
Insects in Well:	Yes (No NA Type:
Wind Blown Dust inside Protective Casing:	Yes No NA
Other Observations or Details on Conditions	Identified Above:
Inspector's Signature: Lath Wo	ngy



8675 Main Street, Williamsville, New York 14221 (716) 634-2293

Inspectors Name (Print):	
Well Locked:	Yes No NA
Lock Functioning:	Yes No NA
Bailer and Rope OK:	Yes No NA
Tubing OK:	Yes No NA
Protective Casing OK:	Yes No NA
Concrete Pad in Good Condition:	Yes No NA
Heaving of Well or Casing:	Yes No NA
Well Sand in Purge Water:	Yes (No) NA
Well Constricted:	Yes No NA
Debris in Well:	Yes No NA
Insects in Well:	Yes 😡 NA Type:
Wind Blown Dust inside Protective Casing:	Yes (No NA
Other Observations or Details on Conditions	Identified Above:
Inspector's Signature:	





March 02, 2020

David Harty Frontier Technical Associates 8675 Main Street Buffalo, NY 14221

RE: Project: PLANT ND LANDFILL

Pace Project No.: 70121827

Dear David Harty:

Enclosed are the analytical results for sample(s) received by the laboratory on February 14, 2020. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rebeka K. Smith

Relie Inito

rebeka.smith@pacelabs.com

(631)694-3040 Project Manager

Enclosures

cc: Kathy Wager, Frontier Technical Associates, Inc.







CERTIFICATIONS

Project:

PLANT ND LANDFILL

Pace Project No.:

70121827

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547

Connecticut Certification #: PH-0694

Delaware Certification

EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040

Florida: Cert E871149 SEKS WET

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: KY90133

KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification #: 9991

Missouri Certification #: 235

Montana Certification #: Cert0082

Nebraska Certification #: NE-OS-29-14

Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617

New Jersey/TNI Certification #: PA051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Ohio EPA Rad Approval: #41249

Oregon/TNI Certification #: PA200002-010

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: 02867

Texas/TNI Certification #: T104704188-17-3

Utah/TNI Certification #: PA014572017-9

USDA Soil Permit #: P330-17-00091

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 9526

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C Wisconsin Approve List for Rad

Wyoming Certification #: 8TMS-L



SAMPLE ANALYTE COUNT

Project:

PLANT ND LANDFILL

Pace Project No.:

70121827

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
70121827001	BR-14-UG	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
70121827002	BG-13-DG	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
70121827003	BR-12-DG	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
70121827004	BR-3-DG	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
70121827005	BR-20-DG	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
70121827006	DUP	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

REPORT OF LABORATORY ANALYSIS



Project:

PWS:

Radium-226

Radium-228

PLANT ND LANDFILL

Pace Project No.:

70121827

Parameters

Sample: BR-14-UG

Site ID:

EPA 903.1

EPA 904.0

Method

Lab ID: 70121827001

Collected: 02/11/20 10:18 Received: 02/14/20 10:30 Matrix: Water

Sample Type:

Act ± Unc (MDC) Carr Trac 0.171 ± 0.261 (0.420)

C:NA T:83% 0.697 ± 0.387 (0.710) C:82% T:85%

Units

pCi/L

pCi/L

Analyzed

02/28/20 13:20 13982-63-3 02/28/20 10:51 15262-20-1

CAS No.

Qual



Project:

PLANT ND LANDFILL

Pace Project No.:

70121827 Sample: BG-13-DG

PWS:

Site ID:

Lab ID: 70121827002 Collected: 02/11/20 11:50 Received: 02/14/20 10:30 Matrix: Water

Sample Type:

Parameters Method Act ± Unc (MDC) Carr Trac Units Analyzed CAS No. Qual Radium-226 EPA 903.1 $0.449 \pm 0.352 \quad (0.414)$ pCi/L 02/28/20 13:20 13982-63-3 C:NA T:84% 0.200 ± 0.362 (0.792) C:77% T:85% Radium-228 EPA 904.0 pCi/L 02/28/20 13:56 15262-20-1



Project:

PLANT ND LANDFILL

Pace Project No.: 70121827

Sample: BR-12-DG Lab ID: 70121827003 PWS: Site ID:		Collected: 02/11/20 12:03 Received: Sample Type:		02/14/20 10:30	Matrix: Water		
Parameters	Method	Act ± Unc (MDC) Carr Trac		Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1		± 0.334 (0.373) T:92%	pCi/L	02/28/20 13:20	13982-63-3	
Radium-228	EPA 904.0	0.888	± 0.428 (0.740)	pCi/L	02/28/20 13:57	15262-20-1	

C:78% T:89%



Project:

PLANT ND LANDFILL

Pace Project No.:

Parameters

70121827

Sample: BR-3-DG

Site ID:

Lab ID: 70121827004

Collected: 02/11/20 12:15 Received: 02/14/20 10:30 Matrix: Water Sample Type:

Act ± Unc (MDC) Carr Trac

CAS No.

Qual

PWS:

Method

0.687 ± 0.382 (0.143)

pCi/L

Units

Analyzed

02/28/20 13:20 13982-63-3

Radium-226 Radium-228 EPA 903.1 EPA 904.0

0.499 ± 0.372 (0.728) C:80% T:84%

C:NA T:84%

pCi/L

02/28/20 13:57 15262-20-1

REPORT OF LABORATORY ANALYSIS

(631)694-3040



ANALYTICAL RESULTS - RADIOCHEMISTRY

Project:

PLANT ND LANDFILL

Pace Project No.:

70121827

Sample: BR-20-DG Lab ID: 70121827005 PWS:

Site ID:

Collected: 02/11/20 11:30 Received: 02/14/20 10:30 Matrix: Water

Sample Type:

Parameters Method Act ± Unc (MDC) Carr Trac Units CAS No. Analyzed Qual EPA 903.1 Radium-226 0.851 ± 0.519 (0.611) pCi/L 02/28/20 13:20 13982-63-3 C:NA T:90% Radium-228 EPA 904.0 0.575 ± 0.362 (0.688) pCi/L 02/28/20 10:51 15262-20-1 C:82% T:89%

REPORT OF LABORATORY ANALYSIS



Project:

PLANT ND LANDFILL

Pace Project No.:

70121827

Sample: DUP

Lab ID: 70121827006

Collected: 02/11/20 00:00

Received: 02/14/20 10:30 Matrix: Water

Analyzed

CAS No.

Qual

PWS:

Site ID:

EPA 904.0

Sample Type:

C:80% T:88%

Radium-226

Radium-228

Parameters Method EPA 903.1

Act ± Unc (MDC) Carr Trac 0.0944 ± 0.216 (0.348) C:NA T:92%

0.716 ± 0.384 (0.693)

pCi/L

Units

pCi/L

02/28/20 13:20 13982-63-3 02/28/20 10:50 15262-20-1

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full, without the written consent of Pace Analytical Services, LLC.





QUALITY CONTROL - RADIOCHEMISTRY

Project:

QC Batch:

PLANT ND LANDFILL

Pace Project No.:

70121827

384311

Analysis Method:

EPA 904.0

QC Batch Method:

EPA 904.0

Analysis Description:

904.0 Radium 228

Associated Lab Samples:

70121827001, 70121827002, 70121827003, 70121827004, 70121827005, 70121827006

METHOD BLANK: 1862124

Matrix: Water

Associated Lab Samples:

70121827001, 70121827002, 70121827003, 70121827004, 70121827005, 70121827006

Parameter

Act ± Unc (MDC) Carr Trac

Units pCi/L Analyzed

Qualifiers

Radium-228

0.148 ± 0.306 (0.675) C:82% T:86%

02/28/20 10:51

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALITY CONTROL - RADIOCHEMISTRY

Project:

PLANT ND LANDFILL

Pace Project No.:

70121827

QC Batch:

384310

Analysis Method:

EPA 903.1

QC Batch Method:

EPA 903.1

Analysis Description:

903.1 Radium-226

Associated Lab Samples:

Associated Lab Samples:

70121827001, 70121827002, 70121827003, 70121827004, 70121827005, 70121827006

METHOD BLANK: 1862122

Matrix: Water

70121827001, 70121827002, 70121827003, 70121827004, 70121827005, 70121827006

Parameter

Act ± Unc (MDC) Carr Trac

Units

Analyzed

Qualifiers

Radium-226

0.124 ± 0.244 (0.445) C:NA T:85%

pCi/L

02/28/20 13:20

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.





QUALIFIERS

Project:

PLANT ND LANDFILL

Pace Project No.: 70121827

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

Date: 03/02/2020 11:43 AM

PASI-PA Pace Analytical Services - Greensburg



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project:

PLANT ND LANDFILL

Pace Project No.:

Date: 03/02/2020 11:43 AM

7012182**7**

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
70121827001	BR-14-UG	EPA 903.1	384310		
70121827002	BG-13-DG	EPA 903.1	384310		
70121827003	BR-12-DG	EPA 903.1	384310		
70121827004	BR-3-DG	EPA 903.1	384310		
70121827005	BR-20-DG	EPA 903.1	384310		
70121827006	DUP	EPA 903.1	384310		
0121827001	BR-14-UG	EPA 904.0	384311		
70121827002	BG-13-DG	EPA 904.0	384311		
70121827003	BR-12-DG	EPA 904.0	384311		
70121827004	BR-3-DG	EPA 904.0	384311		
0121827005	BR-20-DG	EPA 904.0	384311		
70121827006	DUP	EPA 904.0	384311		

CHAIN-OF-CUSTODY Analytical Request Document

WO#:70121827 LAB USE ONLY. Affix Marburani

Pace Workorder Number or

	USE ONLY	the many and the second	oric acid, (4) sociem hydroxide, (5) ginc acetate	one, (A) ascorbic acid, (B) ammonium sulfate,	Lab Profile/Line:		The second of the second secon	ature Fresent Of	TO A CONTROL OF THE PROPERTY O	: 14 36	World Headers and on the San San San San San San San San San San	Tylened Soils	Westone in Holding Time (1) W. W. W. W. W. W. W. W. W. W. W. W. W.			Shilide Present	** FOR MOSO HE	Lab Sample # / Commence:		Comments of the comments of th	er er er er er er er er er er er er er e	e de la compansa del la compansa del la compansa de la compansa de la compansa de la compansa de la compansa de la compansa de la compansa de la compansa de la compansa de la compansa de la compansa de la compansa de la compansa de		e e e e e e e e e e e e e e e e e e e	The second secon			emperature Info:	Stank Roceivon	Cooler Cerp			The second secon	Trip Blank Received: Y N NA HCL MeOH TSP Other		Non Conformance(s): Page:
	Annexis of Control Con	A Comment of the Comm	** Preservative Types: (1) nitric acid; (2) suifuric acid; (3) hydrochloric acid; (4) sociem hydroxide. (5) zinc acetate.	(6) methanol. (7) sodium bisulfate. (8) sodium thiosulfate. (9) hexana. (4) ascorbic acid. (8) ammonlum sulfate, (C) ammonlum hydroxide. (D) TSP. (U) Unpreserved. (O) Other	Annalyses and a second											100 miles (100 miles (Manufacture of the Control of the Co	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	According to the State of the S	Value of the contract of the c		×		The second secon	SHORT HOLDS PRESENT (<72 hours): Y N N	Lab Tracking #:	, marke	FEDEX UPS Client Courier Pace Courier	11001	5 7	Seter Time: Acctoum:	*	Daté/Tíme: PM: PB:
AENT - Complete all relevent fields	n: same	Em3 To. 22th years Strate in the form	4	Ste Collection Info/Address: PLANT ND LF (C	Time Zone Collected:	and the commence	Compliance Monitoring?	[X] Yes No	DW PWS ID #;	DW Location Code:	Immediately Packed on Ice:	rered	**********	A A Market Market	And the second s	ngan kaping sa mangan	Res # of	Clus	Date Time	2 2 2	2	2	2		2			Wet Blue Dry None	sed	er der verste der der der der der der der der der de) screened (<500 cpm): Y N NA	прапу: (9	Bacalinad historical	A Company Company		received by/Company: (Signature)
Chain-of-Custedy	Billing Information: same Y 14221)		andfill State: County/City;	٨٨	Site/Facility ID #:	e de la companya de la companya de la companya de la companya de la companya de la companya de la companya de l	e Orden#:	en de de de la companyación de l	Turnaround Date Required: STANDARD	er en en en en en en en en en en en en en	[Same Day [] Next Day	[2 Day []3 Day []4 Day []5 Day	Expedite Charges Apply)	Drinkir g Water (DW), Ground Water NP), Air (AR), Tissue (TS), Bioassay (E	Comp / Collected (or	Grab Composite			O		A Company of the Comp	- A.O			on grown	nn-ny siber	Packing Material Used	Grant - State Control of the Control	Radchem sample(s) sc	Date/Time:	100		Date Himse	Catal Hills.
educedaliste especialistica punta in participa e especialistica e especialistica de contrata de especialistica e especialistica e e e e e e e e e e e e e e e e e e e	Longrany Fronder Fechnical Associates, Inc. Address: 8675 Main Street, Williamsville, NY 14271	Report To: Kethy Wage:	Notes organized from the manufacturing workshop of a polytyphysical substitution and a second state of the page	Copy To:	Lustomer Project Name/Number: Plant ND Landfill	rollensere construent page page on ell-options and in a sea	Phone: 716-684-2293 Site/Faci	edicalementaria della generalia della generalia della generalia della generalia della generalia della generalia	Lonected by (print): Kathy Wager Purchase Order	And the fact of the fact the supplementary of the fact	oner ed by Skraufer Commaron	Sample Disposal: Rush:	as appropriate (Return	H066:	THE VOLUME PROPERTY OF THE PRO	' Mat'rx Codes (Insert in Matrix box below): Drinkir g Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Soild (St.), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)		Lustomer sample ID Matrix *	A REAL PROCESSOR AND A SECURE AND A SECURE AND A SECURE ASSESSOR A	он вости приходного советским хамандай дагда принять на веденоваться и польтой ста	BR-13-DG GW	BR-12-DG GW	BR-3-DG GW	BR-20-DG GW	Oup		Customer Remarks / Special Conditions (Boseikle Haaade.		sarras Jane	50 t 100 t		Relincuished by/Company: (Signature)	ed by/Company: (Signature)	ge 14	Relincuished by/Company: (Sanature)	American de la composition della composition del



Experience is the solution

314 North Pearl Street ◆ Albany, New York 12207 (800) 848-4983 ◆ (518) 434-4546 ◆ Fax (518) 434-0891

February 27, 2020

Kathy Wager Frontier Technical Associates 8675 Main Street Williamsville, NY 14221

TEL: (716) 634-2293

Work Order No: 200212024

RE: Plant ND GW

Dear Kathy Wager:

Adirondack Environmental Services, Inc received 11 samples on 2/12/2020 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Monica Higdon

Laboratory Manager

ELAP#: 10709

CC:

MS/MSD Report

CASE NARRATIVE

CLIENT:

Frontier Technical Associates

Date: 27-Feb-20

Project:

Plant ND GW

Lab Order:

200212024

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit

C: CCV below acceptable Limits

J: Analyte detected below quantitation limit

C+: CCV above acceptable Limits

B: Analyte detected in Blank

S: LCS Spike recovery is below acceptable limits

X: Exceeds maximum contamination limit

S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded

Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits

T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits

E: Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: BR-14-UG

Collection Date: 2/11/2020 10:18:00 AM

Lab Sample ID: 200212024-001

Analyses	Result	RL	Qua	l Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 16	31E				***************************************	Analyst: W E
(Prep: 1631E - 2	2/18/2020)					Allayst. W.
Mercury	ND	0.5		ng/L	1	2/19/2020
ICP/MS - EPA 200.8 REV 5.4						Americal One
	2/13/2020)					Analyst: SM
` '	,					
Antimony Beryllium	ND	0.0004		mg/L	1	2/19/2020 4:25:01 PM
Thallium	ND	0.0003		mg/L	1	2/19/2020 4:25:01 PM
mamum	ND	0.0003		mg/L	1	2/19/2020 4:25:01 PM
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
(Prep: - 2	2/13/2020)					· · · · · · · · · · · · · · · · · · ·
Total Hardness (As CaCO3)	376	5		mg/L CaCO3	1	2/26/2020
CP METALS - EPA 200.7 REV 4.4	l					Analyst: KH
(Prep: - 2	/13/2020)					,
Arsenic	ND	0.005		mg/L	1	2/26/2020 2:00:00 DM
Barium	0.168	0.003	Z	mg/L	1	2/26/2020 3:08:00 PM 2/26/2020 3:08:00 PM
Boron	0.195	0.050	Z	mg/L	1	2/26/2020 3:08:00 PM
Cadmium	ND	0.005	_	mg/L	1	2/26/2020 3:08:00 PM
Calcium	89.6	0.050		mg/L	1	2/26/2020 3:08:00 PM
Chromium	ND	0.005		mg/L	1	2/26/2020 3:08:00 PM
Cobalt	ND	0.050		mg/L	1	2/26/2020 3:08:00 PM
Iron	0.099	0.050	Z	mg/L	1	2/26/2020 3:08:00 PM
Lead	ND	0.005		mg/L	1	2/26/2020 3:08:00 PM
Lithium	[*] ND	0.050		mg/L	1	2/26/2020 3:08:00 PM
Magnesium	37.0	0.050		mg/L	1	2/26/2020 3:08:00 PM
Manganese	0.025	0.020	Z	mg/L	1	2/26/2020 3:08:00 PM
Molybdenum	ND	0.010	_	mg/L	1	2/26/2020 3:08:00 PM
Potassium	4.24	0.050		mg/L	1	2/26/2020 3:08:00 PM
Selenium	ND	0.005	N	mg/L	1	2/26/2020 3:08:00 PM
Sodium	26.2	0.050	Z	mg/L	1	2/26/2020 3:08:00 PM
CP DISSOLVED META L- EPA 200	0.7 REV 4.4					Analyst: KH
(Prep: - 2/	(13/2020)					, 1411
Arsenic, Dissolved	ND	0.005	N	mg/L	1	2/21/2020 3:12:00 PM
Barium, Dissolved	0.181	0.010	Z	mg/L	1	2/21/2020 3:12:00 PM
Boron, Dissolved	0.171	0.050	Z	mg/L	1	2/21/2020 3:12:00 PM
Cadmium, Dissolved	ND	0.005	_	mg/L	1	2/21/2020 3:12:00 PM
Calcium, Dissolved	92.8	0.050		mg/L	1	2/21/2020 3:12:00 PM
Iron, Dissolved	ND	0.050		mg/L	1	2/21/2020 3:12:00 PM
Lead, Dissolved	ND	0.005		mg/L	1	2/21/2020 3:12:00 PM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order: Reference: 200212024

Plant ND GW /

PO#:

Client Sample ID: BR-14-UG

Collection Date: 2/11/2020 10:18:00 AM

Lab Sample ID: 200212024-001

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200	.7 REV 4.4					Analyst: KH
(Prep: - 2/1	3/2020)					•
Magnesium, Dissolved	38.8	0.050		mg/L	1	2/21/2020 3:12:00 PM
Manganese, Dissolved	0.022	0.020		mg/L	1	2/21/2020 3:12:00 PM
Molybdenum, Dissolved	ND	0.010		mg/L	1	2/21/2020 3:12:00 PM
Potassium, Dissolved	4.44	0.050		mg/L	1	2/21/2020 3:12:00 PM
Selenium, Dissolved	ND	0.005	Ν	mg/L	1	2/21/2020 3:12:00 PM
Sodium, Dissolved	26.8	0.050		mg/L	1	2/21/2020 3:12:00 PM
ANIONS BY ION CHROMATOGRAP	HY - EPA 300.0 R	EV 2.1				Analyst: CS
Fluoride	ND	0.20		mg/L	2	2/13/2020 2:26:39 AM
Chloride	2.86	2.00		mg/L	2	2/13/2020 2:26:39 AM
Nitrate, Nitrogen (As N)	0.04	0.04		mg/L	2	2/13/2020 2:26:39 AM
Sulfate	58.0	4.00		mg/L	2	2/13/2020 2:26:39 AM
ALKALINITY TO PH 4.5 -SM 2320B-	2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	340	10		mgCaCO3/L	1	2/21/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0					Analyst: NK
Nitrogen, Ammonia (As N)	0.8	0.1		mg/L	1	2/21/2020 10:45:09 AM
PHENOLS, TOTAL - EPA 420.4 REV (Prep: Method - 2/2						Analyst: KB
Phenolics, Total Recoverable	ND	0.004		mg/L	1	2/21/2020 4:12:17 PM
OTAL DISSOLVED SOLIDS - SM 2	540C-2011					Analyst: CC
TDS (Residue, Filterable)	355	5		mg/L	1	2/18/2020
OTAL ORGANIC CARBON - SM 53	10C-2011					Analyst: NK
Total Organic Carbon	ND	1.0		mg/L	1	2/25/2020 2:35:00 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: BR-3-DG

Collection Date: 2/11/2020 12:15:00 PM

Lab Sample ID: 200212024-002

Analyses	Result	RL Ç	Qual Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 163	1E				Analyst: W E
(Prep: 1631E - 2/	18/2020)				, mayou ve
Mercury	1.4	0.5	ng/L	1	2/19/2020
ICP/MS - EPA 200.8 REV 5.4					A11 - Oh
	13/2020)				Analyst: SM
Antimony	ND	0.0004	mg/L	1	2/19/2020 4:39:55 PM
Beryllium	ND	0.0003	mg/L	1	2/19/2020 4:39:55 PM
Thallium	ND	0.0003	mg/L	1	2/19/2020 4:39:55 PM
HARDNESS - EPA 200.7 REV 4.4					Å.,
(Prep: - 2/1	3/2020)				Analyst: KH
Total Hardness (As CaCO3)	499	5	mg/L CaCO3	1	2/26/2020
CP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 2/1	3/2020)				Analyst. Kil
Arsenic	ND	0.005	mg/L	1	2/26/2020 3:23:00 PM
Barium	0.034	0.010	mg/L	1	2/26/2020 3:23:00 PM
Boron	0.137	0.050	mg/L	1	2/26/2020 3:23:00 PM
Cadmium	ND	0.005	mg/L	1	2/26/2020 3:23:00 PM
Calcium	129	0.050	mg/L	1	2/26/2020 3:23:00 PM
Chromium	ND	0.005	mg/L	1	2/26/2020 3:23:00 PM
Cobalt	ND	0.050	mg/L	1	2/26/2020 3:23:00 PM
Iron	1,11	0.050	mg/L	1	2/26/2020 3:23:00 PM
Lead	ND	0.005	mg/L	1	2/26/2020 3:23:00 PM
Lithium	ND	0.050	mg/L	1	2/26/2020 3:23:00 PM
Magnesium	42.8	0.050	mg/L	1	2/26/2020 3:23:00 PM
Manganese	1.12	0.020	mg/L	1	2/26/2020 3:23:00 PM
Molybdenum	ND	0.010	mg/L	1	2/26/2020 3:23:00 PM
Potassium	3.25	0.050	mg/L	1	2/26/2020 3:23:00 PM
Selenium	ND	0.005	mg/L	1	2/26/2020 3:23:00 PM
Sodium	17.4	0.050	mg/L	1	2/26/2020 3:23:00 PM
CP DISSOLVED META L- EPA 200.					Analyst: KH
(Prep: - 2/1	3/2020)				
Arsenic, Dissolved	0.006	0.005	mg/L	1	2/21/2020 3:57:00 PM
Barium, Dissolved	0.034	0.010	mg/L	1	2/21/2020 3:57:00 PM
Boron, Dissolved	0.121	0.050	mg/L	1	2/21/2020 3:57:00 PM
Cadmium, Dissolved	ND	0.005	mg/L	1	2/21/2020 3:57:00 PM
Calcium, Dissolved	128	0.050	mg/L	1	2/21/2020 3:57:00 PM
Iron, Dissolved	0.557	0.050	mg/L	1	2/21/2020 3:57:00 PM
Lead, Dissolved	ND	0.005	mg/L	1	2/21/2020 3:57:00 PM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: BR-3-DG

Collection Date: 2/11/2020 12:15:00 PM

Lab Sample ID: 200212024-002

Analyses	Result	RL	Qual Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.	7 REV 4.4				Analyst: KH
(Prep: - 2/1	3/2020)				
Magnesium, Dissolved	43.2	0.050	mg/L	1	2/21/2020 3:57:00 PM
Manganese, Dissolved	1.07	0.020	mg/L	1	2/21/2020 3:57:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	2/21/2020 3:57:00 PM
Potassium, Dissolved	3.35	0.050	mg/L	1	2/21/2020 3:57:00 PM
Selenium, Dissolved	ND	0.005	mg/L	1	2/21/2020 3:57:00 PM
Sodium, Dissolved	17.7	0.050	mg/L	1	2/21/2020 3:57:00 PM
ANIONS BY ION CHROMATOGRAP	HY - EPA 300.0 R	EV 2.1			Analyst: CS
Fluoride	ND	0.20	mg/L	2	2/13/2020 4:23:14 AM
Chloride	19.9	2.00	mg/L	2	2/13/2020 4:23:14 AM
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2	2/13/2020 4:23:14 AM
Sulfate	163	4.00	mg/L	2	2/13/2020 4:23:14 AM
ALKALINITY TO PH 4.5 -SM 2320B-2	2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	320	10	mgCaCO3/L	1	2/21/2020
AMMONIA (NON-DISTILLED) - EPA :	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.3	0.1	mg/L	1	2/21/2020 10:38:39 AM
PHENOLS, TOTAL - EPA 420.4 REV (Prep: Method - 2/21	, ,				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	2/21/2020 4:16:18 PM
OTAL DISSOLVED SOLIDS - SM 25	40C-2011				Analyst: CC
TDS (Residue, Filterable)	520	5	mg/L	1	2/18/2020
OTAL ORGANIC CARBON - SM 531	0C-2011				Analyst: NK
Total Organic Carbon	1.0	1.0	mg/L	1	2/25/2020 3:46:00 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: BR-12-DG

Collection Date: 2/11/2020 12:03:00 PM

Lab Sample ID: 200212024-003

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 1631E					Analyst: W E
(Prep: 1631E - 2/18/2	.020)				mayor. WE
Mercury	ND	0.5	ng/L	1	2/19/2020
CP/MS - EPA 200.8 REV 5.4					Analysis CR
(Prep: - 2/13/2	020)				Analyst: SM
Antimony	ND	0.0004	mg/L	1	2/19/2020 4:43:39 PM
Beryllium	ND	0.0004	mg/L	1	2/19/2020 4:43:39 PM 2/19/2020 4:43:39 PM
Thallium	ND	0.0003	mg/L	1	2/19/2020 4:43:39 PN 2/19/2020 4:43:39 PN
ARDNESS - EPA 200.7 REV 4.4			<i>g.</i> -	·	
(Prep: - 2/13/2	020)				Analyst: KH
Total Hardness (As CaCO3)	729	5	mg/L CaCO3	1	2/26/2020
CP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 2/13/2	020)				r maryot. Terr
Arsenic	ND	0.005	mg/L	1	2/26/2020 3:27:00 PM
Barium	0.049	0.010	mg/L	1	2/26/2020 3:27:00 PM
Boron	0.092	0.050	mg/L	1	2/26/2020 3:27:00 PM
Cadmium	ND	0.005	mg/L	1	2/26/2020 3:27:00 PM
Calcium	181	0.050	mg/L	1	2/26/2020 3:27:00 PM
Chromium	ND	0.005	mg/L	1	2/26/2020 3:27:00 PM
Cobalt	ND	0.050	mg/L	1	2/26/2020 3:27:00 PM
Iron	ND	0.050	mg/L	1	2/26/2020 3:27:00 PM
Lead	ND	0.005	mg/L	1	2/26/2020 3:27:00 PM
Lithium	ND	0.050	mg/L	1	2/26/2020 3:27:00 PM
Magnesium	67.4	0.050	mg/L	1	2/26/2020 3:27:00 PM
Manganese	0.221	0.020	mg/L	1	2/26/2020 3:27:00 PM
Molybdenum	ND	0.010	mg/L	1	2/26/2020 3:27:00 PM
Potassium	4.48	0.050	mg/L	1	2/26/2020 3:27:00 PM
Selenium	ND	0.005	mg/L	1	2/26/2020 3:27:00 PM
Sodium	21.2	0.050	mg/L	1	2/26/2020 3:27:00 PM
P DISSOLVED META L- EPA 200.7 R	EV 4.4				Analyst: KH
(Prep: - 2/13/20)20)				•
Arsenic, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:02:00 PM
Barium, Dissolved	0.050	0.010	mg/L	1	2/21/2020 4:02:00 PM
Boron, Dissolved	0.084	0.050	mg/L	1	2/21/2020 4:02:00 PM
Cadmium, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:02:00 PM
Calcium, Dissolved	187	0.050	mg/L	1	2/21/2020 4:02:00 PM
Iron, Dissolved	ND	0.050	mg/L	1	2/21/2020 4:02:00 PM
Lead, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:02:00 PM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: BR-12-DG

Collection Date: 2/11/2020 12:03:00 PM

Lab Sample ID: 200212024-003

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7	7 REV 4.4				Analyst: KH
(Prep: - 2/13	3/2020)				,
Magnesium, Dissolved	70.2	0.050	mg/L	1	2/21/2020 4:02:00 PM
Manganese, Dissolved	0.221	0.020	mg/L	1	2/21/2020 4:02:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	2/21/2020 4:02:00 PM
Potassium, Dissolved	4.83	0.050	mg/L	1	2/21/2020 4:02:00 PM
Selenium, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:02:00 PM
Sodium, Dissolved	22.2	0.050	mg/L	1	2/21/2020 4:02:00 PM
ANIONS BY ION CHROMATOGRAPH	IY - EPA 300.0 R	EV 2.1			Analyst: CS
Fluoride	ND	0.20	mg/L	2	2/13/2020 4:42:17 AM
Chloride	224	10.0	mg/L	10	2/24/2020 10:56:58 PM
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2	2/13/2020 4:42:17 AM
Sulfate	147	4.00	mg/L	2	2/13/2020 4:42:17 AM
ALKALINITY TO PH 4.5 -SM 2320B-2	011				Analyst: DAA
Alkalinity, Total (As CaCO3)	320	10	mgCaCO3/L	1	2/21/2020
AMMONIA (NON-DISTILLED) - EPA 3	50.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.4	0.1	mg/L	1	2/21/2020 10:50:06 AM
PHENOLS, TOTAL - EPA 420.4 REV 1 (Prep: Method - 2/21/					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	2/21/2020 4:17:39 PM
OTAL DISSOLVED SOLIDS - SM 254	40C-2011				Analyst: CC
TDS (Residue, Filterable)	785	5	mg/L	1	2/18/2020
OTAL ORGANIC CARBON - SM 5310	0C-2011				Analyst: NK
Total Organic Carbon	ND	1.0	mg/L	1	2/25/2020 4:02:00 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order: Reference:

200212024

Plant ND GW /

PO#:

Client Sample ID: BR-13-DG

Collection Date: 2/11/2020 11:50:00 AM

Lab Sample ID: 200212024-004

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 16	31E				Analyst: W E
(Prep: 1631E -	2/18/2020)				. maryott WE
Mercury	ND	0.5	ng/L	1	2/19/2020
CP/MS - EPA 200.8 REV 5.4					Analyst CR
	2/13/2020)				Analyst: SM
Antimony	ND	0.0004	mg/L	1	2/19/2020 4:47:22 PM
Beryllium	ND	0.0003	mg/L	1	2/19/2020 4:47:22 PM
Thallium	ND	0.0003	mg/L	1	2/19/2020 4:47:22 PM
ARDNESS - EPA 200.7 REV 4.4			_		
(Prep: - 2	2/13/2020)				Analyst: KH
Total Hardness (As CaCO3)	451	5	mg/L CaCO3	1	2/26/2020
CP METALS - EPA 200.7 REV 4.4	1				Analyst: KH
(Prep: - 2	2/13/2020)				•
Arsenic	ND	0.005	mg/L	1	2/26/2020 3:30:00 PM
Barium	0.078	0.010	mg/L	1	2/26/2020 3:30:00 PM
Boron	0.173	0.050	mg/L	1	2/26/2020 3:30:00 PM
Cadmium	ND	0.005	mg/L	1	2/26/2020 3:30:00 PM
Calcium	115	0.050	mg/L	1	2/26/2020 3:30:00 PM
Chromium	ND	0.005	mg/L	1	2/26/2020 3:30:00 PM
Cobalt	ND	0.050	mg/L	1	2/26/2020 3:30:00 PM
Iron	ND	0.050	mg/L	1	2/26/2020 3:30:00 PM
Lead	ND	0.005	mg/L	1	2/26/2020 3:30:00 PM
Lithium	0.057	0.050	mg/L	1	2/26/2020 3:30:00 PM
Magnesium	39.9	0.050	mg/L	1	2/26/2020 3:30:00 PM
Manganese	0.091	0.020	mg/L	1	2/26/2020 3:30:00 PM
Molybdenum	NĐ	0.010	mg/L	1	2/26/2020 3:30:00 PM
Potassium	3.79	0.050	mg/L	1	2/26/2020 3:30:00 PM
Selenium	ND	0.005	mg/L	1	2/26/2020 3:30:00 PM
Sodium	44.8	0.050	mg/L	1	2/26/2020 3:30:00 PM
P DISSOLVED META L- EPA 20					Analyst: KH
(Prep: - 2	/13/2020)				-
Arsenic, Dissolved	0.007	0.005	mg/L	1	2/21/2020 4:07:00 PM
Barium, Dissolved	0.078	0.010	mg/L	1	2/21/2020 4:07:00 PM
Boron, Dissolved	0.152	0.050	mg/L	1	2/21/2020 4:07:00 PM
Cadmium, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:07:00 PM
Calcium, Dissolved	119	0.050	mg/L	1	2/21/2020 4:07:00 PM
Iron, Dissolved	ND	0.050	mg/L	1	2/21/2020 4:07:00 PM
Lead, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:07:00 PM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

. . .

Client Sample ID: BR-13-DG

Work Order:

200212024

Collection Date: 2/11/2020 11:50:00 AM

Reference:

Plant ND GW /

Lab Sample ID: 200212024-004

PO#:

Analyses	Result	RL (Qual Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200	.7 REV 4.4				Analyst: KH
(Prep: - 2/ ⁻	13/2020)				•
Magnesium, Dissolved	41.5	0.050	mg/L	1	2/21/2020 4:07:00 PM
Manganese, Dissolved	0.092	0.020	mg/L	1	2/21/2020 4:07:00 PM
Mołybdenum, Dissolved	ND	0.010	mg/L	1	2/21/2020 4:07:00 PM
Potassium, Dissolved	3.93	0.050	mg/L	1	2/21/2020 4:07:00 PM
Selenium, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:07:00 PM
Sodium, Dissolved	46.2	0.050	mg/L	1	2/21/2020 4:07:00 PM
ANIONS BY ION CHROMATOGRAF	PHY - EPA 300.0 R	EV 2.1			Analyst: CS
Fluoride	ND	0.20	mg/L	2	2/13/2020 5:01:19 AM
Chloride	8.53	2.00	mg/L	2	2/13/2020 5:01:19 AM
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2	2/13/2020 5:01:19 AM
Sulfate	99.1	4.00	mg/L	2	2/13/2020 5:01:19 AM
ALKALINITY TO PH 4.5 -SM 2320B-	2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	410	10	mgCaCO3/L	1	2/21/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.4	0.1	mg/L	1	2/21/2020 10:51:43 AM
PHENOLS, TOTAL - EPA 420.4 REV (Prep: Method - 2/2					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	2/21/2020 4:18:59 PM
TOTAL DISSOLVED SOLIDS - SM 2	540C-2011				Analyst: CC
TDS (Residue, Filterable)	470	5	mg/L	1	2/18/2020
OTAL ORGANIC CARBON - SM 53	10C-2011				Analyst: NK
Total Organic Carbon	ND	1.0	mg/L	1	2/25/2020 4:19:00 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order: 200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: BR-20-DG

Collection Date: 2/11/2020 11:30:00 AM

Lab Sample ID: 200212024-005

Analyses	Result	RL Ç	Qual Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 1	631E				Analyst: W E
(Prep: 1631E -	2/18/2020)				•
Mercury	ND	0.5	ng/L	1	2/19/2020
CP/MS - EPA 200.8 REV 5.4					Analyst: SM
(Prep: -	2/13/2020)				Analyst. Sivi
Antimony	0.0004	0.0004	ma/l	4	0/10/0000 4:50:04 DN
Beryllium	0.0004 ND	0.0004	mg/L mg/L	1	2/19/2020 4:58:34 PM
Thallium	ND ND	0.0003	mg/L	1	2/19/2020 4:58:34 PN 2/19/2020 4:58:34 PN
		0.0005	mg/L	'	2/19/2020 4.56.54 PW
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: -	2/13/2020)				
Total Hardness (As CaCO3)	97	5	mg/L CaCO3	1	2/26/2020
CP METALS - EPA 200.7 REV 4	.4				Analyst: KH
(Prep: -	2/13/2020)				, ,
Arsenic	ND	0.005	mg/L	1	2/26/2020 3:35:00 PM
Barium	1.84	0.010	mg/L	1	2/26/2020 3:35:00 PM
Boron	1.47	0.050	mg/L	1	2/26/2020 3:35:00 PM
Cadmium	ND	0.005	mg/L	1	2/26/2020 3:35:00 PM
Calcium	25.2	0.050	mg/L	1	2/26/2020 3:35:00 PM
Chromium	ND	0.005	mg/L	1	2/26/2020 3:35:00 PM
Cobalt	ND	0.050	mg/L	1	2/26/2020 3:35:00 PM
Iron	ND	0.050	mg/L	1	2/26/2020 3:35:00 PM
Lead	ND	0.005	mg/L	1	2/26/2020 3:35:00 PM
Lithium	0.139	0.050	mg/L	1	2/26/2020 3:35:00 PM
Magnesium	8.20	0.050	mg/L	1	2/26/2020 3:35:00 PM
Manganese	ND	0.020	mg/L	1	2/26/2020 3:35:00 PM
Molybdenum	ND	0.010	mg/L	1	2/26/2020 3:35:00 PM
Potassium	8.66	0.050	mg/L	1	2/26/2020 3:35:00 PM
Selenium	ND	0.005	mg/L	1	2/26/2020 3:35:00 PM
Sodium	228	0.500	mg/L	10	2/26/2020 3:52:00 PM
P DISSOLVED META L- EPA 2	00.7 REV 4.4				Analyst: KH
(Prep: -	2/13/2020)				
Arsenic, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:11:00 PM
Barium, Dissolved	1.83	0.010	mg/L	1	2/21/2020 4:11:00 PM
Boron, Dissolved	1.32	0.050	mg/L	1	2/21/2020 4:11:00 PM
Cadmium, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:11:00 PM
Calcium, Dissolved	24.6	0.050	mg/L	1	2/21/2020 4:11:00 PM
Iron, Dissolved	0.093	0.050	mg/L	1	2/21/2020 4:11:00 PM
Lead, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:11:00 PM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: BR-20-DG

Collection Date: 2/11/2020 11:30:00 AM

Lab Sample ID: 200212024-005

Analyses	Result	RL	Qual Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7	7 REV 4.4				Analyst: KH
(Prep: - 2/13	3/2020)				•
Magnesium, Dissolved	8.35	0.050	mg/L	1	2/21/2020 4:11:00 PM
Manganese, Dissolved	ND	0.020	mg/L	1	2/21/2020 4:11:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	2/21/2020 4:11:00 PM
Potassium, Dissolved	9.13	0.050	mg/L	1	2/21/2020 4:11:00 PM
Selenium, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:11:00 PM
Sodium, Dissolved	262	0.500	mg/L	10	2/21/2020 4:15:00 PM
ANIONS BY ION CHROMATOGRAPH	HY - EPA 300.0 F	REV 2.1			Analyst: CS
Fluoride	0.40	0.20	mg/L	2	2/13/2020 5:20:20 AM
Chloride	28.3	2.00	mg/L	2	2/13/2020 5:20:20 AM
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2	2/13/2020 5:20:20 AM
Sulfate	ND	4.00	mg/L	2	2/13/2020 5:20:20 AM
ALKALINITY TO PH 4.5 -SM 2320B-2	2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	610	10	mgCaCO3/L	1	2/24/2020
AMMONIA (NON-DISTILLED) - EPA 3	850.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	2.2	0.5	mg/L	5	2/21/2020 11:40:00 AM
PHENOLS, TOTAL - EPA 420.4 REV (Prep: Method - 2/21					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	2/21/2020 4:20:20 PM
TOTAL DISSOLVED SOLIDS - SM 25	40C-2011				Analyst: CC
TDS (Residue, Filterable)	630	5	mg/L	1	2/18/2020
TOTAL ORGANIC CARBON - SM 531	0C-2011				Analyst: NK
Total Organic Carbon	ND	1.0	mg/L	1	2/25/2020 5:09:00 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: DUP

Collection Date: 2/11/2020

Lab Sample ID: 200212024-006

Analyses	Result	RL (Qual Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 16	31E				Analyst: W
(Prep: 1631E - 2	/18/2020)				
Mercury	ND	0.5	ng/L	1	2/19/2020
ICP/MS - EPA 200.8 REV 5.4					Amalust On
****	/13/2020)				Analyst: SN
` '	,				
Antimony Beryllium	ND	0.0004	mg/L	1	2/19/2020 5:02:18 PM
Thallium	ND	0.0003	mg/L	1	2/19/2020 5:02:18 PN
mainum	ND	0.0003	mg/L	1	2/19/2020 5:02:18 PN
HARDNESS - EPA 200.7 REV 4.4					Analyst: K H
(Prep: - 2	/13/2020)				ŕ
Total Hardness (As CaCO3)	458	5	mg/L CaCO3	1	2/26/2020
CP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 2	(13/2020)				
Arsenic	ND	0.005	mg/L	1	2/26/2020 3:56:00 PM
Barium	0.080	0.010	mg/L	1	2/26/2020 3:56:00 PM
Boron	0.177	0.050	mg/L	1	2/26/2020 3:56:00 PM
Cadmium	ND	0.005	mg/L	1	2/26/2020 3:56:00 PM
Calcium	116	0.050	mg/L	1	2/26/2020 3:56:00 PM
Chromium	ND	0.005	mg/L	1	2/26/2020 3:56:00 PM
Cobalt	ND	0.050	mg/L	1	2/26/2020 3:56:00 PM
Iron	ND	0.050	mg/L	1	2/26/2020 3:56:00 PM
Lead	ND	0.005	mg/L	1	2/26/2020 3:56:00 PM
Lithium	ND	0.050	mg/L	1	2/26/2020 3:56:00 PM
Magnesium	40.8	0.050	mg/L	1	2/26/2020 3:56:00 PM
Manganese	0.091	0.020	mg/L	1	2/26/2020 3:56:00 PM
Molybdenum	ND	0.010	mg/L	1	2/26/2020 3:56:00 PM
Potassium	3.92	0.050	mg/L	1	2/26/2020 3:56:00 PM
Selenium	ND	0.005	mg/L	1	2/26/2020 3:56:00 PM
Sodium	45.7	0.050	mg/L	1	2/26/2020 3:56:00 PM
OP DISSOLVED META L- EPA 200	.7 REV 4.4				Analyst: KH
(Prep: - 2/	13/2020)				,
Arsenic, Dissolved	0.006	0.005	mg/L	1	2/21/2020 4:23:00 PM
Barium, Dissolved	0.079	0.010	mg/L	1	2/21/2020 4:23:00 PM
Boron, Dissolved	0.155	0.050	mg/L	1	2/21/2020 4:23:00 PM
Cadmium, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:23:00 PM
Calcium, Dissolved	120	0.050	mg/L	1	2/21/2020 4:23:00 PM
Iron, Dissolved	0.051	0.050	mg/L	1	2/21/2020 4:23:00 PM
Lead, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:23:00 PM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: DUP

Collection Date: 2/11/2020

Lab Sample ID: 200212024-006

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.	7 REV 4.4				Analyst: KH
(Prep: - 2/1	3/2020)				,
Magnesium, Dissolved	42.1	0.050	mg/L	1	2/21/2020 4:23:00 PM
Manganese, Dissolved	0.092	0.020	mg/L	1	2/21/2020 4:23:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	2/21/2020 4:23:00 PM
Potassium, Dissolved	4.02	0.050	mg/L	1	2/21/2020 4:23:00 PM
Selenium, Dissolved	ND	0.005	mg/L	1	2/21/2020 4:23:00 PM
Sodium, Dissolved	46.9	0.050	mg/L	1	2/21/2020 4:23:00 PM
ANIONS BY ION CHROMATOGRAP	HY - EPA 300.0 F	REV 2.1			Analyst: CS
Fluoride	ND	0.20	mg/L	2	2/13/2020 5:39:23 AM
Chloride	8.52	2.00	mg/L	2	2/13/2020 5:39:23 AM
Nitrate, Nitrogen (As N)	0.05	0.04	mg/L	2	2/13/2020 5:39:23 AM
Sulfate	99.3	4.00	mg/L	2	2/13/2020 5:39:23 AM
ALKALINITY TO PH 4.5 -SM 2320B-	2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	410	10	mgCaCO3/L	1	2/24/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.4	0.1	mg/L	1	2/21/2020 10: 5 4:57 AM
PHENOLS, TOTAL - EPA 420.4 REV (Prep: Method - 2/21					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	2/21/2020 4:24:14 PM
TOTAL DISSOLVED SOLIDS - SM 25	640C-2011				Analyst: CC
TDS (Residue, Filterable)	570	5	mg/L	1	2/18/2020
OTAL ORGANIC CARBON - SM 531		ŭ	g, –	1	
OTAL OTTORNIO CARDON - SM 53	100-2011				Analyst: NK
Total Organic Carbon	ND	1.0	mg/L	1	2/25/2020 5:26:00 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Client Sample ID: OB-2-UG

Collection Date: 2/11/2020 10:50:00 AM

Reference:

Potassium

Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved

Selenium, Dissolved

Sodium, Dissolved

Selenium

Sodium

Plant ND GW /

Lab Sample ID: 200212024-007

2/21/2020 1:47:00 PM

2/21/2020 1:47:00 PM

2/21/2020 1:47:00 PM

2/21/2020 4:28:00 PM

2/21/2020 4:28:00 PM

Analyst: CS

PO#:

Matrix: GROUNDWATER

				THE SHOOM WITTER	
Analyses	Result	RL Q	ual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4 (Prep: - 2/	13/2020)				Analyst: KH
Total Hardness (As CaCO3)	538	5	mg/L CaCO3	1	2/21/2020
ICP METALS - EPA 200.7 REV 4.4 (Prep: - 2/	13/2020)				Analyst: KH
Arsenic	ND	0.005	mg/L	1	2/21/2020 1:47:00 PM
Barium	0.018	0.010	mg/L	1	2/21/2020 1:47:00 PM
Boron	ND	0.050	mg/L	1	2/21/2020 1:47:00 PM
Cadmium	ND	0.005	mg/L	1	2/21/2020 1:47:00 PM
Calcium	146	0.050	mg/L	1	2/21/2020 1:47:00 PM
Iron	0.226	0.050	mg/L	1	2/21/2020 1:47:00 PM
Lead	ND	0.005	mg/L	1	2/21/2020 1:47:00 PM
Magnesium	42.1	0.050	mg/L	1	2/21/2020 1:47:00 PM
Manganese	ND	0.020	mg/L	1	2/21/2020 1:47:00 PM
Molybdenum	ND	0.010	mg/L	1	2/21/2020 1:47:00 PM

0.050

0.005

0.050

ICP DISSOLVED META L- EPA 200.7 F

(Prep: - 2/13/2

0.470

ND

5.88

ND

6.11

REV 4.4 /2020)			Analyst: KH
0.007	0.005	mg/L	1 2/21/2020 4:28:00 PM
0.018	0.010	mg/L	1 2/21/2020 4:28:00 PM
ND	0.050	mg/L	1 2/21/2020 4:28:00 PM
ND	0.005	mg/L	1 2/21/2020 4:28:00 PM
154	0.050	mg/L	1 2/21/2020 4:28:00 PM
ND	0.050	mg/L	1 2/21/2020 4:28:00 PM
ND	0.005	mg/L	1 2/21/2020 4:28:00 PM
43.3	0.050	mg/L	1 2/21/2020 4:28:00 PM
NĐ	0.020	mg/L	1 2/21/2020 4:28:00 PM
ND	0.010	mg/L	1 2/21/2020 4:28:00 PM
0.482	0.050	mg/L	1 2/21/2020 4:28:00 PM

mg/L

mg/L

mg/L

mg/L

mg/L

ANIONS BY ION CHROMATOGRAPHY - EPA 300.0 REV 2.1

Chloride Nitrate, Nitrogen (As N) Sulfate	ND ND 367	2.00 0.04 10.0	mg/L mg/L mg/L	2 2 10	2/13/2020 5:58:25 AM 2/13/2020 5:58:25 AM 2/25/2020 12:52:39 AM
	55.		1119/12	10	2/23/2020 12.32.33 AW
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2 10	2/13/2020 5:58:25 AM

0.005

0.050

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: OB-2-UG

Collection Date: 2/11/2020 10:50:00 AM

Lab Sample ID: 200212024-007

Analyses	Result	RL Qua	I Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B	-2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	170	10	mgCaCO3/L	1	2/24/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	2/21/2020 10:56:34 AM
PHENOLS, TOTAL - EPA 420.4 REV (Prep: Method - 2/2					Analyst: KB
Phenolics, Total Recoverable	0.005	0.004	mg/L	1	2/26/2020 3:55:09 PM
TOTAL DISSOLVED SOLIDS - SM 2	2540C-2011				Analyst: CC
TDS (Residue, Filterable)	705	5	mg/L	1	2/18/2020
TOTAL ORGANIC CARBON - SM 53	310C-2011				Analyst: NK
Total Organic Carbon	1.9	1.0	mg/L	1	2/25/2020 5:42:00 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Client Sample ID: OB-4-DG

Collection Date: 2/11/2020 12:22:00 PM

Reference:

Plant ND GW /

Lab Sample ID: 200212024-008

-	O 11
ν	0 DTT •
	$\cup \pi$.

	Result	RL Q	ual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: K F
(Prep: - 2	2/13/2020)				,
Total Hardness (As CaCO3)	124	5	mg/L CaCO3	1	2/21/2020
ICP METALS - EPA 200.7 REV 4.4	l				Analyst: KE
(Prep: - 2	/13/2020)				Analyst: KF
Arsenic		2 225			
Barium	ND	0.005	mg/L	1	2/21/2020 1:52:00 PN
Boron	0.031	0.010	mg/L	1	2/21/2020 1:52:00 PN
Cadmium	ND	0.050	mg/L	1	2/21/2020 1:52:00 PN
Calcium	ND	0.005	mg/L	1	2/21/2020 1:52:00 PN
	36.7	0.050	mg/L	1	2/21/2020 1:52:00 PM
Iron	0.553	0.050	mg/L	1	2/21/2020 1:52:00 PM
Lead	ND	0.005	mg/L	1	2/21/2020 1:52:00 PM
Magnesium	7.88	0.050	mg/L	1	2/21/2020 1:52:00 PM
Manganese	0.060	0.020	mg/L	1	2/21/2020 1:52:00 PM
Molybdenum	ND	0.010	mg/L	1	2/21/2020 1:52:00 PM
Potassium	1.23	0.050	mg/L	1	2/21/2020 1:52:00 PM
Selenium	ND	0.005	mg/L	1	2/21/2020 1:52:00 PM
Sodium	2.44	0.050	mg/L	1	2/21/2020 1:52:00 PM
CP DISSOLVED META L- EPA 200	0.7 REV 4.4				Analyst: SM
(Prep: - 2/	/13/2020)				, analyst. Sin
Arsenic, Dissolved	ND	0.005	mg/L	1	2/26/2020
Barium, Dissolved	0.028	0.010	mg/L	1	2/26/2020
Boron, Dissolved	ND	0.050	mg/L	1	2/26/2020
Cadmium, Dissolved	ND	0.005	mg/L	1	2/26/2020
Calcium, Dissolved	37.4	0.050	mg/L	1	2/26/2020
Iron, Dissolved	0.113	0.050	mg/L	1	2/26/2020
Lead, Dissolved	ND	0.005	mg/L	1	2/26/2020
Magnesium, Dissolved	8.09	0.050	mg/L	1	2/26/2020
Manganese, Dissolved	0.031	0.020	mg/L	1	2/26/2020
Molybdenum, Dissolved	ND	0.010	mg/L	1	2/26/2020
Potassium, Dissolved	1.70	0.050	mg/L	1	2/26/2020
Selenium, Dissolved	ND	0.005	mg/L	1	2/26/2020
001011101111, 101030, 1000	3.08	0.050	mg/L	1	2/26/2020
Sodium, Dissolved		0.000	mg/L	'	4/20/2020
Sodium, Dissolved					
Sodium, Dissolved		EV 2.1			Analyst: CS
	PHY - EPA 300.0 RE		ma/l	2	,
Sodium, Dissolved		EV 2.1 2.00 0.04	mg/L mg/L	2 2	Analyst: CS 2/13/2020 6:17:27 AM 2/13/2020 6:17:27 AM

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

The second secon

Client Sample ID: OB-4-DG

Collection Date: 2/11/2020 12:22:00 PM

Date: 27-Feb-20

Lab Sample ID: 200212024-008

Analyses	Result	RL Qua	l Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B	-2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	96	4	mgCaCO3/L	1	2/24/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	2/21/2020 10:58:12 AM
PHENOLS, TOTAL - EPA 420.4 REV 1.0(1993) (Prep: Method - 2/24/2020)					Analyst: KB
Phenolics, Total Recoverable	0.005	0.004	mg/L	1	2/26/2020 3:57:50 PM
TOTAL DISSOLVED SOLIDS - SM 2540C-2011					Analyst: CC
TDS (Residue, Filterable)	165	5	mg/L	1	2/18/2020
TOTAL ORGANIC CARBON - SM 53	310C-2011				Analyst: NK
Total Organic Carbon	5.7	1.0	mg/L	1	2/25/2020 5:59:00 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: OB-7-DG

Collection Date: 2/11/2020 11:00:00 AM

Lab Sample ID: 200212024-009

	Result	RL Q	ual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4		<u> </u>			Analyst: K F
(Prep: - 2	2/13/2020)				
Total Hardness (As CaCO3)	682	5	mg/L CaCO3	1	2/21/2020
ICP METALS - EPA 200.7 REV 4.4	1				Analyst: K
(Prep: - 2					Allalyst. Kn
Arsenic	, ND	0.005	A		0/01/0000 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
Barium	0.015	0.005	mg/L	1	2/21/2020 2:27:00 PN
Boron	0.015		mg/L	1	2/21/2020 2:27:00 PN
Cadmium		0.050	mg/L	1	2/21/2020 2:27:00 PN
Calcium	ND 200	0.005	mg/L	1	2/21/2020 2:27:00 PM
Iron		0.500	mg/L	10	2/21/2020 2:31:00 PM
Lead	0.148	0.050	mg/L	1	2/21/2020 2:27:00 PM
Magnesium	ND	0.005	mg/L	1	2/21/2020 2:27:00 PM
Manganese	44.7	0.050	mg/L	1	2/21/2020 2:27:00 PM
Molybdenum	ND	0.020	mg/L	1	2/21/2020 2:27:00 PM
Potassium	ND	0.010	mg/L	1	2/21/2020 2:27:00 PM
Selenium	1.22	0.050	mg/L	1	2/21/2020 2:27:00 PM
Sodium	ND	0.005	mg/L	1	2/21/2020 2:27:00 PM
	8.12	0.050	mg/L	1	2/21/2020 2:27:00 PM
CP DISSOLVED META L- EPA 20	0.7 REV 4.4				Analyst: SM
(Prep: - 2	/13/2020)				
Arsenic, Dissolved	ND	0.005	mg/L	1	2/26/2020
Barium, Dissolved	0.016	0.010	mg/L	1	2/26/2020
Boron, Dissolved	0.341	0.050	mg/L	1	2/26/2020
Cadmium, Dissolved	ND	0.005	mg/L	1	2/26/2020
Calcium, Dissolved	217	0.500	mg/L	10	2/26/2020
Iron, Dissolved	ND	0.050	mg/L	1	2/26/2020
Lead, Dissolved	ND	0.005	mg/L	1	2/26/2020
Magnesium, Dissolved	38.7	0.050	mg/L	1	2/26/2020
Manganese, Dissolved	ND	0.020	mg/L	1	2/26/2020
Molybdenum, Dissolved	ND	0.010	mg/L	1	2/26/2020
Potassium, Dissolved	1.38	0.050	mg/L	1	2/26/2020
Selenium, Dissolved	ND	0.005	mg/L	1	2/26/2020
Sodium, Dissolved	7.51	0.050	mg/L	1	2/26/2020
ANIONS BY ION CHROMATOGRA	PHY - EPA 300.0 R	EV 2.1			Analyst: CS
Chloride	2.29	2.00	mg/L	2	0/10/2020 7.55.51
	2.23		-	2	2/13/2020 7:55:51 AM
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2	2/13/2020 7:55:51 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order: Reference:

200212024

1

Plant ND GW /

PO#:

Client Sample ID: OB-7-DG

Collection Date: 2/11/2020 11:00:00 AM

Lab Sample ID: 200212024-009

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B	-2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	340	10	mgCaCO3/L	1	2/24/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	2/21/2020 11:03:09 AM
PHENOLS, TOTAL - EPA 420.4 REV 1.0(1993) (Prep: Method - 2/24/2020)					Analyst: KB
Phenolics, Total Recoverable	0.006	0.004	mg/L	1	2/26/2020 3:59:11 PM
TOTAL DISSOLVED SOLIDS - SM 2540C-2011					Analyst: CC
TDS (Residue, Filterable)	985	5	mg/L	1	2/18/2020
TOTAL ORGANIC CARBON - SM 53	10C-2011				Analyst: NK
Total Organic Carbon	1.6	1.0	mg/L	1	2/25/2020 6:15:00 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: OB-19-DG

Collection Date: 2/11/2020 11:15:00 AM

Lab Sample ID: 200212024-010

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KF
(Prep: -	2/13/2020)				
Total Hardness (As CaCO3)	1533	5	mg/L CaCO3	1	2/21/2020
ICP METALS - EPA 200.7 REV 4.	4				Analyst: K H
(Prep: -	2/13/2020)				rinaryot. Ref
Arsenic	ND	0.005	mg/L	1	2/21/2020 2:39:00 PM
Barium	ND	0.010	mg/L	1	2/21/2020 2:39:00 PM
Boron	0.098	0.050	mg/L	1	2/21/2020 2:39:00 PM
Cadmium	ND	0.005	mg/L	1	2/21/2020 2:39:00 PM
Calcium	440	0.500	mg/L	10	2/21/2020 2:43:00 PM
Iron	0.239	0.050	mg/L	1	2/21/2020 2:39:00 PM
Lead	ND	0.005	mg/L	1	2/21/2020 2:39:00 PM
Magnesium	106	0.050	mg/L	1	2/21/2020 2:39:00 PM
Manganese	ND	0.020	mg/L	1	2/21/2020 2:39:00 PM
Molybdenum	ND	0.010	mg/L	1	2/21/2020 2:39:00 PM
Potassium	2.22	0.050	mg/L	1	2/21/2020 2:39:00 PM
Selenium	ND	0.005	mg/L	1	2/21/2020 2:39:00 PM
Sodium	8.42	0.050	mg/L	1	2/21/2020 2:39:00 PM
CP DISSOLVED META L- EPA 20	00 7 REV 4 4				Analyst Car
(Prep: - 2					Analyst: SM
Arsenic, Dissolved	ND	0.005	mg/L	1	2/26/2020
Barium, Dissolved	ND	0.010	mg/L	1	2/26/2020
Boron, Dissolved	0,101	0.050	mg/L	1	2/26/2020
Cadmium, Dissolved	ND	0.005	mg/L	1	2/26/2020
Calcium, Dissolved	321	0.500	mg/L	10	2/26/2020
Iron, Dissolved	ND	0.050	mg/L	1	2/26/2020
Lead, Dissolved	ND	0.005	mg/L	1	2/26/2020
Magnesium, Dissolved	91.4	0.050	mg/L	1	2/26/2020
Manganese, Dissolved	ND	0.020	mg/L	1	2/26/2020
Molybdenum, Dissolved	ND	0.010	mg/L	1	2/26/2020
Potassium, Dissolved	2.43	0.050	mg/L	1	2/26/2020
Selenium, Dissolved	ND	0.005	mg/L	1	2/26/2020
Sodium, Dissolved	7.74	0.050	mg/L	1	2/26/2020
NIONS BY ION CHROMATOGRA	NPHY - EPA 300.0 RE	EV 2.1	•		Analyst: CS
					a.y 5 50
Oblasida	ND	2.00	mg/L	2	2/13/2020 8:15:05 AM
Chloride					
Nitrate, Nitrogen (As N)	0.05	0.04	mg/L	2	2/13/2020 8:15:05 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: OB-19-DG

Collection Date: 2/11/2020 11:15:00 AM

Lab Sample ID: 200212024-010

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B	-2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	380	10	mgCaCO3/L	1	2/24/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	†	2/21/2020 11:04:49 AM
PHENOLS, TOTAL - EPA 420.4 RE (Prep: Method - 2/2					Analyst: KB
Phenolics, Total Recoverable	0.005	0.004	mg/L	1	2/26/2020 4:00:31 PM
TOTAL DISSOLVED SOLIDS - SM 2	2540C-2011				Analyst: CC
TDS (Residue, Filterable)	2000	5	mg/L	1	2/18/2020
TOTAL ORGANIC CARBON - SM 5	310C-2011				Analyst: NK
Total Organic Carbon	2.1	1.0	mg/L	1	2/25/2020 6:31:00 AM

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order: Reference: 200212024

Plant ND GW /

PO#:

Client Sample ID: OB-20-DG

Collection Date: 2/11/2020 11:23:00 AM

Lab Sample ID: 200212024-011

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - :	2/13/2020)				
Total Hardness (As CaCO3)	419	5	mg/L CaCO3	1	2/21/2020
CP METALS - EPA 200.7 REV 4.	1				Analyst: K H
(Prep: - :					Analyst. Kii
Arsenic	ŕ				
Barium	ND	0.005	mg/L	1	2/21/2020 2:47:00 PM
Boron	0.038	0.010	mg/L	1	2/21/2020 2:47:00 PM
	0.869	0.050	mg/L	1	2/21/2020 2:47:00 PM
Cadmium	ND	0.005	mg/L	1	2/21/2020 2:47:00 PM
Calcium	102	0.050	mg/L	1	2/21/2020 2:47:00 PM
Iron	0.085	0.050	mg/L	1	2/21/2020 2:47:00 PM
Lead	ND	0.005	mg/L	1	2/21/2020 2:47:00 PM
Magnesium	39.6	0.050	mg/L	1	2/21/2020 2:47:00 PM
Manganese	0.150	0.020	mg/L	1	2/21/2020 2:47:00 PM
Molybdenum	ND	0.010	mg/L	1	2/21/2020 2:47:00 PM
Potassium	9.08	0.050	mg/L	1	2/21/2020 2:47:00 PM
Selenium	ND	0.005	mg/L	1	2/21/2020 2:47:00 PM
Sodium	101	0.500	mg/L	10	2/26/2020 2:03:00 PM
CP DISSOLVED META L- EPA 20	0.7 REV 4.4				Analyst: SM
(Prep: - 2	/13/2020)				
Arsenic, Dissolved	ND	0.005	mg/L	1	2/26/2020
Barium, Dissolved	0.026	0.010	mg/L	1	2/26/2020
Boron, Dissolved	0.938	0.050	mg/L	1	2/26/2020
Cadmium, Dissolved	ND	0.005	mg/L	1	2/26/2020
Calcium, Dissolved	107	0.500	mg/L	10	2/26/2020
Iron, Dissolved	ND	0.050	mg/L	1	2/26/2020
Lead, Dissolved	ND	0.005	mg/L	1	2/26/2020
Magnesium, Dissolved	36.2	0.050	mg/L	1	2/26/2020
Manganese, Dissolved	0.128	0.020	mg/L	1	2/26/2020
Molybdenum, Dissolved	ND	0.010	mg/L	1	
Potassium, Dissolved	7.96	0.050	mg/L		2/26/2020
Selenium, Dissolved	7.96 ND	0.005	9	1	2/26/2020
Sodium, Dissolved	103	0.500	mg/L	1	2/26/2020
			mg/L	10	2/26/2020
NIONS BY ION CHROMATOGRA	PHY - EPA 300.0 RI	EV 2.1			Analyst: CS
Chloride	2.24	2.00	mg/L	2	2/13/2020 8:34:07 AM
Nitrate, Nitrogen (As N)	0.08	0.04	mg/L	2	2/13/2020 8:34:07 AM
Talliale, Talliogen (AS 14)					

Date: 27-Feb-20

CLIENT:

Frontier Technical Associates

Work Order:

200212024

Reference:

Plant ND GW /

PO#:

Client Sample ID: OB-20-DG

Collection Date: 2/11/2020 11:23:00 AM

Lab Sample ID: 200212024-011

Analyses	Result	RL Qua	ıl Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B	-2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	470	10	mgCaCO3/L	1	2/24/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.6	0.1	mg/L	1	2/21/2020 11:06:24 AM
PHENOLS, TOTAL - EPA 420.4 REV (Prep: Method - 2/2					Analyst: KB
Phenolics, Total Recoverable	0.005	0.004	mg/L	1	2/26/2020 4:01:53 PM
TOTAL DISSOLVED SOLIDS - SM 2	2540C-2011				Analyst: CC
TDS (Residue, Filterable)	760	5	mg/L	1	2/18/2020
TOTAL ORGANIC CARBON - SM 53	310C-2011				Analyst: NK
Total Organic Carbon	ND	1.0	mg/L	1	2/25/2020 6:48:00 AM

Frontier Technical Associates 200212024 CLIENT:

Work Order:

Plant ND GW Project:

ANALYTICAL QC SUMMARY REPORT

Date: 27-Feb-20

BatchID: 78081

MBLK	MBLK SeqNo: 2795445			PrepDate:	TestNo. E200 7E	200 7E	0	070001Na0	
And of the control of	Samp ID: MBLK			PrepRef:	Units: mg/L		Analysis Date:	2/20/2020	
Analyte		Result	PQL	SPK value SPK Ref Val	### High Low imit High Limit	mit RPD Ref Val	000%	بإسبا الرقاق الراة	-
Arsenic,	Arsenic, Dissolved	N	0.00500						CODE
Barium,	Barium, Dissolved	QN	0.0100						
Boron, D	Boron, Dissolved	Q	0.0500						
Cadmiun	Cadmium, Dissolved	QN	0.00500						
Calcium,	Calcium, Dissolved	QN	0.0500						
Iron, Dissolved	solved	Q.	0.0500						
Lead, Dissolved	ssolved	9	0.00500						
Magnesi	Magnesium, Dissolved	Q.	0.0500						
Mangane	Manganese, Dissolved	QN	0.0200						
Molybder	Molybdenum, Dissolved	QN	0.0100						
Potassiu	Potassíum, Dissolved	QN	0.0500						
Seleniur	Selenium, Dissolved	QN	0.00500						
Sodium,	Sodium, Dissolved	QN	0.0500						
MBLK	SeqNo: 2795994			PrepDate:2/13/2020	TY COOT : SINESST	7. 00	d		
	Samp ID: MB-78081			PrepRef:	Units: ma/L		Analysis Date: 2/21/2020	Funivo: 180313 is Date: 2/21/2020	
· [,			, , , , , ,	_

AT THE REAL PROPERTY OF THE PARTY OF THE PAR			-)	j	in lary sign	111 at 3 3 Date. 2/2 1/2020	0707/17	
<u>Analyte</u>	Result	g	SPK value	SPK Ref Val	%REC	LowLimit HighLimit	HiahLimit	RPD Ref Val	%RPD	RPDI imit	100
Arsenic, Dissolved	N	0.00500									ה ה ה
Barium, Dissolved	QN	0.0100									
Boron, Dissolved	QN	0.0500									
Cadmium, Dissolved	ΩN	0.00500									
Calcium, Dissolved	Q	0.0500									
Iron, Dissolved	QN	0.0500									
Lead, Dissolved	Q	0.00500									
Magnesium, Dissolved	N	0.0500									
Manganese, Dissolved	Q	0.0200									
Molybdenum, Dissolved	2	0.0100									
Potassium, Dissolved	ΩN	0.0500									
Selenium, Dissolved	ND	0.00500									
Sodium, Dissolved	ND	0.0500									

Page 1 of 25

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

Qualifiers:

Page 2 of 25

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

Qualifiers:

Frontier Technical Associates 200212024 CLIENT:

Work Order:

Plant ND GW

Project:

ANALYTICAL QC SUMMARY REPORT

-	-
×	≎
=	>
×	0
`	•
•	•
_	2
-	4
c	
c	5
Ē	•
Ç	ţ
	•
_	•

PasiNo: E200.7F PasiNo: E200.7F	rcs	SeqNo: 2795446			PrenDate	afe:							
Particle Particle	11.1000					į		Tes	tNo: E200.7	L	RunNo: 1	180278	
Passalla Passalla		Samp ID: LCS			PrepRe	of:		'n	its: mg/L	Ar		2/20/2020	
C. Discolved 1.97 0,00500 2 0 96.5 68.5 115 0 0 N. Discolved 1.94.1 0.0500 2 0 96.1 68.7 68.1 112 0 0 N. Discolved 1.922 0 96.1 66.1 112 0	Analyte		Result	d		SPK Ref Val	%REC	imi lwo l	Highl imit	RPD Ref Val	WRPD	BPDI janit	3
1,0)ssolved 1,341 0,0100 2 0 0 0 0 0 0 0 0	Arsenic, Di	issolved	1.97	0.00500	8	0	9.0 7.	8	4-1				000
Dissolved 1922 0.0500 2 0 96.1 96.6 115 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Barium, Di	ssolved	1.941	0.0100	0	0	97	83	112				
No. Dissolved 1877 200500 2 0 938 853 115 0 0 0 0 0 0 0 0 0	Boron, Dís	solved	1.922	0.0500	2	0	96.1	86.6	115	· ·	o c		
Second 1889 0.0500 2 0 944 85.8 115 0 0 0 0 0 0 0 0 0	Cadmium,	Dissolved	1.877	0.00500	2	0	93.8	85.3	112	· C	· ·		
Second 1.92 0.0500 2	Calcium, D	issolved	1.889	0.0500	2	0	94.4	82.8	115	0	0		
Dissolved 1.849 0.00500 2 0 93.1 87.7 112 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Iron, Disso	lved	1.92	0.0500	2	0	96	87.5	113	0	0		
Sequel Dissolved 1.86 bit of the processory of the processory of the processory of the processory of the processory of the processory of the processory of the processory of the processory of the processory of the processory of the processory of the processor of the proces	Lead, Diss	olved	1.849	0.00500	2	0	92.5	86.8	114	0	0		
1.95 0.10200 2 0.99 99.4 112 0.99 0.94 115 0.99 0.94 0.95 0.99 0.	Magnesiun	n, Dissolved	1.862	0.0500	2	0	93.1	87.7	112	0	0		
1.856 1.956 1.956 1.956 1.956 1.956 1.956 1.956 1.955 1.95	Manganes	e, Dissolved	1.96	0.0200	2	0	98	89.2	112	0			
ium, Dissolved by 181 0,0500 10 0,000 0 10 0 0 91.8 95 115 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Molybdenu	m, Dissolved	1.868	0.0100	0	0	93.4	87.9	115	0	0		
m. Dissolved 1.907 0.05500 2 0 95.4 85 115 0 <th< td=""><td>Potassium,</td><td>, Dissolved</td><td>9.181</td><td>0.0500</td><td>10</td><td>0</td><td>91.8</td><td>85</td><td>115</td><td>0</td><td></td><td></td><td></td></th<>	Potassium,	, Dissolved	9.181	0.0500	10	0	91.8	85	115	0			
Sequelor 1.935 0.0500 2 0 96.8 85 115 0 0 Sequelor: 2795993 Samp ID: LCS-78081 PrepPate:2/13/2020 TestRo: 2200.7F Analysis Date: 2/21/2020 RunNo: 180313 Samp ID: LCS-78081 Besult PQL SPK value SPK AelVal 2/BEC LowLinit High Limit Analysis Date: 2/21/2020 Dissolved 2.115 0.0100 2 0 106 85 115 0 0 Dissolved 2.147 0.06500 2 0 107 86.8 115 0 0 Dissolved 2.041 0.0500 2 0 104 85.8 115 0 0 Ssolved 2.041 0.0500 2 0 </td <td>Selenium, I</td> <td>Dissolved</td> <td>1.907</td> <td>0.00500</td> <td>2</td> <td>0</td> <td>95.4</td> <td>85</td> <td>115</td> <td></td> <td>· C</td> <td></td> <td></td>	Selenium, I	Dissolved	1.907	0.00500	2	0	95.4	85	115		· C		
SeqNo: 2795993 PrepDate:2/13/2020 PrepDate:2/13/2020 PrepDate:2/13/2020 TestNo: E200.7F RunNo: E200.7F RunNo: Instance in the post of	Sodium, Di	ssolved	1.935	0.0500	CJ	0	96.8	85	115	0	0		
Paraphelic Par		SeqNo: 2795993			PrepDa	te:2/13/2020		Test	No. E200 7 E	1.	1	00010	
Besult PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPD Limit , Dissolved 2.03 0.0050 2 0 106 85 115 0 0 Dissolved 1.868 0.0500 2 0 102 86.6 115 0 0 m. Dissolved 2.047 0.0500 2 0 104 85.3 112 0 0 ssolved 2.041 0.0500 2 0 104 85.8 114 0 0 ssolved 2.041 0.0500 2 0 102 86.8 114 0 0 sisum, Dissolved 2.061 0.0500 2 0 97.2 86.8 114 0 0 sisolved 2.050 2 0 97.2 86.8 112 0 0 sisolved 2.050 2 0 97.8 89.2 115 <th></th> <th>Samp ID: LCS-78081</th> <th></th> <th></th> <th>PrepRe</th> <th>41</th> <th></th> <th></th> <th>ts: mg/L</th> <th></th> <th></th> <th>/21/2020</th> <th></th>		Samp ID: LCS-78081			PrepRe	41			ts: mg/L			/21/2020	
2.115 0.00500 2 0 106 85 115 0 0 2.03 0.0100 2 0 102 89 112 0 0 1.868 0.0500 2 0 93.4 86.6 115 0 0 2.079 0.0500 2 0 107 85.3 112 0 0 2.079 0.0500 2 0 104 85.8 115 0 0 2.041 0.0500 2 0 102 87.5 114 0 0 2.061 0.0500 2 0 97.8 86.8 114 0 0 1.957 0.0500 2 0 97.8 89.2 112 0 0 2.134 0.0100 2 0 97.8 87.9 115 0 0 2.17 0.0500 2 0 98.7 85 115 0 0 </td <td>Analyte</td> <td></td> <td>Result</td> <td>DG</td> <td>1</td> <td>SPK Ref Val</td> <td>%REC</td> <td>LowLimit</td> <td>HighLimit</td> <td>RPD Ref Val</td> <td>%RPD</td> <td>RPDI imit</td> <td>القاح</td>	Analyte		Result	DG	1	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDI imit	القاح
2.03 0.0100 2 0 102 89 112 0 1.868 0.0500 2 0 93.4 86.6 115 0 2.147 0.0500 2 0 104 85.3 112 0 2.079 0.0500 2 0 102 87.5 113 0 2.041 0.0500 2 0 97.2 86.8 114 0 2.061 0.0500 2 0 97.8 89.2 112 0 2.051 0.0200 2 0 97.8 89.2 112 0 2.134 0.0100 2 0 97.8 89.2 115 0 9.869 0.0500 10 98.7 85 115 0 2.17 0.00500 2 0 98.7 85 115 0 2.17 0.00500 2 0 98.5 85 115 0 9.869 0.00500 2 0 98.5 85 115 0	Arsenic, Di	ssolved	2.115	0.00500	67	0	106	85	115	0			
1.868 0.0500 2 0 93.4 86.6 115 0 2.147 0.06500 2 0 107 85.3 112 0 2.079 0.0500 2 0 102 87.5 113 0 2.041 0.0500 2 0 97.2 86.8 114 0 2.061 0.0500 2 0 97.8 89.2 112 0 2.051 0.0500 2 0 97.8 89.2 112 0 2.134 0.0100 2 0 97.8 89.2 112 0 9.869 0.0500 2 0 97.8 89.2 115 0 2.134 0.0100 2 0 98.7 85 115 0 2.17 0.00500 1 0 98.7 85 115 0 1.97 8.5 115 0 98.5 115 0 <td>Barium, Dis</td> <td>ssolved</td> <td>2.03</td> <td>0.0100</td> <td>2</td> <td>0</td> <td>102</td> <td>68</td> <td>11.5</td> <td></td> <td></td> <td></td> <td></td>	Barium, Dis	ssolved	2.03	0.0100	2	0	102	68	11.5				
2.147 0.00500 2 0 107 85.3 112 0 2.079 0.0500 2 0 104 85.8 115 0 2.041 0.0500 2 0 102 87.5 113 0 2.061 0.0500 2 0 97.2 86.8 114 0 2.061 0.0500 2 0 97.8 89.2 112 0 2.134 0.0100 2 0 97.8 89.2 115 0 3.869 0.0500 10 98.7 85 115 0 2.17 0.00500 2 0 98.5 85 115 0 1.97 0.0500 2 0 98.5 85 115 0	Boron, Diss	solved	1.868	0.0500	2	0	93.4	86.6	1. 1.				
2.079 0.0500 2 0 104 85.8 115 0 2.041 0.0500 2 0 102 87.5 113 0 1.944 0.0500 2 0 97.2 86.8 114 0 2.061 0.0500 2 0 97.8 86.8 112 0 2.134 0.0100 2 0 97.8 89.2 112 0 2.134 0.0100 2 0 107 87.9 115 0 9.869 0.0500 10 98.7 85 115 0 2.17 0.00500 2 0 98.5 85 115 0 1.97 0.0500 2 0 98.5 85 115 0	Cadmium, I	Dissolved	2.147	0.00500	2	0	107	85.3	112	0	0		
2.041 0.0500 2 0 102 87.5 113 0 1.944 0.00500 2 0 97.2 86.8 114 0 2.061 0.0500 2 0 103 87.7 112 0 2.134 0.0100 2 0 97.8 89.2 115 0 9.869 0.0500 10 98.7 87.9 115 0 2.17 0.00500 2 0 98.5 85 115 0 1.97 0.0500 2 0 98.5 85 115 0	Calcium, Di	issolved	2.079	0.0500	2	0	104	85.8	115	0	0		
1.944 0.00500 2 0 97.2 86.8 114 0 2.061 0.0500 2 0 103 87.7 112 0 1.957 0.0200 2 0 97.8 89.2 112 0 2.134 0.0100 2 0 107 87.9 115 0 9.869 0.0500 10 98.7 85 115 0 1.97 0.0500 2 0 98.5 85 115 0	Iron, Dissol	ved	2.041	0.0500	2	0	102	87.5	113	0	0		
2.061 0.0500 2 0 103 87.7 112 0 1.957 0.0200 2 0 97.8 89.2 112 0 2.134 0.0100 2 0 107 87.9 115 0 9.869 0.0500 10 98.7 85 115 0 2.17 0.0500 2 0 98.5 85 115 0	Lead, Dissc	olved	1.944	0.00500	2	0	97.2	86.8	114	0	C		
1.957 0.0200 2 0 97.8 89.2 112 0 2.134 0.0100 2 0 107 87.9 115 0 9.869 0.0500 10 98.7 85 115 0 2.17 0.00500 2 0 98.5 85 115 0 1.97 0.0500 2 0 98.5 85 115 0	Magnesium	ı, Dissolved	2.061	0.0500	2	0	103	87.7	112	0	C		
2.134 0.0100 2 0 107 87.9 115 0 9.869 0.0500 10 0 98.7 85 115 0 2.17 0.00500 2 0 109 85 115 0 1.97 0.0500 2 0 98.5 85 115 0	Manganese	e, Dissolved	1.957	0.0200	2	0	97.8	89.2	112	0	0		
9.869 0.0500 10 0 98.7 85 115 0 2.17 0.00500 2 0 109 85 115 0 1.97 0.0500 2 0 98.5 85 115 0	Molybdenur	m, Dissolved	2.134	0.0100	61	0	107	87.9	115	0	0		
2.17 0.00500 2 0 109 85 115 0 1 1.97 0.0500 2 0 98.5 85 115 0	Potassium,	Dissolved	9.869	0.0500	10	0	98.7	85	115	0	0		
1.97 0.0500 2 0 98.5 85 115 0	Selenium, [Dissolved	2.17		2	0	109	85	115	0	0		
	Sodium, Die	ssolved	1.97	0.0500	2	0	98.5	85	115	0	0		

Frontier Technical Associates CLIENT:

200212024 Work Order: Plant ND GW Project:

BatchID: 78081

ANALYTICAL QC SUMMARY REPORT

(
<u>ი</u> 	SeqNo: 2796002			Prepl	repDate:2/13/2020		Test	TestNo: E200.7F	11	BunNo: 180313	80313	
	Samp ID: 200212024-001F (BR-14-UG)	14-UG)		PrepRef:	₹ef:		Uni	Jnits: mg/L	ď	vnalysis Date: 2/	2/21/2020	
Analyte		Result	Pol	SPK value	SPK Ref Val	%REC	%REC LowLimit HighLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic,	krsenic, Dissolved	0.02992	0.00500	0.04	0.004611	63.3	75	123	0	С		U.

SM	SeqNo: 2796002			PrepD	PrepDate:2/13/2020		F					
	100000000000000000000000000000000000000			-			lest	I ESTINO: EZOU./F		HunNo: 180313	313	
	Samp ID: 200212024-001F (BR-14-UG)	IR-14-UG)		PrepRef:	ef:		Uni	Units: mg/L	Anal	Analysis Date: 2/21,	2/21/2020	
Analyte		Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit	HiahLimit	RPD Ref Val	R URPN B	BPDI imit	Jei C
Arsenic,	Arsenic, Dissolved	0.02992	0.00500	0.04	0.004611	63.3		123				100 O
Barium,	Barium, Dissolved	2.17	0.0100	Ø	0.1806	99.5	75	124	0 0	o c		ס
Cadmiu	Cadmium, Dissolved	0.0519	0.00500	0.05	0	104	75	125	o c) C		
Iron, Dissolved	solved	0.9925	0.0500	-	0.005234	98.7	75	120	0 0) C		
Lead, Di	Lead, Dissolved	0.01908	0.00500	0.05	0.0008976	90.9	75	125	o c) C		
Mangan	Manganese, Dissolved	0.4865	0.0200	0.5	0.02187	92.9	75	115	0) O		
Seleniur	Selenium, Dissolved	0.006492	0.00500	0.01	0	64.9	75	125	0	0		ഗ
DUP	SeqNo: 2795996			PrepD	PrepDate:2/13/2020		Test	TestNo: E200.7F		BunNo: 180313	713	
	Samp ID: 200212024-001F			PrepRef:	ef:		Unit	Units: mg/L			2/21/2020	
Analyte		Result	Pal	SPK value	SPK Ref Val	%REC	LowLimit	HiahLimit	RPD Ref Val	R USBN R	RPDI imit	
Arsenic,	Arsenic, Dissolved	0.005093	0.00500	0	0	0	_	0	0.004611		17.3	
Barium,	Barium, Dissolved	0.2213	0.0100	0	0	0	0	0	0.1806	20.3	15.4	^
Boron, D	Boron, Dissolved	0.215	0.0500	0	0	0	0	0	0,1705	23.1	6.00	1 ^
Cadmiur	Cadmium, Dissolved	Q	0.00500	0	0	0	0	0	0	0	20	l
Calcium,	Calcium, Dissolved	91.2	0.0500	0	0	0	0	0	92.84	1.79	13.9	
Iron, Dissolved	solved	Q	0.0500	0	0	0	0	0	0.005234	0	17.9	
Lead, Dissolved	ssolveď	Q	0.00500	0	0	0	0	0	0.0008976	0	22	
Magnesi	Magnesium, Dissolved	38.01	0.0500	0	0	0	0	0	38.75	1.93	13.7	
Mangane	Manganese, Dissolved	0.02057	0.0200	0	0	0	0	0	0.02187	6.12	17.2	
Molybde	Molybdenum, Dissolved	Q	0.0100	0	0	0	0	0	0	0	17.3	
Potassiu	Potassíum, Dissolved	4.948	0.0500	Ö	0	0	0	0	4.44	10.8	15.2	
Seleniun	Selenium, Dissolved	Q	0.00500	0	0	0	0	0	0	0	16.6	
Sodium,	Sodium, Dissolved	34.18	0.0500	0	0	0	0	0	26.83	24.1	15	Z

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Frontier Technical Associates 200212024 Plant ND GW CLIENT:

Work Order: Project:

_	
٠.	٦,
О	С
Ä	=
_	_
70007	С
-	Ξ
	_
٤	٠
غ	5
غ	
خ	
5	
جابز	,
-CHUD-	
fob ID:	
ofoh ID.	attain).
Safeh I D.	Jack III D.
Ratch ID.	Darrie.
Rafeh ID.	Darrey.

ANALYTICAL QC SUMMARY REPORT

SΜ	SeqNo: 2794061			Prepl	PrepDate:2/13/2020] Jac	TestNo. Fon 8		Don 100	100107	
	Samp ID: 200212024-001	(BR-14-UG)		PrepRef:	lef:		<u>.</u> 5	esilvo. Ezuu.e Units: mg/L			180197 2/19/2020	
Analyte		Result	Pol	SPK value	SPK Ref Val	%BEC	timi lwo l	Lichi imit	10/13/00 (100			-
Antimony	>	0.4314	0.000400	0.5		86.3		120	11 0 110		חדיים	Cual
Arsenic		0.04375	0.00100	0.04		00.00	2 6) (
Barium		1 874	0.0000		7.797	76.4			> (o •		
Bervllium		0.038	000000	2 0	5.1.5	1 00			Э,	0		
Cadmium	: F	0.030	0.000300	0.00)	9/			0	0		
	=	0.05105	0.00100	0.05	0	102		130	0	0		
read:		0.02249	0.00100	0.05	0.003159	96.7	70	130	0	0		
Manganese	ese	0.3836	0.00500	0.5	0.024	71.9	70	130	0	0		
Selenium	Ľ	0.008558	0.00100	0.01	0.000411	81.5	70		0	0		
Thallium		0.05331	0.000300	0.05	0.0002463	106	70	130	0	0		
MS	SeqNo: 2794062			PrepD	PrepDate:2/13/2020		1001	Toothle.				
	Samp ID: 200212024-001	(BR-14-UG)		PrepRef:	ef:		<u> </u>	Follow EZUU.8			/60	
							5	its. Ing/L	Aric	Arialysis Date: 2/15	0202/61/2	
Analyte		Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD E	RPDLimit	Qual
Chromium	٤	0.2295	0.0500	0.2	0.0002448	115	70	130	0	0		
Cobalt		0.3929	0.0100	0.5	0.0001644	78.6	70	130	0	0		
lron		1.285	0.200	-	0.3173	96.8	70	130	0	0		
DUP	SeqNo: 2794060			PrepD	PrepDate:2/13/2020		Test	TectMo: E200 B			107	
	Samp ID: 200212024-001			6	4		ξυ :	1140. E200.0			/61	
	Carry 10. 2002 12024-001			Prepret:	et:		- C	Units: mg/L	Ans	Analysis Date: 2/19	2/19/2020	
Analyte		Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	R QARW	RPDLimit	Qual
Antimony	•	ON	0.000400	0	0	0	0	0	0.00009372	0	20	
Arsenic		0.006051	0.00100	0	0	0	0	0	0.00677	11.2	20	
Barium		0.2015	0.00200	0	0	0	0	0	0.1737	14.8	20	
Beryllium		QN	0.000300	0	0	0	0	0	0	0	20	
Cadmium	ر	9	0.00100	0	0	0	0	0	0	0	20	
Chromium	٤	QN	0.00500	0	0	0	0	0	0.0002448	0	20	
Cobalt		Q	0.00100	0	0	0	0	0	0.0001644	0	20	
ron		0.3272	0.0200	0	0	0	0	0	0.3173	3.05	20	В
Lead		QN	0.00100	0	0	0	0	0	0.003159	0	20	
Manganese	sse	0.03265	0.00500	0	0	0	0	0	0.024	30.5	20	2
Selenium		2	0.00100	0	0	0	0	0	0.000411	0	20	
Qualifiers:	s: ND - Not Detected at the Reporting Limit	the Reporting Limit		S - Spik	S - Spike Recovery outside accepted recovery limits	accepted reco	very limits	3	3 - Analyte detecte	B - Analyte detected in the associated Method Blank	d Method Bla	mk
	J - Analyte detected below quantitation limits	elow quantitation lim	iits	R - RPI	R - RPD outside accepted recovery limits	ecovery limits					D	367
						•					rage 4 of 23	C7 fc

Frontier Technical Associates 200212024 Plant ND GW CLIENT:

Work Order:

Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 78082

	DUP	SegNo: 2794060			C								
Samp ID: 2002/12024-001 PeepPdt: One					Prep	Date:2/13/2020		Tes	tNo: E200.8			197	
Samp ID: LCS Result P.D. P.D.		Samp ID: 200212024-001			Prep	Ref:		'n	its: mg/L			9/2020	
Sequetor 291720	Analyte		Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	1	3PDLimit	Qual
Sacybe: 2791220 Prepidet: Propidet: Prepidet: Thalliu	m	N O	0.000300	0		0	0	0	0.0002463		20		
	MBLK				Prep	Date:		TPS	1No. E200 7		1	054	
Page Page		Samp ID: MBLK			Prep	7ef:		n n	its: mg/L	Ana		031 3/2020	
No. No.	Analyte		Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val		3PDI imit) jeij
No. 0.00500	Antimo	ny	Q	0.0600	0	0	0	0					3
ND 0,0000 0 0 0 0 0 0 0	Arsenic		ΩN	0.00500	0	0	0	0	· c	o c	0 0		
NB 0,00500 0 0 0 0 0 0 0 0	Baríum		Q.	0.0100	0	0	0	, 0	· C) C	o c		
Main Main	Berylliu	ш	QN	0.00500	0	0	0	0	0) C		
Main Main	Boron		Q	0.0500	0	0	0	0	0) C	o c		
Image	Cadmit	E	N	0.00500	0	0	0	0	0	0	0		
Imm ND 0.00500 0 0 0 0 0 0 0 0	Calciun	ر. د	Q	0.0500	0	0	0	0	0	C	· c		
ND 0.0500 0 0 0 0 0 0 0 0 0	Chromi	m	QN	0.00500	0	0	0	0	0	0) C		
ND 0.0500 0 0 0 0 0 0 0 0 0	Cobalt		Q	0.0500	0	0	0	0	0	0			
ND 0.05500 0 0 0 0 0 0 0 0	Iron		QN	0.0500	0	0	0	0	0	· c	0 0		
ND 0.0500 0 0 0 0 0 0 0 0 0	Lead		QN	0.00500	0	0	0	0	0	0) С		
ND 0.05500 0 0 0 0 0 0 0 0	Lithium		QN	0.0500	0	0	0	0	· C	· c	o c		
ND 0.0200 0 0 0 0 0 0 0 0 0	Magnes	sium	Q.	0.0500	0	0	0	0	0	0	o c		
ND 0.0100 0 0 0 0 0 0 0 0 0	Mangar	nese	QN	0.0200	0	0	0	0	0	С			
ium ND 0.05600 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Molybdo	enum	QN	0.0100	0	0	0	0	0	C) C		
ND 0.00500 0 0 0 0 0 0 0 0	Potassi	mn	ΩN	0.0500	0	0	0	0	C	, c	0		
ND 0.0500 0 0 0 0 0 0 0 0 0	Seleniu	E	Q	0.00500	0	0	0	0	0	0	0		
SeqNo: 2791271 Samp ID: LCS PrepDate: PrepPate: PrepPPATE: PrepPP	Sodium		Q	0.0500	0	0	0	0	0	0	0		
SeqNo: 2791271 Samp ID: LCS PrepRef: PrepRef: PrepRef: Units: mg/L Analysis Date: 2/13/2020 2	Thalliun	_	Q	0.0100	0	0	0	0	0	0	0		
Samp ID: LCS PrepRef: Units: mg/L HunNo: 180051 HunNo: 180051	SOT	SeqNo: 2791271			Prep	Jate:		H					
Pesult Pol. SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit		Samp ID: LCS			Prep	lef:		lest	NO: E200./	,		051 (800)	
rs. ND - Not Detected below quantitation limits ND - Analyte detected below quantitation limits ND - Analyte detected below quantitation limits ND - Analyte detected below quantitation limits ND - Analyte detected below quantitation limits ND - Analyte detected below quantitation limits ND - Analyte detected below quantitation limits ND - Analyte detected below quantitation limits ND - Analyte detected below quantitation limits ND - Analyte detected in the associated Method Blank	Analyte		Result	POI	SPK value	SPK Bef Val	0, BEC	: 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	מייר	7		
1.923	Antimor	λ.	1 984	0.0600	C			_	יייי אוורוווין	ופת חבו			<u> </u>
rs: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated N - Analyte detected below quantitation limits R - RPD outside accepted recovery limits	Arsenic		1.923	0.00500	1 0	o c	93.2 0 90	00°.5	2 1	0 0	0 (
rs: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated N - Analyte detected below quantitation limits R - RPD outside accepted recovery limits	Barium		1.92	0.0100	. 2) C	1.00	- K	-		0 0		
ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated N Analyte detected below quantitation limits R - RPD outside accepted recovery limits)	8	3	2	>	D		
R - RPD outside accepted recovery limits	Qualifie		Reporting Limit		S - Spi	ke Recovery outside	accepted reco	very limits	1	- Analyte detecte	d in the associated	Method Blan	ık
		J - Analyte detected below	quantitation lim	its	R - RP	D outside accepted 1	ecovery limits					ر د	, ;

Page 6 of 25

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

Qualifiers:

Frontier Technical Associates CLIENT:

200212024 Work Order: Plant ND GW Project:

BatchID: 78082

ANALYTICAL QC SUMMARY REPORT

SS	SegNo. 2701274										
i i	131617 :00/000			Prep∪ate:	ite:		Test	TestNo: E200.7		RunNo: 180051	
	Samp ID: LCS			PrepRef:	: <u>:</u>		Uni	Units: mg/L			
Analyte		Result	POL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	leno
Beryllium		1.98	0.00500	2	0	66	86.1	114	С		
Boron		1.886	0.0500	2	0	94.3	88.2	114) C	» c	
Cadmium	_	1.928	0.00500	8	0	96.4	85	115		o c	
Calcium		1.977	0.0500	2	0	98.8	85.6	114) C	o c	
Chromium	٦	1.891	0.00500	Ø	0	94.6	89.7	109	0 0	o c	
Cobalt		1.953	0.0500	8	0	97.7	89,6	109) C		
Iron		1.891	0.0500	2	0	94.6	86,2	112	0 0	o c	
Lead		1.924	0.00500	2	0	96.2	88.1	112	0	o C	
Magnesium	ш	1.923	0.0500	2	0	96.1	87.4	110	C	· C	
Manganese	se	1.911	0.0200	2	0	95.5	85	112	0 0	o c	
Molybdenum	ıum	1.983	0.0100	2	0	99.1	88.8	112	0	o C	
Potassium	۳	9.312	0.0500	10	0	93.1	85	112	0	0	
Selenium		1.931	0.00500	2	0	96.5	87.5	112	0	C	
Sodium		2.087	0.0500	2	0	104	82.8	113	0	, C	
Thallium		1.977	0.0100	2	0	98.9	85	115	0	0	
SM	SeqNo: 2798767			PrepDat	PrepDate:2/13/2020		H	1 000			
	Samp ID: 200212024-001	(011 71 00)		- (lsə	lestino: EZ00./			
And of the same of	Jainp 10. 200212024-001	(BR-14-UG)		PrepRef:	<u></u>		Unit	Units: mg/L	Ana	Analysis Date: 2/26/2020	
<u>Analyte</u>		Result	<u>Pol</u>	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Antimony		0.5065	0.0600	0.5	0	101	9.08	120	0		
Arsenic		0.03234	0.00500	0.04	0	80.9	75	125	0	0	
Barium		2.229	0.0100	2	0.1679	103	75	119	0	0	
Beryllium		0.05332	0.00500	0.05	0	107	80.6	123	0	0	
Cadmium		0.05033	0.00500	0.05	0	101	75	118	0	0	
Chromium	_	0.2108	0.00500	0.2	0	105	75	124	0		
Cobalt		0.4549	0.0500	0.5	0	91	75	123	0	0	
Iron		1.199	0.0500	-	0.0992	110	75	122	0	0	
Lead		0.01923	0.00500	0.02	0.003763	77.3	75	125	0		
Manganese	es.	0.5043	0.0200	0.5	0.02472	95.9	75	123	0	0	
Selenium		0.006612	0.00500	0.01	0	66.1	75	125	0	0	v)
Thallium		0.0437	0.0100	0.05	0	87.4	75	125	0	0	

B - Analyte detected in the associated Method Blank

Frontier Technical Associates 200212024 CLIENT:

Work Order:

Plant ND GW Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: 78082

	Ц,											
ე ე	SeqNo: 2798766			PrepD	PrepDate:2/13/2020		Toeth	TestMo: E2007		100 to 100 do	70700	
	Samp ID: 200212024-001			PrepRef:	lef:		Units	Units: mg/L	Ana	Analysis Date: 2/	160434 2/26/2020	
Analyte		Result	POL	SPK value	SPK Ref Val	%REC	LowLimit H	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	>	QN	0.0600	0	0	0	0	0	0	C	20	
Arsenic		QN	0.00500	0	0	0	0	0	0	· c	3 8	
Barium		0.2426	0.0100	0	0	0	0	0	0.1679	36.4	î R	7
Beryllium		Ω	0.00500	0	0	0	0	0	0	0	202	J
Boron		0.2382	0.0500	0	0	0	0	0	0.1948	20.1	20	Z
Cadmiun	-	Ω	0.00500	0	0	0	0	0	0	0	20	I
Calcium		86.12	0.0500	0	0	0	0	0	89.57	3.92	13.9	
Chromiur	E	ΩN	0.00500	0	0	0	0	0	0	0	20	
Cobalt		ΩN	0.0500	0	0	. 0	0	0	0	0	+ +	
lron		0.5797	0.0500	0	0	0	0	0	0.0992	142	19,4	Z
Lead		ΩŽ	0.00500	0	0	0	0	0	0.003763	0	18.9	
Lithium		0.0542	0.0500	0	0	0	0	0	0	200	18.8	Z
Magnesiu	E	35.25	0.0500	0	0	0	0	0	36.99	4.82	15.6	
Manganese	esi	0.05512	0.0200	0	0	0	0	0	0.02472	76.1	16.6	Z
Molybdenum	mnı	QN	0.0100	0	0	0	0	0	0	C	15.3	ı
Potassium	F	4.618	0.0500	0	0	0	0	0	4.239	8.55	15 C	
Selenium		ΩN	0.00500	0	0	0	0	0	C	<u> </u>	i .	
Sodium		33.29	0.0500	0	0	0	0	· c	26.22	23.8	15.7	7
Thallium		QN	0.0100	0	0	0	0	0	0	0	19.6	1

Qualifiers:

J - Analyte detected below quantitation limits

Page 8 of 25

CLIENT: Frontier Technical Associates

Work Order: 200212024

Project: Plant ND GW

BatchID: 78146

ANALYTICAL QC SUMMARY REPORT

MBLK	SeqNo: 2793894			PrepDa	PrepDate:2/18/2020		TestNo. E1631		BusNo: 180170	
	Samp ID: MB-78146			PrepRe	PrepRef:(1631E)		Units: ng/L		Analysis Date: 2/19/2020	
<u>Analyte</u> Mercury		Result ND	PQL 0.500	SPK value §	SPK Ref Val	%REC	%REC LowLimit HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
SOT	SeqNo: 2793895 Samp ID: LCS-78146			PrepDa	PrepDate:2/18/2020 PrepRef:(1631E)		TestNo: E1631 Units: na/L		RunNo: 180179 Analysis Date: 2/19/2020	
Analyte Mercury		Result 10.9	PQL 0.500	SPK value SPK Ref Val	PK Ref Val	%REC 109	%REC LowLimit HighLimit 109 77 123	RPD Ref V	%RPD RPDLimit	Qual
MS	SeqNo: 2793899			PrepDat	PrepDate:2/18/2020		Totalo: E4694		0.00	
	Samp ID: 200212024-001	(BR-14-UG)		PrepRef	PrepRef:(1631E)		Units: ng/L	Ana	Hunivo: 1801/9 Analysis Date: 2/19/2020	
<u>Analyte</u> Mercury		Result 12.8	PQL 0.500	SPK value SPK Ref Val	PK Ref Val 0.498	%REC 98.4	LowLimit HighLimit 71 125	RPD Ref V	%RPD RPDLimit 0	Qual
MSD	SeqNo: 2793900 Samp ID: 200212024-001 (BR-14-UG)	(BR-14-UG)		PrepDat PrepRef	PrepDate:2/18/2020 PrepRef:(1631E)		TestNo: E1631 Units: ng/L	Anal	RunNo: 180179 Analysis Date: 2/19/2020	
Analyte Mercury		Result 10.7	PQL 0.500	SPK value S 12.5	SPK Ref Val 0.498	%REC 81.6	LowLimit HighLimit 71 125	RPD Ref Val	%RPD RPDLimit 17.9 24	Qual

Qualifiers:

ANALYTICAL QC SUMMARY REPORT
BatchID: 78203

Frontier Technical Associates 200212024

CLIENT: Work Order:

Project:

Plant ND GW

m K	SeqNo: 2795871			PrepDate:2/20/2020		TestNo: E420 A		DinAlo: 100000	
	Samp ID: MB-78203			PrepRef:(Method)		Units: mg/L		Analysis Date: 2/21/2020	
<u>Analyte</u> Phenolic	<u>nnalyte</u> Phenolics, Total Recoverable	Result ND	PQL 0.00400	SPK value SPK Ref Val	%REC	LowLimit HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
lcs	SeqNo: 2795872 Samp ID: LCS-78203			PrepDate:2/20/2020 PrepRef:(Method)		TestNo: E420.4 Units: mg/L		RunNo: 180308 Analysis Date: 2/21/2020	
<u>Analyte</u> Phenolic	<u>vnalyte</u> Phenolics, Total Recoverable	Result 0.0964	PQL 0.00400	SPK value SPK Ref Val 0.1 0	%REC 96.4	LowLimit HighLimit 90 110	RPD Ref V		Qual
ms	SeqNo: 2795878 Samp ID: 200212005-004			PrepDate:2/20/2020 PrepRef:(Method)		TestNo: E420.4 Units: mg/L		RunNo: 180308 Analysis Date: 2/21/2020	
Analyte Phenolic	<u>vnalyte</u> Phenolics, Total Recoverable	Result 0.0987	<u>PQL</u> 0.00400	SPK value SPK Ref Val	<u>%REC</u> 98.7	LowLimit HighLimit 80.7 120	RPD Ref Val	%RPD RPDLimit 0	Qual
ms	SeqNo: 2795897 Samp ID: 200212024-001	(BR-14-UG)		PrepDate:2/21/2020 PrepRef:(Method)		TestNo: E420.4 Units: mg/L		RunNo: 180308 Analysis Date: 2/21/2020	
Analyte Phenolic	<u>nnalyte</u> Phenolics, Total Recoverable	Result 0.1058	<u>PQL</u> 0.00400	SPK value SPK Ref Val 0.1 0.0023	<u>%REC</u> 104	LowLimit HighLimit 80.7 120	RPD Ref Val	%RPD RPDLimit 0	Qual
psu	SeqNo: 2795879 Samp ID: 200212005-004			PrepDate:2/20/2020 PrepRef:(Method)		TestNo: E420.4 Units: mg /L		RunNo: 180308 Analysis Date: 2/21/2020	
<u>Analyte</u> Phenolic	<u>nnalyte</u> Phenolics, Total Recoverable	Result 0.1084	<u>PQL</u> 0.00400	SPK value SPK Ref Val 0.1 0	<u>%REC</u> 108	LowLimit HighLimit 80.7 120	RPD Ref Val 0.0987	%RPD RPDLimit 9.37 16	Qual
msd	SeqNo: 2795886 Samp ID: 200212024-001	(BR-14-UG)		PrepDate:2/21/2020 PrepRef:(Method)		TestNo: E420.4 Units: mg/L		RunNo: 180308 Analysis Date: 2/21/2020	
Analyte Phenolic	<u>Analyte</u> Phenolics, Total Recoverable	Result 0.1123	POL 0.00400	SPK value SPK Ref Val	%REC	LowLimit HighLimit	RPD Ref Val	%RPD RPDLimit	Qual

J - Analyte detected below quantitation limits

Page 10 of 25

Frontier Technical Associates 200212024 CLIENT:

Work Order:

Plant ND GW Project:

BatchID: 78203

ANALYTICAL QC SUMMARY REPORT

5	SeaNo. 2705806								
	2000			Prepuate:		TestNo: E420.4		BimNo: 180308	
* Shall had a backer	Samp ID: cri-78203			PrepRef:		Units: mg/L		Analysis Date: 2/21/2020	
Analyte Phenolic	<u>Analyte</u> Phenolics, Total Recoverable	Result 0.0062	POL 0.00400	SPK value SPK Ref Val 0.004 0	%REC 155	%REC LowLimit HighLimit RPD Ref Val	RPD Ref Val	%RPD RPDLimit 0	<u>Qual</u> S
5	SeqNo: 2795870			PrepDate:		TestNo. F420.4		BunNo: 180308	
	Samp ID: ICB			PrepRef:		Units: mg/L		Analysis Date: 2/21/2020	
Analyte Phenolic	<u>Analyte</u> Phenolics, Total Recoverable	Result ND	PQL 0.00400	SPK value SPK Ref Val 0 0	%REC 0	<u>%REC LowLimit HighLimit</u> 0 0 0	RPD Ref Val	%RPD RPDLimit 0	Qual
ં	SeqNo: 2795869			PrepDate:		TestNo: F 420.4		BunNo: 180308	
	Samp ID: ICV			PrepRef:		Units: mg/L	Analy	Analysis Date: 2/21/2020	
Analyte Phenolic	<u>Analyte</u> Phenolics, Total Recoverable	Result 0.0944	PQL 0.00400	SPK value SPK Ref Val 0.1 0	<u>%REC</u> 94.4	%REC LowLimit HighLimit 94.4 90 110	RPD Ref Val	%RPD RPDLimit 0	Qual

ND - Not Detected at the Reporting Limit

Qualifiers:

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Page 11 of 25

Frontier Technical Associates 200212024 CLIENT:

Work Order:

Plant ND GW Project:

ANALYTICAL QC SUMMARY REPORT BatchID: 78248

mblk	SeqNo: 2798881			PrepDate:2/24/2020		TestNo: E420 4		BusNo: 190454	
	Samp ID: MB-78248			PrepRef:(Method)		Units: mg/L		Analysis Date: 2/26/2020	
Analyte Phenolic	<u>Analyte</u> Phenolics, Total Recoverable	Result ND	<u>PQL</u> 0.00400	SPK value SPK Ref Val	%REC	LowLimit HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Sol	SeqNo: 2798882 Samp ID: LCS-78248			PrepDate:2/24/2020 PrepRef:(Method)		TestNo: E420.4 Units: mg/L		RunNo: 180454 Analysis Date: 2/26/2020	
Analyte Phenolic	<u>Analyte</u> Phenolics, Total Recoverable	Result 0.0964	PQL 0.00400	SPK value SPK Ref Val 0.1 0	%REC 96.4	LowLimit HighLimit 90 110	RPD Ref V		Qual
SW .	SeqNo: 2798884 Samp ID: 200212024-007 (OB-2-UG)	(OB-2-UG)		PrepDate:2/24/2020 PrepRef:(Method)		TestNo: E420.4 Units: mg/L		RunNo: 180454 Analysis Date: 2/26/2020	
Analyte Phenolics	<u>nnalyte</u> Phenolics, Total Recoverable	Result 0.0868	<u>PQL</u> 0.00400	SPK value SPK Ref Val 0.1 0.0052	%REC 81.6	LowLimit HighLimit 80.7 120	RPD Ref Val	%RPD RPDLimit 0	Qual
go	SeqNo: 2798903 Samp ID: ICB			PrepDate: PrepRef:		TestNo: E420.4 Units: mg/L		RunNo: 180454 Analysis Date: 2/26/2020	
Analyte Phenolics	<u>nnalyte</u> Phenolics, Total Recoverable	Result 0.0041	POL 0.00400	SPK value SPK Ref Val 0 0	%REC 0	LowLimit HighLimit 0	RPD Ref Val	%RPD RPDLimit 0	Qual
je	SeqNo: 2798902 Samp ID: ICV			PrepDate: PrepRef:		TestNo: E420.4 Units: mg/L		RunNo: 180454 Analysis Date: 2/26/2020	
<u>Analyte</u> Phenolics	<u>nnalyte</u> Phenolics, Total Recoverable	<u>Result</u> 0.0912	<u>POL</u> 0.00400	SPK value SPK Ref Val 0.1	%REC 91.2	LowLimit HighLimit 90 110	RPD Ref Val	%RPD RPDLimit 0	Qual

ND - Not Detected at the Reporting Limit Qualifiers:

S - Spike Recovery outside accepted recovery limits J - Analyte detected below quantitation limits

B - Analyte detected in the associated Method Blank

Page 12 of 25

Frontier Technical Associates 200212024 CLIENT:

Work Order:

Plant ND GW Project:

ANALYTICAL QC SUMMARY REPORT BatchID: R180013

MBLK	SeqNo: 2790405						TestNo: E300	E300		DunNo. + 00019	
	Samp ID: MBLK 3449 DI						Units: mg/L	Low ng/L	Anal	Analysis Date: 2/12/2020	
Analyte Chloride Fluoride Nitrate, N	Analyte Chloride Fluoride Nitrate, Nitrogen (As N) Sulfate	Result ND ND ND ND	PQL 1.00 0.100 0.0200 1.00	SPK value	SPK Ref Val	%REC	LowLimit HighLimit		RPD Ref Val	%RPD RPDLimit	Qual
S	SeqNo: 2790406 Samp ID: LCS ICA-82-S						TestNo: E300 Units: mg/L	E300 1g/L	Analy	RunNo: 180013 Analysis Date: 2/12/2020	
Analyte Chloride Fluoride Nitrate, N Sulfate	# L	Result 102.3 9.88 11.07 200.3	POL 10.0 1.00 0.200 10.0	SPK value 100 10 11.3 200	SPK Ref Val 0 0 0	%REC 102 98.8 98	LowLimit HighLimit 90 110 90 110 90 110		RPD Ref Val 0 0 0 0	%RPD RPDLimit 0 0 0 0 0 0	Qual
23	SeqNo: 2790449 Samp ID: LCS						TestNo: E300 Units: mg/L	E300 19/L	Analy	RunNo: 180013 Analysis Date: 2/13/2020	
Analyte Chloride Fluoride Nitrate, N Sulfate	<u>Analyte</u> Chloride Fluoride Nitrate, Nitrogen (As N) Sulfate	Result 102.2 9.84 11.02 199.9	PQL 10.0 1.00 0.200 10.0	SPK value 100 10 11.3 200	SPK Ref Val 0 0 0	%REC 102 98.4 97.5 99.9	LowLimit HighLimit 90 111 90 111 90 111	0000	RPD Ref Val 0 0 0	%RPD RPDLimit 0 0 0 0 0	Ona

Analyte Chloride Fluoride Nitrogen (As N) Easult (1.07) SPK value (As N) SPK Net Value (As N) <th< th=""><th>CS</th><th>SeqNo: 2790470</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th></th<>	CS	SeqNo: 2790470											
Besult POL. SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD 102.5 10.0 10.0 10.0 0 98.4 90 11.0 0 0 98.7 10.0 0.200 11.3 0 98 90 11.0 0 0 0 200.4 10.0 200 0 100 90 11.0 0 0 0 0 0								TestNo	E300		RunNo: 18	80013	
Result 102.5 POL 10.0 SPK value 10.0 SPK Ref Val 10.0 %REC 10.0 LowLimit HighLimit HighLimit RPD Ref Val 10.0 %RPD 10.0 9.836 1.00 10.0 0 98.4 90 110 0	1000	samp ID: LCS						Units:	mg/L	Analy	sis Date: 2/	/12/2020	
102.5 10.0 100 0 102 90 110 0 0 98.4 90 110 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Analyte		Result	POL	SPK value	SPK Ref Val	%REC			RPD Ref Val	%RPD	RPDLimit	Clark
9.836 1.00 10 0 98.4 90 1 1.07 0.200 11.3 0 98 90 1 200.4 10.0 200 0 100 90 1	Chloride	a)	102.5	10.0	100	0	102	06	_	0	0		
Nitrogen (As N) 11.07 0.200 11.3 0 98 90 200.4 10.0 200 0 100 90	Fluoride		9.836	1.00	10	0	98.4	06	110	0	0		
200.4 10.0 200 0 100 90	Nitrate, I	Nitrogen (As N)	11.07	0.200	11.3	0	86	06	110	0	0		
	Sulfate		200.4	10.0	200	0	100	06	110	0	0		

ND - Not Detected at the Reporting Limit Qualifiers:

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Page 13 of 25

Frontier Technical Associates 200212024 Plant ND GW CLIENT:

ANALYTICAL QC SUMMARY REPORT

BatchID: R180013

Work Order: Project:

MS	SeqNo: 2790413						1	0001			
	Samp ID: 200212005-004a						- GS	lestino: E300	((
								OIIIIS. Mg/L	Ans	Analysis Date: 2/12/2020	
Analyte		Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	#BPD BPDI imit	Perio
Chloride	u,	26.39	2.00	20	5.464	105	06	110	_		7
Nitrate,	Nitrate, Nitrogen (As N)	4.638	0.0400	4.5	0.114	101		110) C	o c	
Sulfate		30.08	4.00	20	9.864	101	06	110	0	0	
MS	SeqNo: 2790429						<u> </u>	200		- 1	
	Samp ID: 200212015-006a						iesi Uni	Units: ma/l.	Ana	Hunno: 180013 Analysis Date: 2/13/2020	
Analyte		Basult	Č	Sular, Violo	1-77 3-0 7100	i i	1	6		i	
Fluoride		10.37	0.200	JUN VAIUE	SFR Hel Val	%HEC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Sulfate		164.4	2.00	20	144	97.1	06 06	110	0) 0	
MS	SeqNo: 2790438										
	004-004	(00,14,10)					Test	TestNo: E300		RunNo: 180013	
		n-14-0G)					iu D	Units: mg/L	Ana	Analysis Date: 2/13/2020	
Analyte		Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit	HiahLimit	RPD Ref Val	### MAPD RPDI imit] lei O
Chloride	a.	23.58	2.00	20	2.864	104	06	110	0		
Fluoride		10.6	0.200	10	0	106	06	110	0) C	
Nitrate, I	Nitrate, Nitrogen (As N)	4.584	0.0400	4.5	0.04	101	06	110	0	0	
Sulfate		78.71	4.00	20	57.98	104	06	110	. 0	0	
MS	SeqNo: 2790463						Tool	ToctNlo. Eaco		1	
	Samp ID: 200212016-006b						iest.	140. E300	· · · · · · · · · · · · · · · · · · ·		
								UIIIS: mg/L	Ana	Analysis Date: 2/13/2020	
Analyte	:	Result	Pol	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
Nitrate, I	Nitrate, Nitrogen (As N)	4.51	0.0400	4.5	0	100	06	110	0		
MSD	SeqNo: 2790416									- 1	
	Samp ID: 200212005-004a						i esti Duit	Units: ma/L	Anal	Hunno: 180013 Analysis Date: 2/12/2020	
Analyte		Result	ICA	SPK value	SPK Bof Val	/ DEC /	i di mi la m	7 4 2		i ,	
Chloride		26.39	2.00	20	5.464	105	_	110	76 39	O 0185	<u>Qual</u>
Nitrate, N	Nitrate, Nitrogen (As N)	4.686	0.0400	4.5	0.114	102	06	110	4.638		
Sulfate		30.1	4.00	20	9.864	101	06	110	30.08		
Qualifiers:	's: ND - Not Detected at the Reporting Limit	Reporting Limit		S - Spi	S - Spike Recovery outside accepted recovery limits	: accepted reco	very limits	B	- Analyte detecte	B - Analyte detected in the associated Method Blank	3lank
	J - Analyte detected below quantitation limits	quantitation limits	is.	R - RP	R - RPD outside accepted recovery limits	recovery limits			•	Page 13 of 25	of 25
										0	

Page 14 of 25

B - Analyte detected in the associated Method Blank

Qual

%RPD RPDLimit

RPD Ref Val

%REC LowLimit HighLimit

SPK value SPK Ref Val

0.02

PQL 0.100 0.0200

Result ND 0.025

Nitrate, Nitrogen (As N)

Analyte Fluoride

Samp ID: CRI NO3 from I

SeqNo: 2790408

CR

TestNo: E300 Units: mg/L 0 0

150 150

50

110

RunNo: **180013** Analysis Date: **2/12/2020**

CLIENT: Frontier Technical Associates

Work Order: 200212024

Project: Plant ND GW

BatchID: R180013

ANALYTICAL QC SUMMARY REPORT

MSD	SeqNo: 2790430							200			
	Samp ID: 200212015-006a	.					Lestivo: E300 Units: mg/L	: E300 mg/L	Ana	HunNo: 180013 Analysis Date: 2/13/2020	
<u>Analyte</u> Fluoride Sulfate		Result 10.43 164.9	PQL 0.200 2.00	SPK value 3 10 20	SPK Ref Val 0 144.9	%REC 104 100	LowLimit His	HighLimit 110 110	RPD Ref Val 10.37 164.4	<u>%RPD</u> RPDLimit 0.538 20 0.350 20	mit Qual 20 20
MSD	SeqNo: 2790439 Samp ID: 200212024-001 (BR-14-UG)	(BR-14-UG)					TestNo: E300 Units: mg/L	: E300 mg/L	Anal	RunNo: 180013 Analysis Date: 2/13/2020	
Analyte Chloride Fluoride Nitrate, N Sulfate	Analyte Chloride Fluoride Nitrate, Nitrogen (As N) Sulfate	Result 23.62 10.54 4.604 78.65	POL 2.00 0.200 0.0400 4.00	SPK value 20 20 10 4.5 20	SPK Ref Val 2.864 0 0.04 57.98	%REC 104 105 101	LowLimit Hig 90 90 90 90	HighLimit 110 110 110	23.58 23.58 10.6 4.584 78.71	%RPD RPDLimit 0.168 20 0.549 20 0.435 20 0.0661 20	20 20 20 20 20 20
MSD	SeqNo: 2790464 Samp ID: 200212016-006b						TestNo: E300 Units: mg/L	E300 mg/L	Anal	RunNo: 180013 Analysis Date: 2/13/2020	
<u>Analyte</u> Nitrate, N	<u>nnalyte</u> Nitrate, Nitrogen (As N)	Result 4.502	POL 0.0400	SPK value S 4.5	SPK Ref Val	%REC 100	LowLimit HighLimit 90 110		RPD Ref Val 4.51	%RPD RPDLimit 0.178 20	nit Qual 20
CBI	SeqNo: 2790407 Samp ID: CRI ICA-86-C						TestNo: E300 Units: mg/L	E300 mg/L	Anal	RunNo: 180013 Analysis Date: 2/12/2020	
<u>Analyte</u> Chloride Sulfate		<u>Result</u> 1.225 2.058	<u>PQL</u> 1.00 1.00	SPK value S 1 2	SPK Ref Val 0	%REC 123 103	LowLimit HighLimit 50 150 50 150	0.0	RPD Ref Val 0 0	%RPD RPDLimit 0	<u>oual</u>

Qualifiers:	ND - Not Detected at the Reporting Limit
	J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

Qualifiers:

Frontier Technical Associates 200212024 CLIENT:

Plant ND GW Work Order: Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: R180013

-												
8 <u>2</u>	SeqNo: 2790404						TestNo: E200	2000		0.00	4 7000	
	Samp ID: ICB 3449 DI						Units: mg/L	:300 ig/L	Analy	Analysis Date: 2/12/2020	800 3 2/12/2020	
Analyte Chloride Fluoride Nitrate, Ni	<u>knalyte</u> Chloride Fluoride Nitrate, Nitrogen (As N) Sulfate	Result ND ND ND	POL 1.00 0.100 0.0200 1.00	SPK value SPK Bef Val	PK Ref Val 0 0 0 0	%REC 0 0	%BEC LowLimit HighLimit 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		RPD Ref Val 0 0 0 0	%RPD 0 0 0 0	%RPD RPDLimit 0 0 0 0	Qual
20	SeqNo: 2790403 Samp ID: ICV IC020520C						TestNo: E300 Units: mg/L	300 g/L	Analy	RunNo: 180013 Analysis Date: 2/12/2020	80013 //12/2020	
Analyte Chloride Fluoride Nitrate, Ni Sulfate	<u>unalyte</u> Chioride Fluoride Nitrate, Nitrogen (As N) Sulfate	Hesult 10.2 1.006 0.977 9.854	POL 1.00 0.100 0.02 0 0 1.00	SPK value SPK Ref Val 10 (11 (11 (11 (11 (11 (11 (11 (11 (11	PK Ref Val 0 0 0 0	%REC 102 101 97.7 98.5	%BEC LowLimit HighLimit 102 90 110 101 90 110 97.7 90 110		RPD Ref Val 0 0 0	28PD 0 0 0 0	%RPD RPDLimit 0 0 0 0	Qual

Page 16 of 25

Frontier Technical Associates 200212024 CLIENT:

Work Order:

Plant ND GW Project:

BatchID: R180186

ANALYTICAL QC SUMMARY REPORT

-									
rcs	SeqNo: 2793833					TectNo. SM2540C	00	Dunkler 100100	
	Samp ID: LCS-R180186					Units: mg/L		Analysis Date: 2/18/2020	
Analyte TDS (Re	<u>nalyte</u> TDS (Residue, Filterable)	Result 635	<u>PQL</u> 5.00	SPK value SPK Ref Val 654 0	%REC 97.1	LowLimit HighLimit 85.4 114	RPD Ref Val	%RPD RPDLimit 0	Qual
rcs	SeqNo: 2794808 Samp ID: LCS-R180186					TestNo: SM2540C Units: mg/L		RunNo: 180186 Analysis Date: 2/18/2020	
Analyte TDS (Re	<u>nnalyte</u> TDS (Residue, Filterable)	Result 620	<u>PQL</u> 5.00	SPK value SPK Ref Val 654 0	%REC 94.8	LowLimit HighLimit 85.4 114	RPD Ref Val	%RPD RPDLimit 0	Qual
DUP	SeqNo: 2794791 Samp ID: 200212015-011					TestNo: SM2540C Units: mg/L		RunNo: 180186 Analysis Date: 2/18/2020	
Analyte TDS (Re	<u>Natyte</u> TDS (Residue, Filterable)	Result 1820	PQL 5.00	SPK value SPK Ref Val 0 0	%REC 0	LowLimit HighLimit 0 0	RPD Ref Val 1795	%RPD RPDLimit 1.38 10	Qual
DUP	SeqNo: 2794807 Samp ID: 200212024-00 1					TestNo: SM2540C Units: mg/L		RunNo: 180186 Analysis Date: 2/18/2020	
Analyte TDS (Rea	<u>nnalyte</u> TDS (Residue, Filterable)	Result 360	<u>PQL</u> 5.00	SPK value SPK Ref Val 0 0	%REC 0	LowLimit HighLimit 0 0	RPD Ref Val 355	%RPD RPDLimit	Qual
DUP	SeqNo: 2794819 Samp ID: 200212075-004					TestNo: SM2540C Units: mg/L		RunNo: 180186 Analysis Date: 2/18/2020	
Analyte TDS (Re	<u>nnalyte</u> TDS (Residue, Filterable)	Result 640	<u>PQL</u> 5.00	SPK value SPK Ref Val 0	%REC 0	%REC LowLimit HighLimit 0 0 0	RPD Ref Val 610	%RPD RPDLimit 4.80 10	Qual

ND - Not Detected at the Reporting Limit Qualifiers: J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Page 17 of 25

Frontier Technical Associates CLIENT:

200212024 Work Order:

Plant ND GW Project:

ANALYTICAL QC SUMMARY REPORT

R180280	
BatchID:	

- C - C - C - C - C - C - C - C - C - C	Ļ										
MBLK	SeqNo: 2795423						TestNo. F350 1	350 1		BunNo: 180280	
	Samp ID: MBLK						Units: mg/L	J/L	Anal		
Analyte Nitroger	<u>snalyte</u> Nitrogen, Ammonia (As N)	Result ND	<u>PQL</u> 0.100	SPK value 0	SPK Ref Val	%REC 0	LowLimit HighLimit 0		RPD Ref Val	%RPD RPDLimit 0	Oual
SOT	SeqNo: 2795310 Samp ID: LCS 2,72 PPM						TestNo: E350.1 Units: mg/L	350.1 J/L	Anal	RunNo: 180280 Analysis Date: 2/21/2020	
Analyte Nitrogen	<u>Analyte</u> Nitrogen, Ammonia (As N)	Result 2.969	Pol 0.200	SPK value 2.72	SPK Ref Val	%REC 109	LowLimit HighLimit 90 11		RPD Ref Val		Qual
SOT	SeqNo: 2795333 Samb ID: LCS 2.72 Filtere						TestNo: E350.1	350.1		1	
Analyte Nitrogen	unalyte Nitrogen, Ammonia (As N)	Result 2 971	POL	SPK value	SPK Ref Val	%REC	LowLimit HighLimit		Anal RPD Ref Val	Analysis Date: 2/21/2020	Qual
00						60	0.6	0	>	n	
22	SeqNo: 2795355 Samp ID: LCS 2.72						TestNo: E350.1 Units: mg/L	350.1 //L	Analy	RunNo: 180280 Analysis Date: 2/21/2020	
<u>Analyte</u> Nitrogen	<u>vnalyte</u> Nitrogen, Ammonia (As N)	Result 2.979	POL 0.200	SPK value 2.72	SPK Ref Val	%REC 110	LowLimit HighLimit 90 111		RPD Ref Val	%RPD RPDLimit 0	Qual
MS	SeqNo: 2795317 Samp ID: 200212005-004						TestNo: E350.1 Units: mg/L	150.1 /L	Analy	RunNo: 180280 Analysis Date: 2/21/2020	
<u>Analyte</u> Nitrogen	<u>Analyte</u> Nitrogen, Ammonia (As N)	Result 0.78	POL 0.100	SPK value	SPK Ref Val	%REC 78	LowLimit HighLimit 90 110		RPD Ref Val	%RPD RPDLimit 0	Qual S
MS	SeqNo: 2795338 Samp ID: 200212016-011						TestNo: E350.1 Units: mg/L	50.1	Analy	RunNo: 180280 Analysis Date: 2/21/2020	
<u>Analyte</u> Nitrogen,	<u>Analyte</u> Nitrogen, Ammonia (As N)	Result 1.101	PQL 0.100	SPK value	SPK Ref Val	%REC 110	LowLimit HighLimit 90 110		RPD Ref Val	%RPD RPDLimit 0	<u>Qual</u> S

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

BatchID: R180280

ANALYTICAL QC SUMMARY REPORT

Frontier Technical Associates

Plant ND GW 200212024

Work Order: CLIENT:

Project:

∑	SeqNo: 2795357					TestMo: E350 1	-	Occoor Change	
	Samp ID: 200212024-001	(BR-14-UG)				Units: mg/L		Analysis Date: 2/21/2020	
Analyte Nitrogen	<u>алаіуіе</u> Nitrogen, Ammonia (As N)	Result 1.773	PQL 0.100	SPK value SPK Ref Val 1 0.7846	%REC 98.8	LowLimit HighLimit 90 110	RPD Ref Val	%RPD RPDLimit 0	Oual
MSD	SeqNo: 2795318 Samp ID: 200212005-004	,				TestNo: E350.1 Units: mg/L		RunNo: 180280 Analysis Date: 2/21/2020	
Analyte Nitrogen	<u>Analyte</u> Nitrogen, Ammonia (As N)	Result 0.712	PQL 0.100	SPK value SPK Ref Val	%REC 71.2	LowLimit HighLimit 90 110	RPD Ref V		<u>Qual</u> S
MSD	SeqNo: 2795339 Samp ID: 200212016-011					TestNo: E350.1 Units: mg/L		RunNo: 180280 Analysis Date: 2/21/2020	
Analyte Nitrogen,	Analy <u>le</u> Nitrogen, Ammonia (As N)	Result 1.22	<u>Pol</u> 0.100	SPK value SPK Ref Val	<u>%REC</u> 122	LowLimit HighLimit 90 110	<u>RPD Ref Val</u> 1.101	%RPD RPDLimit 10.3 20	Oual S
MSD	SeqNo: 2795358 Samp ID: 200212024-001	(BR-14-UG)				TestNo: E350.1 Units: mg/L		RunNo: 180280 Analysis Date: 2/21/2020	
Analyte Nitrogen,	watyte Nitrogen, Ammonia (As N)	Result 1.76	POL 0.100	SPK value SPK Ref Val	%REC 97.5	LowLimit HighLimit 90 110	RPD Ref Val	%RPD RPDLimit 0.742 20	Qual
<u>E</u>	SeqNo: 2795311 Samp ID: CRI 0.1 PPM					TestNo: E350.1 Units: mg/L		RunNo: 180280 Analysis Date: 2/21/2020	
Analyte Nitrogen,	<u>analyte</u> Nitrogen, Ammonia (As N)	Result ND	PQL 0.100	SPK value SPK Ref Val	%REC 66.3	LowLimit HighLimit 50 150	RPD Ref Val	%RPD RPDLimit 0	Qual

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit Qualifiers:

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Oua

%RPD RPDLimit 0

RPD Ref Val

LowLimit HighLimit

%REC 73.5

SPK value SPK Ref Val 0.1

PQL 0.100

2

Nitrogen, Ammonia (As N)

Analyte

Result

Samp ID: CRI 0.1 PPM SeqNo: 2795334

CRI

150

20

Analysis Date: 2/21/2020 RunNo: 180280

TestNo: **E350,1**

Units: mg/L

Page 19 of 25

Frontier Technical Associates 200212024 CLIENT:

Work Order:

Plant ND GW Project:

BatchID: R180280

ANALYTICAL QC SUMMARY REPORT

ICB	SeqNo: 2795309							
	Samp ID: ICB				TestNo: E350.1 Units: mg/L		RunNo: 180280 Analysis Date: 2/21/2020	
Analyte Nitrogen,	<u>nnalyte</u> Nitrogen, Ammonia (As N)	Result ND	PQL 0.100	SPK value SPK Ref Val 0	%REC LowLimit HighLimit RPD Ref Val	RPD Ref Val	%RPD RPDLimit Qual 0	Oual
<u>S</u>	SeqNo: 2795308 Samp ID: ICV				TestNo: E350.1 Units: mg/L		RunNo: 180280 Analysis Date: 2/21/2020	
<u>Analyte</u> Nitrogen,	<u>nalvie</u> Vitrogen, Ammonia (As N)	<u>Result</u> 0.9885	<u>Pol</u> 0.100	SPK value SPK Ref Val	%REC LowLimit HighLimit RPD Ref Val 98.8 90 110 0	RPD Ref Val 0	%RPD RPDLimit 0	Qual

Qualifiers:

Frontier Technical Associates 200212024 CLIENT:

Work Order:

Plant ND GW Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: R180324

7 1014	L									
ב מ ב ב	SeqNo: 2796212						TestNo: SM2320B	~	BunNo: 180324	
	Samp ID: MB-R180324						Units: mgCaCO3/L	پ		
<u>Analyte</u> Alkalinit)	<u>Analyte</u> Alkalinity, Total (As CaCO3)	Result ND	POL 1.00	SPK value S	SPK Ref Val	%REC	LowLimit HighLimit	RPD Ref Val	%RPD RPDLimit	Qual
SOT	SeqNo: 2796213 Samp ID: LCS-R180324						TestNo: SM2320B Units: mqCaCO3/L	ب ا	RunNo: 180324 Analysis Date: 2/21/2020	
Analyte Alkalinity	<u>vnalyte</u> Alkalinity, Total (As CaCO3)	Result 55	<u>POL</u> 5.00	SPK value S	SPK Ref Val	%REC 97.7	LowLimit HighLimit 188.6 115	D Ref V		Qual
MS	SeqNo: 2796215 Samp ID: 200212016-00 7						TestNo: SM2320B Units: mgCaCO3/L	\	RunNo: 180324 Analysis Date: 2/21/2020	
Analyte Alkalinity	Alkalinity, Total (As CaCO3)	Result 900	PQL 10.0	SPK value S 500	SPK Ref Val 400	%REC 100	LowLimit HighLimit E 80 120	RPD Ref Val	%RPD RPDLimit 0	Qual
MS	SeqNo: 2796226 Samp ID: 200212024-001	(BR-14-UG)					TestNo: SM2320B Units: mgCaCO3/L	ر ا	RunNo: 180324 Analysis Date: 2/21/2020	
Analyte Alkalinity	<u>vnalyte</u> Alkalinity, Total (As CaCO3)	Result 860	PQL 10.0	SPK value S 500	SPK Ref Val 340	%BEC 104	LowLimit HighLimit E 80 120	RPD Ref Val	%RPD RPDLimit 0	Qual
MSD	SeqNo: 2796216 Samp ID: 200212016-007						TestNo: SM2320B Units: mgCaCO3/L		RunNo: 180324 Analysis Date: 2/21/2020	
<u>Analyte</u> Alkalinity	<u>unalyte</u> Alkalinity, Total (As CaCO3)	Result 910	<u>PQL</u> 10.0	SPK value SI 500	SPK Ref Val 400	%REC 1	LowLimit HighLimit F 80 120	RPD Ref Val 900	%RPD RPDLimit 1.10 15	Qual
MSD	SeqNo: 2796227 Samp ID: 200212024-001	(BR-14-UG)					TestNo: SM2320B Units: mgCaCO3/L	ر ا	RunNo: 180324 Analysis Date: 2/21/2020	
<u>Analyte</u> Alkalinity,	<u>nnalyte</u> Alkalinity, Total (As CaCO3)	Result 850	PQL 10.0	SPK value SI 500	SPK Ref Val 340	%REC 1	LowLimit HighLimit F 80 120	RPD Ref Val 860	%RPD RPDLimit	Qual

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

Page 20 of 25

Page 21 of 25

B - Analyte detected in the associated Method Blank

CLIENT: Frontier Technical Associates

Work Order: 200212024

Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

BatchID: R180348

DOP	SeqNo: 2796816					ToetMo: CMoode			
Arterio ta paga a	Samp ID: 200212075-002					Units: mgCaCO3/L	HU Analysis I	Hunno: 180348 Analysis Date: 2/24/2020	
Analyte Alkalinity	<u>Analyte</u> Alkalinity, Total (As CaCO3)	Result 280	<u>PQL</u> 10.0	SPK value SPK Ref Val 0 0	%REC 0	%REC LowLimit HighLimit RPD 0	RPD Ref Val 290	%RPD RPDLimit 3.51 8.8	Qual
MBLK	MBLK SeqNo: 2796797 Samp ID: MB-R180348					TestNo: SM2320B Units: mgCaCO3/L	Ru Analysis [RunNo: 180348 Analysis Date: 2/24/2020	
Analyte Alkalinity,	Analyte Alkalinity, Total (As CaCO3)	Result ND	1.00 1.00	SPK value SPK Ref Val	%REC	%REC LowLimit HighLimit RPD 6	RPD Ref Val	%RPD RPDLimit	Qual
SS	SeqNo: 2796798 Samp ID: LCS-R180348					TestNo: SM2320B Units: mgCaCO3/L	Ru Analysis [RunNo: 180348 Analysis Date: 2/24/2020	
Analyte Alkalinity,	<u>vnalyte</u> Alkalinity, Total (As CaCO3)	Result 55	PQL 5.00	SPK value SPK Ref Val 56.3 0	%REC 97.7	WREC LowLimit HighLimit RPD Ref Val 97.7 88.6 115 0	Ref Val	%RPD RPDLimit 0	Qual

Qualifiers:

Frontier Technical Associates 200212024 CLIENT:

Work Order: Project:

Plant ND GW

ANALYTICAL QC SUMMARY REPORT

BatchID: R180349

	L									
N N N N N N N N N N	SeqNo: 2796868						TestNo: SM5310C	۲	BunNo: 180340	
	Samp ID: MBLK						Units: mg/L			
Analyte Total Or	<u>nnalyte</u> Total Organic Carbon	Result ND	PQL 1.00	SPK value 0	SPK Ref Val 0	%REC 0	LowLimit HighLimit 0 0	RPD Ref Val	%RPD RPDLimit 0	Qual
SOT	SeqNo: 2796821 Samp ID: LCS						TestNo: SM5310C Units: mg/L		RunNo: 180349 Analysis Date: 2/24/2020	
Analyte Total On	<u>vnalyte</u> Total Organic Carbon	Result 28.97	POL 1.00	SPK value 30	SPK Ref Val	%REC 96.6	LowLimit HighLimit 88.7 115	RPD Ref Val		Qual
SOT	SeqNo: 2796847 Samp ID: LCS						TestNo: SM5310C Units: mg/L		RunNo: 180349 Analysis Date: 2/25/2020	
Analyte Total On	<u>unalyte</u> Total Organic Carbon	Result 28.9	PQL 1.00	SPK value 30	SPK Ref Val	%REC 96.3	LowLimit HighLimit 88.7 115	RPD Ref Val	%RPD RPDLimit 0	Qual
MS	SeqNo: 2796826 Samp ID: 200212005-004						TestNo: SM5310C Units: mg/L		RunNo: 180349 Analysis Date: 2/24/2020	
Analyte Total Org	<u>Analyte</u> Total Organic Carbon	Result 26.06	PQL 1.00	SPK value 25	SPK Ref Val 0	%REC 104	LowLimit HighLimit 82 120	RPD Ref Val	%RPD RPDLimit 0	Qual
MS	SeqNo: 2796849 Samp ID: 200212024-001	(BR-14-UG)					TestNo: SM5310C Units: mg/L		RunNo: 180349 Analysis Date: 2/25/2020	,
<u>Analyte</u> Total Org	<u>snalyte</u> Total Organic Carbon	Result 25.94	<u>PQL</u> 1.00	SPK value 25	SPK Ref Val	% <u>REC</u> 104	LowLimit HighLimit 82 120	RPD Ref Val	%RPD RPDLimit 0	Qual
MSD	SeqNo: 2796827 Samp ID: 200212005-004						TestNo: SM5310C Units: mg/L		RunNo: 180349 Analysis Date: 2/24/2020	
Analyte Total Org	<u>Analyte</u> Total Organic Carbon	Result 23.03	<u>PQL</u> 1.00	SPK value 25	SPK Ref Val 0	%REC 92.1	LowLimit HighLimit 82 120	RPD Ref Val 26.06	%RPD RPDLimit 12.3 21.2	Qual

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

R - RPD outside accepted recovery limits

Page 22 of 25

Page 23 of 25

B - Analyte detected in the associated Method Blank

Frontier Technical Associates 200212024 CLIENT:

ANALYTICAL QC SUMMARY REPORT

BatchID: R180349

Work Order:

Project:

Plant ND GW

To the second second									
MSD	SeqNo: 2796850					Toothle: Char	000		
	Samp ID: 200212024-001 (BR-14-UG)	(BR-14-UG)				Units: mg/L		Hunivo: 180349 Analysis Date: 2/25/2020	
<u>Analyte</u> Total Org	<u>nnalyte</u> Total Organic Carbon	Result 23.81	PQL 1.00	SPK value SPK Ref Val 25 0	%BEC 95.2	LowLimit HighLimit 82 120	RPD Ref V	%RPD RPDLimit 8.54 21.2	Qual
CRI	SeqNo: 2796820 Samp ID: CRI					TestNo: SM5310C Units: ma/L		RunNo: 180349 Analysis Dale: 2/24/2020	
Analyte Total Org	كاملاية Total Organic Carbon	Result 1.036	POL 1.00	SPK value SPK Ref Val	%REC 104	%REC LowLimit HighLimit 104 50 150	RPD Ref V	%RPD RPDLimit 0	Onal
ICB	SeqNo: 2796819 Samp ID: ICB					TestNo: SM5310C Units: mg/L		RunNo: 180349 Analysis Date: 2/24/2020	
<u>Analyte</u> Total Org	<u>vnalyte</u> Total Organic Carbon	Result ND	<u>Pol</u> 1.00	SPK value SPK Ref Val	%REC 0	%REC LowLimit HighLimit 0 0	RPD Ref Val 0 0	%RPD RPDLimit 0	Qual
<u>S</u>	SeqNo: 2796818 Samp ID: ICV					TestNo: SM5310C Units: mg/L		RunNo: 180349 Analysis Date: 2/24/2020	
Analyte Total Org	<u>nnalyte</u> Total Organic Carbon	Result 47.02	PQL 1.00	SPK value SPK Ref Val 50 0	<u>%REC</u> 94	%REC LowLimit HighLimit 94 90 110	RPD Ref Val	%RPD RPDLimit 0	Qual

Qualifiers:

Page 24 of 25

Frontier Technical Associates 200212024 CLIENT:

Work Order: Project:

Plant ND GW

ANALYTICAL QC SUMMARY REPORT

BatchID: R180365

MBLK	SeqNo: 2797079						F			
	Samp ID: MBLK 3449 DI						l estNo: E300 Units: mg/L		RunNo: 180365 Analysis Date: 2/24/2020	
<u>Analyte</u> Chloride Fluoride Sulfate		Besult ND ND ND	PQL 1.00 0.100 1.00	SPK value	SPK Ref Val	%REC	LowLimit HighLimit	it RPD Ref Val	%RPD RPDLimit	Onal
SOT	SeqNo: 2797080 Samp ID: LCS ICA-82-T						TestNo: E300 Units: mg/L		RunNo: 180365 Analysis Date: 2/24/2020	
Analyte Chloride Fluoride Sulfate		Besult 105.6 10.31 211	POL 10.0 1.00 10.0	SPK value 100 10 200	SPK Ref Val 0 0	%REC 106 103 105	LowLimit HighLimit 90 111 90 111	mit RPD Ref Val 110 0 110 0 110 0	%RPD RPDLimit 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Qual
SOT	SeqNo: 2797102 Samp ID: LCS						TestNo: E300 Units: mg/L		RunNo: 180365 Analysis Date: 2/25/2020	
Analyte Chloride Fluoride Sulfate		Result 105.5 10.22 209.6	POL 10.0 1.00 10.0	SPK value 100 10 200	SPK Ref Val 0 0	%BEC 105 102 105	LowLimit HighLimit 90 111 90 111	mi RPD Ref Val 110 0 110 0	%RPD RPDLimit 0 0 0	Oual
MS	SeqNo: 2797083 Samp ID: 200211010-001a						TestNo: E300 Units: mg/L		RunNo: 180365 Analysis Date: 2/24/2020	
Analyte Sulfate		Result 968.9	<u>PQL</u> 20.0	SPK value 200	SPK Ref Val 757.5	%REC 106	LowLimit HighLimit 90 110	t RPD Ref Val	%RPD RPDLimit 0	Qual
SM S	SeqNo: 2797099 Samp ID: 200212024-003a (BR-12-DG)	R-12-DG)					TestNo: E300 Units: mg/L		RunNo: 180365 Analysis Date: 2/24/2020	
<u>Analyte</u> Chloride		Result 328.9	POL 10.0	SPK value	SPK Ref Val	%REC	LowLimit HighLimit	I RPD Ref Val	%RPD RPDLimit	Qual

ND - Not Detected at the Reporting Limit Qualifiers:

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Page 25 of 25

Frontier Technical Associates 200212024 CLIENT:

Work Order:

Plant ND GW Project:

BatchID: R180365

ANALYTICAL QC SUMMARY REPORT

DUP	SeqNo: 2797085					T .c. N+c.c. T			
	Samp ID: 200211010-002a					l estivo: E300 Units: mg/L	Analy	Hunno: 180365 Analysis Date: 2/24/2020	
Analyte Sulfate		Result 1787	<u>PQL</u> 50.0	SPK value SPK Ref Val 0 0	%REC 0	LowLimit HighLimit 0 0	RPD Ref Val	%RPD RPDLimit 0.629 10.9	Qual
DUP	SeqNo: 2797106 Samp ID: 200212024-010a					TestNo: E300 Units: mg/L	Analy	RunNo: 180365 Analysis Date: 2/25/2020	
<u>Analyte</u> Sulfate		Result 1101	<u>PQL</u> 50.0	SPK value SPK Ref Val 0 0	%REC 0	LowLimit HighLimit 0	RPD Ref Val 1125	%RPD RPDLimit 2.18 10.9	Qual
ICB	SeqNo: 2797078 Samp ID: ICB 3449 DI					TestNo: E300 Units: mg/L	Analy	RunNo: 180365 Analysis Date: 2/24/2020	
Analyte Chloride Fluoride Sulfate		Result ND ND	PQL 1.00 0.100 1.00	SPK value SPK Ref Val 0 0 0 0 0 0 0 0 0	%REC 0 0	LowLimit HighLimit 0 0 0 0 0 0 0	RPD Ref Val 0 0 0	%RPD RPDLimit 0 0 0	Qual
ıc	SeqNo: 2797077 Samp ID: ICV IC022020C					TestNo: E300 Units: mg/L	Analy	RunNo: 180365 Analysis Date: 2/24/2020	
Analyte Chloride Fluoride Sulfate		Result 10.69 1.019 10.58	Pol. 1.00 0.100 1.00	SPK value SPK Ref Val 10 0 1 0 0 10 0	%REC 107 102 106	%BEC LowLimit HighLimit 107 90 110 102 90 110 106 90 110	RPD Ref Val 0 0 0	%RPD RPDLimit 0 0 0	Qual

ND - Not Detected at the Reporting Limit Qualifiers:

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank



314 North Pearl Street Albany, NY 12207 518-434-4546 / FAX: 518-434-0891 **CHAIN OF CUSTODY RECORD**

AES Work Order#:	
aoud1aod4	
COC Reference:	

EXPERIENCE IS THE SOLUTION

1003 BR-12-DG- 1203 D 1 0 CT SU, TDS 004 BR-13-DG- 1150 D 2 1 WH3 phenol 005 BR-20-DG- 1130 P 1. O ALKAlinity 006 DUP - P 1 10 TOC	0UBSS
Send Report to: Kathy Wager Client Phone #: 716-634-2293 Client Email: kathy.wager@frontiertechnical.com AES Sample Number Client Sample Identification & Date Number Client Sample Identification & Date Sampled Number Client Sample Identification & Date Sampled Sample Type # of Preservative Analysis Client Sample Number Analysis Analysis Analysis Analysis Analysis BZ-1Z-DG- JUSO JUSO W X 1 Z T metals have DAU D Matrix C G Cont's Vative Analysis A	0UBSS
Kathy Wager Client Phone #: 716-634-2293 Client Email: kathy.wager@frontiertechnical.com AES Sample Number Number Client Sample Identification & Date Sampled P-pm Matrix C G Cont's Vative Analysis OI BR-17-UC- BIIBO INTO P GW X I Z T metals, Law DATE Sampled P-pm Matrix C G Cont's Vative Analysis OI BR-3-DC- INSS P I O CI SU, 7 DS OUT BR-30-DC- INSS P I O AVKAINITY OUE DUP OI BR-14-UG MSD V 1618 P	0UBSS
Client Phone #:716-634-2293 Client Email: kathy.wager@frontiertechnical.com AES Sample Number Client Sample Identification & Date Number Date Location Date Sampled Date Sample Type # of Matrix C G Cont's V 1 2 T metals Lac Date Sampled Date Sampled Date Date Sample Date Sample Type # of Matrix C G Cont's Date D	0UBSS
Client Email: kathy.wager@frontiertechnical.com AES Sample Number Client Sample Identification & Date Sampled P=pm Matrix C G Cont's Vative Analysis OUI BR-14-UG- DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T metals Lac I DILLO IUIT P GW X I Z T Metals Lac I DILLO IUIT P GW X I	OURIS
AES Sample Number Client Sample Identification & Date Sampled $P=pm$ $Matrix$ C G $Cont's$ $Valive$ $Analysis$ $OOI BP-14-UC- OII BP-1$	OURIS
Number Location Sampled P=pm Matrix C G Cont's Vative Analysis O B P - 14 - U C - 3/11/30 U/B P GW X 1 Z T metals, have D B P - 3 - D C - 13/5 D 1 1 2 D metals D B P - 12 - D C - 13/3 D 1 0 C Su, 7 D D B P - 13 - D C - 11/30 P 2 1 U/H3 D O B P - 3 - D C - 11/30 P 1 0 TOC O B P - 14 - U C M S D V U/F P V V B P - 14 - U C M S D V U/F P V V O B P - 14 - U C M S D V U/F P V V O B P - 14 - U C M S D V U/F P V V O B P - 14 - U C M S D V U/F P V V O B P - 14 - U C M S D V U/F P V V O D B P - 14 - U C M S D V U/F P V V O D B P - 14 - U C M S D V U/F P V V O D B P - 14 - U C M S D V U/F P V V O D B P - 14 - U C M S D V U/F P V V O D B P - 14 - U C M S D V U/F P V V O D D D D D D D D D O D D D D D D D D O D D D D D D D D O D D D D D D D O D D D D D D O D D D D D D O D D D D D O D D D D O D D D D O D D D D O D D D D O D D D O D D D O D D D O D D D O D D D O D D D O D D D O D D O D D D O D O	OURIS
DOD BR-3-DG- 125 B 1 2 D mitals DOS BR-12-DG- 1263 B 1 0 CT SU, 7DS DOS BR-30-DG- 1150 B 2 1 WH3, phenol DOS BR-30-DG- 1130 P 1 0 TOC DOS BR-14-UG MS D V 10/8 P V V 3 3 LL H2 BR-14-UG MS D V 10/8 P V V	James James
103 BR-12-DG- 1203 D 1 0 CT 304, 7 DS 004 BR-30-DG- 1150 P 2 1 WH3, phenol 005 BR-20-DG- 1130 P 1 0 TOC 006 DUP 001 BR-14-UG MSD V 108 P V V	Learn francis
005 BR-20-06- 1130 P 2 1 NH3, phenol 005 BR-20-06- 1130 P 1. 0 ALKALINITY 006 DUP - P 1 10 TOC 001 BR-14-46 MS D V 1018 P 3 3 LC H2 BR-14-46 MS D V 1018 P V V	· · · · · · · · · · · · · · · · · · ·
005 BR-20-06- 1130 P 2 1 NH3, phenol 005 BR-20-06- 1130 P 1. 0 ALKALINITY 006 DUP - P 1 10 TOC 001 BR-14-46 MS D V 1018 P 3 3 LC H2 BR-14-46 MS D V 1018 P V V	FID
005 BR-20-86- 1136 P 1. 0 ALKALINITY 006 DUP - P 1 10 TOC 001 BR-14-46 MSD V 1678 P V V 3 3 LL HZ	
006 DUP - P 1 10 TOC 1	
001 BZ-14-UG MSD V 1618 PV V V	pame in and 2 distributed estimation of the distributed by
02-79-00 1/3 V 10-8 P V	staleget geginne krjó mie Calleberg (Albert Aglemakijages).
A COLUMN TO THE PROPERTY OF TH	24 404444444444
	mingen and maje, and a plant of the section of the section of the plant property of the section
DL:	Victoriosensiascumor victori electrone
Sh 40,0004 mg/4 }	And the section of th
Be 40,0003 mg/4 A	in dent enhalt una passagen d'Arbitet extraitera
Te < 0.000 3 mg/2 AP	ye reacy; and or o' reactional trials to age regularity and
Li 20:050 mg/L AP	
O A D	entre desirables compositive, pagesta
Shipment Arrived Via: FedEx UPS Client AES Other: Furnaround Time Requested: 1 Day 2 Day 5 Day 5 Day 5 Day 5 Day 5 Day 5 Day 5 Day 6 Da	V V
FedEx UPS Client AES Other: T. metals i AS, Ba, B, Ca, Ca, Fe, Pb, M,	100, 10kg
Turnaround Time Requested: 1 Day 2 Day 3 Day 5 Day Standard D M to be 3 Color of the standard D M to be 3 C	12
1 Day 2 Day 3 Day 5 Day Standard D. Note 15: As, Ba, B, Cd, a, Fe, Ph, M, NOTE: Samples received after 3:30pm are considered next business day.	nn, Moj
	Time
The second secon	4:00
Relinquished by: (Signature) Date T	Time
Relinquished by: (Signature) Received for Laboratory by: Date T	Time
\(\text{\text{NOF}}\) \(\text{2/13/20}\)	9970
Sample Temperature Properly Preserved: Y / N Received Within Ho	
Ambient ~ Chilled ~ Chilling Begun 0=None 5=NH ₄ Cl Times: Y / Notes: Notes:	1.4
2=HNO₃ pH<2 7=FAS	
$4=Na_2S_2O_3$ $9=NaOH pH>10$	
Custody Seal Intact: Y/N 10=Other_	
Bottles AES: Y / N	
######################################	



Bottles AES: Y N

314 North Pearl Street Albany, NY 12207

518-434-4546 / FAX: 518-434-0891

CHAIN OF CUSTODY RECORD

AES	Work Order#:
3	009/3094
COC	Reference:

Client Na	A full service an	endistration and environment	II CII IADU	alui	onerings	***********	MIS TO	·	ymesassereaniss:	JICCI III	en en en en en en en en en en en en en e	- s excentigad served adapticada pa
Client Na	me: Frontier Technical Associates,	Address: Inc .			8675 M	ain S	tree	et, Wil	liamsvi	lle, NY 14	221	
Send Rep		Project Na	me (Lo				and the second	Sample	ers Nam	ie.	tak ki salah kanan di kanan di kanan di kanan di kanan di kanan di kanan di kanan di kanan di kanan di kanan d	
	Kathy Wager	-			LF					noty (Ko	thin Wi	1-31
Client Ph	one #:716-634-2293	Client PO			dan expression and a second	alandarun ere er er er	*********	Sample	ers Sign	ature:	1.	a fa facilità de la companie
ĺ	nail: kathy.wager@frontiertechn	cal.com							Kit	th Wo	The	
AES	Client Sample Identification &		Tim		Sampl	e Tv	/ne	# of	Preser-		31	
Sample Number	Location	Date Sampled	A=a P=p		<u>Matrix</u>	<u>⊆</u>	G	Cont's	!		<u>Analysis</u>	
007	03-2-45-	2/11/20	1650	4	GW		X	1	2	1. met	Als, M	00465
D.S.	03-4-26-	enernoanneel encommonana	1222				4	<u> </u>	2	Dine	Lals 1	en er annang an eine generale de de anticoner par en eine de anticoner par en eine de anticoner par en eine de
205	03-7-06	or no make water the state of t	1100	P	were more than the second and	,	X	l	0	ICI, S	14, 705	Nûz
010	03-19-DG	223 1704 224 24 200 000	1115				X	2		JUH2,	Pheno	1
2//	03-30-20		1123		V_{-}		7		<u>ن</u>	Alkali	nity	ernetissy dae designapaine designation
	and the second of the second o			A P	innersymmet at the cattless of	r-man-y-cour	ed second or a		10	TOC		and and a few particular to the second and and a second a
		and a state of the		A P	www.comensumeranea			MATERIAL PROPERTY.	contractions of the	al and a substitution of the substitution of t	aranan kalendar kalendar kalendar kalendar kalendar kalendar kalendar kalendar kalendar kalendar kalendar kale	
that A west was present and the		on en		A P	SOME SINGLESS PROOF SAN WHITE				managerym e mar i i i i i i i i i i i i i i i i i i i	suurannassa vuon kirjannassa kirjannassa	والمناطقة والمناطقة والمناطقة والمناطقة والمناطقة والمناطقة والمناطقة والمناطقة والمناطقة والمناطقة والمناطقة	g Karala Marka Magay gravyt. Procedor Associado de Marka
ngan diagraphy ang pagaman ng pag	Angeletination of the Committee of the C			A P	Park Version of Company and Company		-wayanan				novalences was the object outstook distriction.	entenna en den elementation des de desse en en en en en en en en en en en en en
				A P					***************************************	10000000000000000000000000000000000000		- proportion to proportion of the last last last last last last last last
				A P								
			A P									
SERVICE PROPERTY AND ASSESSED.	TO A THE RESIDENCE AND A STREET OF THE PROPERTY OF THE RESIDENCE AND A STREET OF THE PROPERTY	even a common establishment e versi acea		A P	an out the succession of the s				androducaria erica () () ()			and the state of t
	Committee Commit	an over en a s'estallanguague na mai	al alternative de descriptions	A P	ARREST STATE OF THE STATE OF TH				The second section of the second	i mangani terbebahan pengangan di pengani terbebahan dan di penganjan di penganjan di penganjan di penganjan d	territoria in consultar de la consultar de la consultar de la consultar de la consultar de la consultar de la c	nenene en deze electroniste i en el el ente electroniste (electroniste (electroniste (electroniste (electronis
annan in die den den den den den den den den den de	of encountry of a contribute to a deviction but to a large and a substitution and a size of electric acts also devictions.	te proposition and management to the contract of the contract		A	CONTRACTOR AND AND CONTRACTOR AND AND AND AND AND AND AND AND AND AND		~~~~	A 19 19 18 18 18 18 18 18 18 18 18 18 18 18 18	COMMERCIAL CONTROL CONTROL	von en som som stationeren in entrance	namen al controller reservation de l'interferé de l'interferé de l'interferé de l'interferè de l	elektron elektrologia pira direktrologia kilosologi, projen direktrologia
Shipment Arrived Via: FedE UPS Client AES Other:				Spe	cial Inst	ruction	ons/	/Rema	rks:	B, CO, C , K, Se,		inamenter announce de la companie de
FedEx			4 7	40	me	ta Is	s: A	3, B	B Cal	a, Fe, P	6,1113	
Turnaround Time Requested:								~ 19 i	n, <i>O</i> no	1 / Sel	Na	•
1 Day 2 Day 3 Day 5 Day Standard NOTE: Samples received after 3:30pm are considered fiext bus					mo to	15	a	ra C	eld.	filters	ı	
INOTE: Samples received after 3:30pm are considered fiext busin Relinquished by: (Signature)				_L	eived by: (C1 C6	411101147	IDate	Time
Relinquished by: \Signature\)										ech - 2 com t Am ha historica cultura bibliotica	2/11/20	4:06
Relinquish	ed by: (Signature)						Date	Time				
Relinquish	ed by: (Signature)	TO CARREST THE TOTAL SECTION OF SECTION AND A SECTION OF SECTION AND A SECTION OF SECTION AND A SECTION AND ASSECTION ASSECTION AND ASSECTION ASSECTIO	CONTRACTOR CONTRACTOR	Rec	eived for L	abora	tory	by:	amenings with tinho	والمتعادة والمتعادة والمتعادة والمتعادة والمتعادة والمتعادة والمتعادة والمتعادة والمتعادة والمتعادة والمتعادة	Date	Time
en et til tribeliere beskrivere beskrivere och eller beskrivere be	PP M Z (S S S S S No S No No No No No No No No No No No No No	in linear to the contract of t	kogmenne manuel kiel konstrukt		ring				ter entropy on a page of the con-	والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض والمتعارض	2/12/20	947a
	Sample Temperature		1	-	erly Pre			:(Ŷ / 1	N		ed Within	_
	obient ~ Chilled ~ Chilling Be	egun	0=None		<2	5=Ni 6=As		oic Acid		Notes:	mes: Ҷ <i>҈/</i>	N
Notes:	; ex		2=HNC)₃ pH<		7=FA	AS.		1.0	INUICS.		
	Lo · c		3=HCl 4=Na ₂ S			9=Na	HOE	VaOH pł pH>10				
	Custody Seal Intact: Y / N			2-3		10=0	Other	H31	264			



Laboratory Results for SSL Confirmation (March 2020)



Experience is the solution

314 North Pearl Street ♦ Albany, New York 12207 (800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

Work Order No: 200313062

ELAP#: 10709

March 20, 2020

Dave Harty Frontier Technical Associates 8675 Main Street Williamsville, NY 14221

TEL: (716) 634-2293

RE: Plant ND-LF SPDES
Plant ND LF-CCR

Dear Dave Harty:

Adirondack Environmental Services, Inc received 2 samples on 3/13/2020 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Christopher Hess

QA Manager

CASE NARRATIVE

CLIENT: Frontier Technical Associates Date: 20-Mar-20

Project: Plant ND-LF SPDES

Lab Order: 200313062

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X: Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits E: Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

CLIENT: Frontier Technical Associates Client Sample ID: BR-20-DG

Work Order: 200313062 Collection Date: 3/12/2020

Reference: Plant ND-LF SPDES / Plant ND LF-CCR **Lab Sample ID:** 200313062-001

PO#: Matrix: GROUNDWATER

Analyses	Resu	ılt RL	Qual	Units	DF	Date Analyzed
ICP METALS -	- EPA 200.7 REV 4.4					Analyst: KH
	(Prep: - 3/16/2020)				
Lithium	0.19	0.050)	mg/L	1	3/19/2020 2:53:00 PM

Date: 20-Mar-20

CLIENT: Frontier Technical Associates

Work Order: 200313062

Reference: Plant ND-LF SPDES / Plant ND LF-CCR

PO#:

Client Sample ID: Field Dup

Collection Date: 3/12/2020

Lab Sample ID: 200313062-002

Matrix: GROUNDWATER

Date: 20-Mar-20

Analyses	Resul	t RL	Qual Units	DF	Date Analyzed
ICP METALS - E	PA 200.7 REV 4.4 (Prep: - 3/16/2020				Analyst: KH
Lithium	0.19	7 0.050	mg/L	1	3/19/2020 2:58:00 PM



314 North Pearl Street Albany, New York 12207 518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order #

200313062 A full corving analytical

xperience is 1	the solution	AII	ili service	analytical	research abo	ratory o	nemig s	oluli	UHS	to en	vironmental concerns	
Client Name: Fr	ontier Techni	ical Associate	Address: s, Inc.		8675 N	⁄Iain St	reet, W	illia	ms	ville, l	NY 14221	
Send Report To:			· ·	ne (Location	O LF	-car	Sam			imes)	Harly	
Client Phone No		Client Email: david.ha	//		Number:					gnature)		
AES Sample Number		Client mple Identification			Date Sampled	Time A=a.m. P=p.m.	Samp Matrix	le Type	Grab	Number of Cont's	Analysis Required	
001	BR-2				3/12/20	10.22		1	x	1	Lithiun	
					, ,	F						
002	Field Dy	<i>P</i>			3/12/201	0 25			X	_/	Letheny	
						F						
						,	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \					
						1 <u> </u>	\ }					
						1	\ >					
							1 1					
		-					1					
							A P					
							A P					
Shipment Arriv	red Via:	род периня (а па поско се се се се се се се се се се се се се		CC Repo	rt To / Special Ins	tructions	Remarks:					
FedEx UPS	Client AES	Other:										
Furnaround Tim 1 Day 2 Day Note: Samples n	De Request: ☐ 3 Day 5 Day eceived after 3:30 pm	Normal (+)										
Relinquished b	HQ			to	t by: (Signature)	waren en				3/12/20 3:00	on	
Relinquished b					d by: (Signature)			***********	************	Appleare server and	Date/Time '	
Relinguished b	y: (Signature)				d for Laboratory I	ly:			*********	- La rancoppe and	Date/Time 3/13/20 13	20ipi
p		Bothilled y	AES ottles N		OPERLY PRESERVE)				Receive	ED WITHIN HOLDING TIMES Y N	
Notes:	2° WHITE - L		No	otes:	W - Sampler Cop			i		200 may 100 may		

Adirondack Environmental Services,





Experience is the solution

314 North Pearl Street * Albany, New York 12207 * (518) 434-4546 * Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the Adirondack Environmental Services, Inc. are undertaken and all rates are based upon the following terms:

- (a) Neither Adirondack Environmental Services, Inc., nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of Adirondack Environmental Services, Inc.'s performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against Adirondack Environmental Services, Inc. arising out of its work.
- (b) All claims made must be in writing within forty-five (45) days after delivery of the Adirondack Environmental Services, Inc. report regarding said work or such claim shall be deemed or irrevocably waived.
- (c) Adirondack Environmental Services, Inc. reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an Adirondack Environmental Services, Inc. report by other than our customer does not constitute a representation of Adirondack Environmental Services, Inc. as to the accuracy of the contents thereof.
- (d) In no event shall Adirondack Environmental Services, Inc., its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.
- (e) No deviation from the terms set forth herein shall bind Adirondack Environmental Services, Inc. unless in writing and signed by a Director of Adirondack Environmental Services, Inc.
- (f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and Adirondack Environmental Services, Inc. is not responsible for the accuracy of this information.
- (g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.



Experience is the solution

314 North Pearl Street ♦ Albany, New York 12207 (800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

Work Order No: 200402011

ELAP#: 10709

April 07, 2020

Dave Harty Frontier Technical Associates 8675 Main Street Williamsville, NY 14221

TEL: (716) 634-2293

RE: Plant N LF

Lithium Samples

Dear Dave Harty:

Adirondack Environmental Services, Inc received 3 samples on 4/2/2020 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Monica Higdon

Laboratory Manager

CASE NARRATIVE

CLIENT: Frontier Technical Associates Date: 07-Apr-20

Project: Plant N LF **Lab Order:** 200402011

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits

X : Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

CLIENT: Frontier Technical Associates **Client Sample ID:** BR-20-DG

Work Order: 200402011 Collection Date: 3/31/2020

Reference: Plant N LF / Lithium Samples **Lab Sample ID:** 200402011-001

PO#: Matrix: GROUNDWATER

Analyses		Result	RL Qua	l Units	DF	Date Analyzed
ICP METALS	- EPA 200.7 REV 4.4					Analyst: KH
	(Prep: - 4/3/2020)				
Lithium		0.253	0.050	ma/L	1	4/6/2020 3:42:00 PM

Date: 07-Apr-20

CLIENT: Frontier Technical Associates **Client Sample ID:** BR-20-DG-Dis

Work Order: 200402011 Collection Date: 3/31/2020

Reference: Plant N LF / Lithium Samples **Lab Sample ID:** 200402011-002

PO#: Matrix: GROUNDWATER

Analyses		Result	RL Qua	al Units	DF	Date Analyzed
ICP METALS - EF	PA 200.7 REV 4.4					Analyst: KH
	(Prep: - 4/3/2020)				
Lithium		0.275	0.050	mg/L	1	4/6/2020 4:02:00 PM

Date: 07-Apr-20

CLIENT: Frontier Technical Associates **Client Sample ID:** MH-19 Leachate

Work Order: 200402011 Collection Date: 3/31/2020

Reference: Plant N LF / Lithium Samples **Lab Sample ID:** 200402011-003

PO#: Matrix: LEACHATE

Analyses		Result	RL Qu	al Units	DF	Date Analyzed
ICP METALS -	EPA 200.7 REV 4.4					Analyst: KH
	(Prep: - 4/3/2020)				
Lithium		ND	0.050	mg/L	1	4/6/2020 4:06:00 PM

Date: 07-Apr-20



314 North Pearl Street Albany, NY 12207

518-434-4546 / FAX: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#:

20040

NCE IS THE SOLUTION					ſ	COC Re	eference:	,			
A full service an	alvtical resear	ch labor	ator	y offering s	olutic	ns to	environ	mental c	oncerns		
me:	Address:		ncecestariori de la composición de la composición de la composición de la composición de la composición de la c		mour an evaluate for the	***********		94999944444444444444444444444444444444		221	
The state of the s	l	ne (Loc	0000000000	nonnannonnannonni d	8111 K		Sample	ers Nam	ie.	dan da de la composição de la composição de la composição de la composição de la composição de la composição d	
David Harty							Ī	avi	d Har	A.	# cannon
one #: 716-634-2293	Client PO#	enonemore o a recon					Sample	ers Sign	ature:		
ail: David.harty@frontiertech	nical.com							LV1.	MHE		
Client Sample Identification & Location	Date Sampled	A=ar P=pr	n n	Sample Type		уре <u>G</u>	# of Cont's	Preser- vative		Analysis)
BR-20-DG	3/31/20	12/0	A	GW	1	入		2	Life	i irum	
BR-20-06-Dis	3/31/20	1:11	A P A	6W	enenenenen Superiorien	ጵ		2		-	
MH-19 Leachate	3/31/20	122		Lend	de	×		2	Lith	cum	
			A P					2222 Asida delektrisiste 1000000000000000000000000000000000000			
			P		ļ						
			P A		Laconom				and the second s		
ereneren en			P A								
\$			P A							aanaan kanaan ka aa aa dhii isaa ah aa ah ah ah ah ah ah ah ah ah ah a	
			P A			ļ					
\$255.55 m d d d d d d d d d d d d d d d d d d	nd 2000-000-000 (100-000)		P		onnacione.						
ranasanasassassa matikalistalistassa katap pipika nyapapinina sindonosososososososososososososososososos			PA			-					Administration of the second o
nt Arrived Via:			Spe	 ecial Inst	ruct	ions	l /Bema	rks'			nanananananananan aidatat diddi diddi diddi diddi diddi diddi.
UPS Client AES Other:			Op	oolal Illot		.00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				
und Time Requested:		\	pot charge and the ch								
2 Day 3 Day 5 Day	Standard		and the same of th								
	red next busin	ess day.	Roc	saivad hv: (Sign	ature				Date	Time
ea by (signature)			1160	TO G	1	_				t/1/20	2:000
ed by: (Signature)			Rec	eived by: (Sign	ature)		gayaya kida ya kida kida kida kida kida kida kida kid	Date	Time
ed by: (Signature)			Red	eived for L	abor.	atory	by: ,		Y	Date 2/2	Time V/O
Sample Temperature		1		perly Pre			/	N			
Allibicity /Olillica / Olilling Dogain										mes. ¶//	I A
2=HN							NaOH n	H>9	1		
				<u>.</u>	9=1	VaO H	1 pH>10				
and and a superior of the supe			on one of the second		10=	:Othe	er				
Bottles AEŞ: Y) / N	na palasan na na na na na na na na na na na na n									Jemo	
	ne: Frontier Technical Associates, ort to: David Harty one #: 716-634-2293 ail: David harty@frontiertech Client Sample Identification & Location BR - 20 - DG BR-20 - DG BR-20 - DG OUPS Client AES Other: und Time Requested: 2 Day 3 Day 5 Day nples received after 3:30pm are considered by: (Signature) ed by: (Signature) Sample Temperature abient ~ Chilled ~ Chilling E	A full service analytical researce. Frontier Technical Associates, Inc. Ort to: David Harty David Harty David Harty David Harty David Harty David Harty David Harty Client Sample Identification & Date Sampled BR - 20 - DG Sampled Sa	A full service analytical research labor me: Frontier Technical Associates, Frontier Technical Associates, Inc. David Harty one #:716-634-2293 ail: David harty@frontiertechnical.com Client Sample Identification & Date Sampled	A full service analytical research laborator; me: Frontier Technical Associates, Inc. ort to: David Harty me #:716-634-2293 ail: David harty@frontiertechnical.com Client Sample Identification & Date Sampled Ppm BR - 20 - DG 3/3/30 1:10 P BR - 20 - DG 5/3 3/30 1:10 P BR - 20 - DG 5/3 3/30 1:10 P MH - 19 Leachage 3/31/20 1:22 f A P MH - 19 Leachage 3/31/20 1:22 f A P A P A P A P A P A P A P A	A full service analytical research laboratory offering service inc. Frontier Technical Associates, Inc. 8675 March 16 Address: Inc. 8675 March 16 Address Inc. 8675 March 16	A full service analytical research laboratory offering solutions: Frontier Technical Associates, Inc. 8675 Main Sort to: David Harty David Harty	A full service analytical research laboratory offering solutions to me: Frontier Technical Associates, Inc. 8675 Main Street Project Name (Location): Plant N - LF Client PO #: all: David harty@frontiertechnical.com Client Sample Identification & Date A-am P-pm Matrix C G BR - 20 - DG 3/3/20 1/10 P GW Matrix C G BR - 20 - DG 3/3/20 1/10 P GW Matrix C G BR - 20 - DG 3/3/20 1/10 P GW Matrix C G BR - 20 - DG 5/3/20 1/10 P GW Matrix C G BR - 20 - DG 5/3/20 1/10 P GW Matrix C G BR - 20 - DG 5/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G G BR - 20 - DG - Dr 5 3/3/20 1/10 P GW Matrix C G G BR - 20 - DG - Dr 5 4/20 GW Matrix C G G BR - 20 - DG - Dr 5 4/20 GW Matrix C G G BR - 20 - DG - Dr 5 4/20 GW Matrix C G G BR - 20 - DG - Dr 5 4/20 GW Matrix C G G BR - 20 - DG - Dr 5 4/20 GW Matrix C G G BR - 20 - DG - Dr 5 4/20 GW Matrix C G G BR - 20 - DG - Dr 5 4/20 GW Matrix C G G BR - 20 - DG - Dr 5 4/20 GW Matrix C G G BR - 20 - DG - Dr 5 4/20 GW Matrix C G G BR - 20 - DG - Dr 5 4/20 GW Matrix C G G BR - 20 - DG - DG - DG Matrix C G G BR - 20 - DG - DG - DG Matrix C G G BR - 20 - DG - DG - DG Matrix C G G BR - 20 - DG - DG - DG Matrix C G G BR - 20 - DG - DG - DG Matrix C G G BR - 20 - DG - DG - DG Matrix C G G BR - 20 - DG - DG - DG Matrix C G G BR - 20 - DG - DG - DG Matrix C G G BR - 20 - DG - DG - DG Matrix C G G BR - 20 - DG - DG Matri	A full service analytical research laboratory offering solutions to environ me: Frontier Technical Associates, Inc. Address: Frontier Technical Associates, Inc. 8675 Main Street, Will ont to: Place No. Let Sample David Harty Place No. Let Sample Clocation): Place No. Let Sample Type # of Aam Matrix C G Cont's Aample David Harty@frontiertechnical.com Client Sample Identification & Date Sampled Pend Matrix C G Cont's Aample Date Date Date Date Date Date Date Dat	A full service analytical research laboratory offering solutions to environmental comes. Address: Inc. 8675 Main Street, Williamsviron to to: David Harty Project Name (Location): Plast N - LF Samplers Nam Paul Client PO #: Sampler Sign aii: David harty@frontiertechnical.com Client Sample Identification & Date Sampled Sampled Ppm Matrix C G Contr's vative BR - 20 - DG 3/31/20 1:10 p GW X / 2 BR - 20 - DG - D: 3/31/20 1:10 p GW X / 2 MH - 1 9 Leachage 3/31/20 1:21 p P GW X / 2 MH - 1 9 Leachage 3/31/20 1:22 p Leachage X / 2 PP P P P P P P P P P P P P P P P P P	A full service analytical research laboratory offering solutions to environmental concerns Address: Frontier Technical Associates, Inc. 8675 Main Street, Williamsville, NY 14: Ort to: David Harty Plant N - LF David Harty Plant Harty Plant N - LF David Harty Plant Hart	A fall service analytical research laboratory offering solutions to environmental concerns Actions: Frontier Technical Associates, Inc. 8675 Main Street, Williamsville, NY 14221 ort to: Polack N - LF Plack N - LF Sampler Name: Client Polack N - LF Client Sample Identification & Date Sampler I David Harry BR - 20 - DG 3/3//300 12/0 ¹ GW BR - 20 - DG 3/3//300 12/0 ¹ GW NH - 19 Leachale 3/3//30 12/0 ¹ GW NH - 19 Leachale Analysis



Experience is the solution

314 North Pearl Street * Albany, New York 12207 * (518) 434-4546 * Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the Adirondack Environmental Services, Inc. are undertaken and all rates are based upon the following terms:

- (a) Neither Adirondack Environmental Services, Inc., nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of Adirondack Environmental Services, Inc.'s performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against Adirondack Environmental Services, Inc. arising out of its work.
- (b) All claims made must be in writing within forty-five (45) days after delivery of the Adirondack Environmental Services, Inc. report regarding said work or such claim shall be deemed or irrevocably waived.
- (c) Adirondack Environmental Services, Inc. reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an Adirondack Environmental Services, Inc. report by other than our customer does not constitute a representation of Adirondack Environmental Services, Inc. as to the accuracy of the contents thereof.
- (d) In no event shall Adirondack Environmental Services, Inc., its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.
- (e) No deviation from the terms set forth herein shall bind Adirondack Environmental Services, Inc. unless in writing and signed by a Director of Adirondack Environmental Services, Inc.
- (f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and Adirondack Environmental Services, Inc. is not responsible for the accuracy of this information.
- (g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Appendix E

April-May 2020 Supplemental Sampling Events

FRONTIER TECHNICAL ASSOCIATES, INC.

8675 Main Street, Williamsville, New York 14221 (716) 634-2293 Environmental Monitoring and Consulting

May 27, 2020 (Revised 12/18/20)

Mr. George Streit NRG Dunkirk Power, LLC 106 Point Drive North Dunkirk, NY 14048

Re:

Supplemental Well Monitoring at Dunkirk Landfill

Dear Mr. Streit:

On May 12, 2020, in accordance with your request, we sampled some of the supplemental wells associated with the Dunkirk Landfill. Some of these wells are not part of the normal NYSDEC Part 360 monitoring and also are not part of the CCR program. The locations of these wells are shown on the attached Figure. The wells were purged and sampled and the sampling field sheets are also attached. The well water was monitored for the field parameters and total and dissolved lithium.

A brief summary of the wells is presented below:

Well ID BR-6-DG BR-12-DG BR-13-DG BR-15-DG BR-20-DG OB-5-DG OB-7-DG OB-11-DG OB-19-DG OB-20-DG FA-10-DG	Approximate Bottom Depth below grade 17.96' 15.25' 16.65' 17' 33.5' 5.7' 6.4' 4.5' 7.5' 14.6' 14.5'	Description of Water Bearing Zone Gray shale bedrock Soft weathered shale Moderately hard shale Gray shale bedrock, soft Unknown (no well log) Clayey-Silt with bedrock refusal at bottom of hole Sand-Silt-Clay mix Sand-Silt-Clay mix with refusal at bottom of hole Unknown (no well log) Unknown (no well log) Black flyash
--	---	---

From an understanding of the results perspective, a couple of notes are in order. The designation BR stands for bedrock. Bedrock on this site is a layered shale sometimes denoted soft and sometimes denoted hard. The OB designation stands for overburden, although these shallow wells often scratched the surface of the shale bedrock and thus are not truly overburden wells. BR-12-DG, BR-13-DG, BR-20-DG, OB-19-DG and OB-20-DG are part of the NYSDEC Part 360 monitoring and there is historical data available for these wells, until recently lithium was not examined in these wells.

The water bearing zone for well FA-10-DG is in 8' of black flyash. This well is approximately 1,300 feet from the landfill and visually looks like the surrounding area and not a fill site.

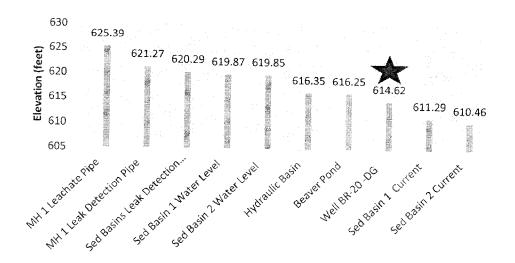
The field measurements are summarized below:

Well ID	pH (SU)	Specific	ORP/eH	Turbidity
		Conductance		(NTU)
		(umhos/cm)		
BR-6-DG	6.87	909	-90	56.7
BR-12-DG	7.05	982	-144	13.5
BR-13-DG	7.21	633	-89	12.7
BR-15-DG	7.98	563	-80	189
BR-20-DG	7.52	1,125	- 91	13.8
OB-20-DG	7.20	945	-94	38.7
OB-5-DG	6.65	1,580	42	4.95
OB-7-DG	6.77	963	60	5.08
OB-11-DG	7.39	482	56	16.4
OB-19-DG	7.05	1,408	-130	14.2
FA-10-DG	7.43	1,394	-82	15.8

Direction of Groundwater Flow

The direction of groundwater gradients in the bedrock wells is instructional for further understanding

Groundwater Elevations - NRG Dunkirk Landfill May 2020



The groundwater elevations followed the expected pattern with BR-14-UG the upgradient well and BR-12-DG the downgradient well at the edge of the property. Well BR-3 being somewhat off to the side. The well where we should reexamine the data is BR-15-DG where two factors are impacting the reliability of the data. The first is the survey data only shows a ¼" difference between the concrete pad and the well but in reality this is closer to two feet. There was also a significant amount of soil in the bottom of the well and this could be influencing the groundwater level. This well should be further redeveloped and resurveyed if needed in this evaluation.

Lithium Results

The table below presents the total and dissolved lithium results obtained from the wells on May 12, 2020.

Lithium Results in Wells at NRG Dunkirk Landfill (May 12, 2020)									
Well ID		entration (mg/1)							
	Total	Dissolved							
BR-6-DG	< 0.050	< 0.050							
BR-12-DG	< 0.050	< 0.050							
BR-13-DG	< 0.050	< 0.050							
BR-15-DG	< 0.050	< 0.050							
BR-20-DG	0.208	0.211							
OB-20-DG	0.095	0.060							
OB-5-DG	9.94	10.1							
OB-7-DG	< 0.050	< 0.050							
OB-11-DG	< 0.050	< 0.050							
OB-19-DG	< 0.050	< 0.050							
FA-10-DG	0.336	0.313							

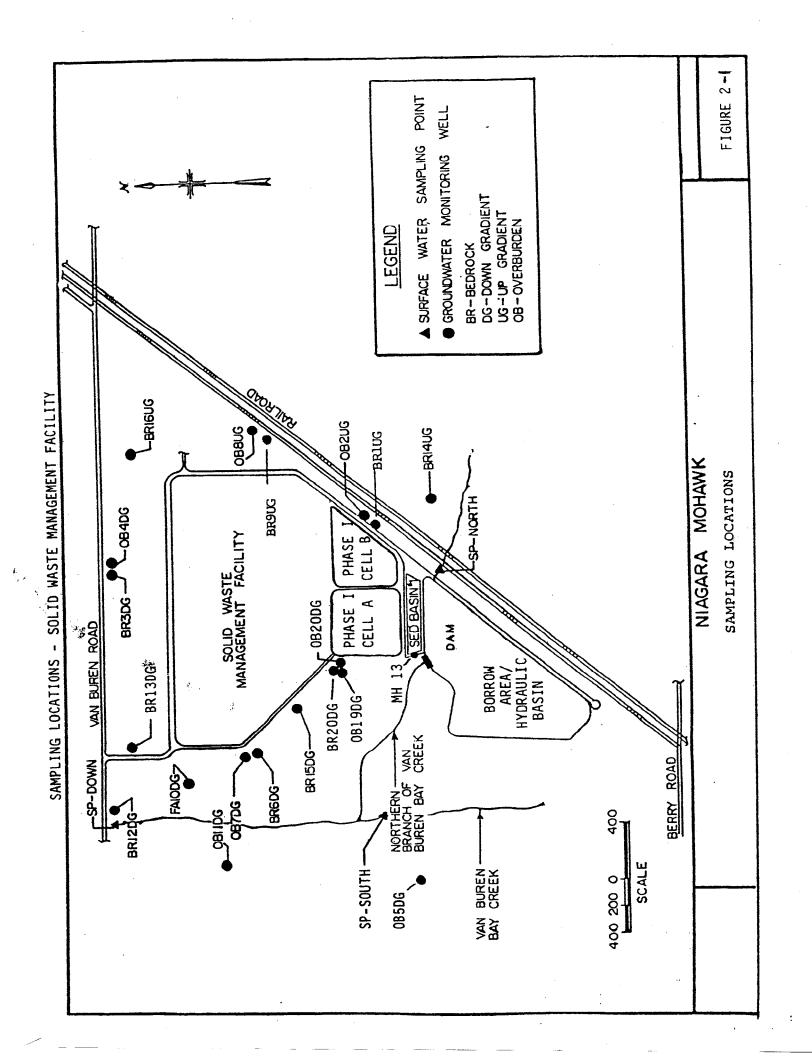
Observations are tentative and subject to revision based on additional data. If you have any questions please do not hesitate to contact me.

Sincerely,

David M. Harty,

P.E., BCEE President

DMH:20-120 (Revised) 200514014





FRONTIER TECHNICAL ASSOCIATES INC.

14221 (716) 634-2293. Fax (716) 634-2344

Site Location	n: <u>NRG D</u>	unkirk Lan	<u>idfill</u> Pro	oject No.:	ET-10	<u>66</u>					
Sample Poir	nt I.D.:	OB- 5	5- DG		Dat	te:	5/13/0	20			
Purge Infor	mation		Purge I	Method: <u>E</u>	Bailer, F	erist	altic Pum	\geq			
Depth to Bot	tom of We	ell: <u>8.20</u> 2	<u>f</u> ft								
Depth to Wa	ter Surfac	e: 2.90	<u> 2</u> ft	4"	well = 0).66 g	gallons pe	r foot			
Depth of Water Column: 5,30 ft Elevation of Casing: 619.92											
Volume of Si	tanding W	ater in We	ell: <u>3</u> /3		llons		<u> </u>				
Start of Purg			10:25								
End of Purge			10:51								
Total Volume			10.5	-	lons We	ell Pu	urged Dry:	Yes	No		
Parameters	Meter	Method	Initial	Accumula	ted Volu	me P	urged (gallo	ns)	Sample		
			Sample		3.5		8.5		5/13/20		
Time			10:28		10:34		10:45		10:51		
рH	Oakton pH 300	SM 18-20	6-13								
Spec.	Oakton	4500HB EPA	015		6.60		6.66	· · · · · · · · · · · · · · · · · · ·	6.65		
Conductance	CON 5	120.1	2230		1980		1650		1580		
Temperature	Oakton	SM 18-20									
Eh .	CON 5 ORP	2550B	51		50		51		50		
-!1	tester	ASTM D1498	6		2		70		42		
Turbidity	Hach	EPA					38		74		
	2100P	180.1	72,2		42.5		20,1		4,95		
Appearance			Slightly	17	lightly		Clear		Clear		
NYSDOH ELAP	No. 10475,	Values in p	arenthesis	are duplic	ate value	S					
Depth to Wat	er: <i>5</i>	-78	_ft. S	Sample M	ethod:_[<u>Baile</u>	r Petista	iltic Pu	pap dag		
Meters Calibr	rated: Yes	Dedicat									
Notes/Weath				o Equipi		<u> </u>					
ACIES/AAEGIII	CI		·			· · · · · · · · · · · · · · · · · · ·	 				
											
Sampling Per		Dav	id HA	Sty	1						
Sampling Per	rsonnel Sig	gnature:	411								



FRONTIER TECHNICAL ASSOCIATES INC. 14221 (716) 634-2293. Fax (716) 634-2344

8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	n: <u>NRG D</u>	unkirk Lar	ndfill Pha	<u>se II Well</u> Project N	o.: <u>ET-1066</u>	
Sample Poir	nt I.D.:	OB-7	-DG	Date:	5/12/20	
Purge Infor	mation		Purge I	Method: Bailer Perisi	taltic Pump	
Depth to Bot	ttom of We	ell: <u>8.87</u>				
Depth to Wa	iter Surfac	e: 2.48	<u> </u>	4" well = 0.66	gallons per foot	
Depth of Wa	iter Colum	n:6,39	ft ft	Elevation of Ca		
Volume of S				_	<u> </u>	
Start of Purg			0:08	<u> </u>		
End of Purge			020	The state of the s		
Total Volume			7.5	gallons Well P	urged Dry: Kes) _{No}
Parameters	Meter	Method	Initial	Accumulated Volume P	urged (gallons)	Sample
			Sample	4.2		5/13/20
Time			10:08	10:15		11:58
pН	Oakton pH 300	SM 18-20 4500HB	6,71	6.72		
Spec.	Oakton	EPA	- ''	0.70	_	6.77
Conductance	CON 5	120.1	1378	1088		963
Temperature	Oakton CON 5	SM 18-20 2550B	48	48		
Eh	ORP	ASTM		70	 	48
	tester	D1498	46	56		60
Turbidity	Hach 2100P	EPA	9.11			
Appearance	2100F	180.1	1,11	16.0		5.08
•			Clear	Cler		Clear
NYSDOH ELAF	No. 10475,	Values in p	arenthesis	are duplicate values		
Depth to Wat	er:3	-85		ample Method: Baile	r Peristaltic Pu	nasy
Meters Calibi	rated: Yes	Dedicat		le Equipment: Yes		
Notes/Weath						
Sampling Per	rsonnei:	David	Hart			
Sampling Per			+ 100	n 12-		
	-5.116. OK	J. 101016	XXII			



Site Locatio	n: <u>NRG D</u>	unkirk Lar	ndfill Pha	se I Wel	Project	No.:	ET-1066	<u>i</u>		
Sample Poi							5/13/6			
Purge Infor	mation		Purge	Method:	Bailer, Pe	erista	tic Pump	<u> </u>	_	
Depth to Bo	ttom of We	ell: <u>7.25</u>	<u>f</u> t	4'	well = 0.6	66 ga	llons pe	r foot		
Depth to Wa	ater Surfac	e: <u>2.90</u>	<u> ft</u>							
Depth of Wa	ter Colum	in: <i>4.35</i>	_ft							
Volume of S	tanding W	ater in We	ell: <u>2</u> ,	<u>9</u> g	allons					
Start of Purg										
Start of Purge – Time: ////2 and End of Purge – Time: ///3 ou m										
Total Volum	e Purged:		9-0		illons Wei	l Pur	ged Dry:	Yes	No	
Parameters	Meter	Method	Initial	Accumu	ated Volum	e Pur	ged (gallor	ns)	Sample	
			Sample		2.9				3-0	
Time			71213		1/15				11:30	
pН	Oakton pH 300	SM 18-20	7.76							
Spec.	Oakton	4500HB EPA	1.10		7.53				7.39	
Conductance	CON 5	120.1	463		474				482	
Temperature	Oakton	SM 18-20	_						100	
	CON 5	2550B	E 3		53				56	
Eh	ORP	ASTM					+			
	tester	D1498	39	-	-/				-35	
Turbidity	Hach 2100P	EPA	4.95		2 2 2					
Appearance	21001	180.1	7.12		2,22				16.4	
·			Clear	1	Clear				16.4 Clear	
NYSDOH ELAF	No. 10475,	Values in p	arenthesis	s are dupli	cate values	-	A CONTRACTOR OF THE PARTY OF TH			
Depth to Wat	:er:	0-50	_ft. S	Sample M	lethod: Ba	ailer	Perista	ltic Pur	np)	
Meters Calibi	rated: Yes	Dedicate	ed Samp	le Equip	ment: Yes	<u>s</u>				
Notes/Weath										
Sampling Per	rsonnel:	David	Harty	1 /						
Sampling Per	sonnel Si	gnature:_ <u>}</u>	XV III	N A	1					



FRONTIER TECHNICAL ASSOCIATES INC. 14221 (716) 634-2293. Fax (716) 634-2344

8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	n: <u>NRG D</u>	<u>unkirk Lan</u>	dfill Phas	<u>se I Well</u> Project No	.: <u>ET-1066</u>	
Sample Poir	nt I.D.:	OB-1	9-DG	Date:	5/12/20	
Purge Infor	mation		Purge I	Method: <u>Bailer, Perist</u>	taltic Pump	
Depth to Bot	ttom of We	ell: <u>10.55</u>	_ ft	2" well = 0.17	gallons per foot	
Depth to Wa	iter Surfac	e: <u>3,08</u>	_ ft			
Depth of Wa	iter Colum	n: <u>7.4</u>	<u>Z</u> ft	Elevation of Ca	asing:'625.36	
		•		27 gallons		
Start of Purg						
End of Purge						
		•		gallons Well P	urged Dry: Yes) No
Parameters	Meter	Method	Initial	Accumulated Volume P	urged (gallons)	Sample
			Sample	1.5		5/13/20
Time			10:30	10:36		12:39
рН	Oakton pH 300	SM 18-20 4500HB	6.67	6.70		
Spec.	Oakton	EPA	4.41	6.70		7-05
Conductance	CON 5	120.1	2180	2010		1408
Temperature	Oakton CON 5	SM 18-20 2550B	47	48		
Eh	ORP	ASTM				50
Turbidity	tester Hach	D1498 EPA	-36	-47		-130
Appearance	2100P	180.1	8.25	10.5		14.2
, ippourariou			Clear	Clear		Clear
NYSDOH ELAF	No. 10475,	Values in p	arenthesis	s are duplicate values		
Depth to Wat	ter:	5-80	_ft. S	Sample Method: Baile	r Peristaltic Pu	ımb
				ele Equipment: Yes		
N otes/Weath						
Sampling Pe	rsonnel:	Dai	id Ha	vtz.	**************************************	
Sampling Pe	rsonnel Si	gnature:	Y	MAT	***************************************	
				y (



Site Location	n: <u>NRG D</u>	<u>unkirk Lan</u>	dfill Phas	se I We	I_Projec	t No.:_	ET-1066	<u> </u>			
Sample Poin	nt I.D.:	OB-2	0-DG		Dat	e:	5/12/	20			
Purge Inform	mation		Purge I	Method:	Bailer,(P	erista	tic Pum	Q			
Depth to Bot	tom of We	श्री: <u>17.61</u>	_ ft	2	" well = 0	.17 ga	illons pe	r foot			
Depth to Wa	ter Surfac	e: 3.08	<u>}</u> ft								
Depth of Water Column: 14.59 ft Elevation of Casing: 625.35											
Volume of Standing Water in Well: 2,5 gallons											
Start of Purg	e – Time:		15429	n							
End of Purge – Time: 11:34cm											
Total Volume Purged:gallons Well Purged Dry: Yes No											
Parameters	Meter	Method	Initial	Accumu	lated Volu	me Pur	ged (galio	ns)	Sample		
			Sample		2.5		4.0	6.5	5/13/20		
Time			10:42		10:52		11:04	11:34			
рН	Oakton	SM 18-20	_		_						
Spec.	pH 300 Oakton	4500HB EPA	6.82		7.02		7.06	7.23	7.20		
Conductance	COM 6=	120.1	1393		1322		1308	1108	945		
Temperature	emi 550	SM 18-20			1 30100		100	1700			
		2550B	49		50		50	50	50		
Eh	ORP tester	ASTM D1498	-6		5		,	-34	-94		
Turbidity	Hach	EPA	Ø				(- 1	-17		
	2100P	180.1	7200		18.1		9.97	9-68	38.7		
Appearance			Rack Flow		Clear			ĺ	Clear		
NYSDOH ELAP Depth to Wat Meters Calibr	er: <u> </u>	C 9 Dedicate	_ft. S ed Samp	ample I le Equi	Method: E	<u>Bailer</u>	Perista	altic Pur	np		
Notes/Weath	er:										
Sampling Per	sonnel:	David	Hari	Z	/						
Sampling Per	sonnel Sig	gnature:	Del.	MA							



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	n: <u>NRG D</u>	unkirk Lar	<u>idfill</u> Pr	oject N	o.: <u>ET-1</u> 0	<u> 266</u>			
Sample Poir	nt I.D.:	BR-6	-DG		Da	ate:	1/12/2	10	
Purge Information Purge Method: Pump									
Depth to Bo	ttom of We	ell: 20.18	<u>3_</u> ft						
Depth to Wa	iter Surfac	e: 3/12	_ ft	4	" well =	0.66ga	llons pe	r foot	
Depth of Wa	iter Colum	n: 17.06	ft		Elevation	•			
Volume of S				1	gallons		g. <u> </u>	0.01	
Start of Purg	_		47		gaoo				
End of Purge		2	:38						
Total Volume					allana M	In II Door		· ·	
		-5-	<i>)</i>		allons W		_		No
Parameters	Meter	Method	Initial	Accumi	ulated Vol	ume Pur	ged (gallo	ons)	Sample
			Sample	8	15	21	30	50	5/13/20
Time			1:47	1:54	2:05	2:12		2:33	12:11
рН	Oakton	SM 18-20							
Spec.	pH 300 Oakton	4500HB EPA	8,26	7.71	7.36	7.33	7.36	7.35	6.87
Conductance	CON 5	120.1	1181	1132	1093	1086	1084	107	909
Temperature	Oakton	SM 18-20	1101	1111	1013	1006	1001	1076	707
	CON 5	2550B	48	48	48	47	47	47	48
Eh	ORP	ASTM							
T. abiatta	tester	D1498	-47	-94	-158	-196	-204	-185	-90
Turbidity	Hach 2100P	EPA 180.1	2.50	7.22	212	720	621	20	
Appearance				1,24	3,13	7.25	5.36	35	567
			Singhtly	Clear	•	i	Cless.	Stights	Sightle
NYSDOH ELAP	No. 10475,	Values in p	arenthesis	are dup	licate valu	es			
Depth to Wat	er:	.96	_ft. S	Sample	Method:	Bailer/	Perista	altic Pur	np)
Meters Calibr	ated: Yes	Dedicate							
Notes/Weath									
				ſ					
Sampling Per	rsonnel:	David	of Ha	4)				
Sampling Per	sonnel Sig	gnature:		U/			<u></u>		



FRONTIER TECHNICAL ASSOCIATES INC.

8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	: NRG Du	inkirk Land	dfill Phas	<u>e II We</u>			ET-106				
Sample Point	t I.D.:	BR-12	2-DG		Dat	:e:_	12/2	-0			
Purge Inform	nation		Purge M	fethod:	Bailer, P	eristalt	ic Pump	2			
Depth to Bott		_	,	2	' well = 0	.17 gal	lons per	foot			
Depth to Water Surface: 5.05 ft											
Depth of Water Column: 13.3 Lft Elevation of Casing: 600.65											
Volume of Standing Water in Well: gallons											
Start of Purg	e – Time:	M-4-8	11:30								
End of Purge	e – Time:		11:47								
Total Volume	Purged:		6.3	9	allons W	ell Purg	ged Dry:	Yes	(No/		
Parameters	Meter	Method	Initial Sample	Accumi	ilated Volu		_	ns)	Sample	. 1	
			Gampie		3.1	4.2	4.3		5/13/	7	
Time			1432		11:37	11:42	11:47		12:30	5	
pH	Oakton pH 300	SM 18-20 4500HB	7.17		7.18	7.18	7.76		7.03		
Spec. Conductance	Oakton CON 5	EPA 120.1	758		755	762	754		980	2	
Temperature	Oakton CON 5	SM 18-20 2550B	10,1	·	10.1	11.3	165		11-2		
Eh	ORP tester	ASTM D1498	-107		-131	-139	-137		-144		
Turbidity	Hach 2100P	EPA 180.1	3.36		3.05	1.41	2.36		13.	2	
Appearance			deer		day	day	deay		Clean		
NYSDOH ELAF Depth to Wa		Values in			licate valu Method:		erist	altic Pu	mp		
Meters Calib	rated: Ye	s_Dedica	ted Samı	ple Equ	ipment: <u>`</u>	<u>Yes</u>					
Notes/Weath	ner:					<u></u>					
Sampling Personnel: Wathy Waxer Sampling Personnel Signature: Wayy											
					, () '					



FRONTIER TECHNICAL ASSOCIATES INC.

8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	: NRG Du	inkirk Land	dfill Sed.	Basin No. 2 We	∥ Project No∴ <u>E I-1</u>	066					
Sample Point	t I.D.:	BR-13	B-DG	Dat	e: 5/12/20	-					
Purge Inform	nation		Purge N	/lethod: <u>Bailer, P</u>	eristaltic Pump						
Depth to Bott											
Depth to Water Surface: 3.94 ft 4" well = 0.66 gallons per foot											
Depth of Water Column: 15.37 ft Elevation of Casing: 607.42											
Volume of Standing Water in Well: gallons											
Start of Purg	e – Time:		11:54								
End of Purge	e – Time:		13.92								
Total Volume	e Purged:		19.2	gallons W	ell Purged Dry:	No					
Parameters	Meter	Method	Initial	Accumulated Volu	me Purged (gallons)	Sample					
			Sample	10		5/13/20					
Time	-÷		11:54	12:08		12:58					
рН	Oakton pH 300	SM 18-20 4500HB	7.36	7.33		7-21					
Spec.	Oakton	EPA	666	674		633					
Conductance Temperature	CON 5 Oakton	120.1 SM 18-20									
·	CON 5	2550B	16.8	10.1		122					
Eh	ORP tester	ASTM D1498	-116	-135		-89					
Turbidity	Hach 2100P	EPA 180.1	6.6	15.0		12.7					
Appearance		-~	dea	dear		12.7 Clay					
	,			s are duplicate valu		2					
Depth to Wa		14		Sample Method:		<u>-ump</u>					
Meters Calib	rated: <u>Ye</u>	s_Dedica	ted Sam	ple Equipment: _	Yes						
Notes/Weath	ner:	····									
		* 4*									
Sampling Personnel: WAY WAY											
Sampling Pe	rsonnel S	ignature:_		way way							



Site Location	n: NRG D	unkirk Lan	dfill Pha	<u>se i Well</u> Pro	ect No	.: <u>ET-1066</u>	<u>3</u>	
Sample Poir	nt I.D.:	BR-2		ate:	5/12/	20		
Purge Information Purge Method: Bailer, Peristaltic Pump								
Depth to Bottom of Well: 35.99 ft 2" well = 0.17 gallons per foot								
Depth to Water Surface: 10.42 ft								
Depth of Water Column: 25,57 ft Elevation of Casing: 625.43								
Volume of Standing Water in Well: 4.35 gallons								
Start of Purg	e – Time:	/	11:10	an				
End of Purge	e – Time:		1218					
Total Volume	e Purged:		4.5		Vel l Ρι	urged Dry:	Yes	No
Parameters	Meter	Method	Initial	Accumulated Vo	lume Pu	urged (gallor	ns)	Sample
			Sample	4.0				5/13/20
Time			11:10	11:18	•			1-15pm
рH	Oakton	SM 18-20						']
Spec.	pH 300 Oakton	4500HB EPA	7.76	7-53	-			7-52
Conductance	CON 6+	120.1	1127	63	3			1125
Temperature	emi 550	SM 18-20	5/		,			I
Eh	ORP	2550B ASTM		5/				51
	tester	D1498	-24	-34				-91
Turbidity	Hach 2100P	EPA 180.1	760	4.41				13-8
Appearance			Clear	Yer				Clear
NYSDOH ELAP No. 10475, Values in parenthesis are duplicate values Depth to Water: 25,/6 ft. Sample Method: Bailer Peristaltic Pump Meters Calibrated: Yes Dedicated Sample Equipment: Yes Notes/Weather: Dup								
Sampling Personnel: David Harty								
Sampling Personnel Signature:								
				- 70			_	



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	I: NRG DI	unkirk Lan	atili Phas	se i vveli Project N	0.: <u>E1-1000</u>	
Sample Poin	t I.D.:	FA-10)-DG	Date:_	5/12/20	
Purge Inform	mation		Purge N	//ethod: <u>Bailer, Peri</u>	staltic Pump	
Depth to Bot	tom of We	:II: <u>16.56</u>	ft	2well = 0.17	gallons per foot	
Depth to Wa	ter Surfac	e: 6.58	_ ft			
Depth of Wa	ter Colum	n: 10,28	<u> </u>			
Volume of St	tanding W	ater in We	- II:	7 ⁹ gallons		
Start of Purg	e – Time:	م د .	3:300	m		
End of Purge			158			
Total Volume		,	1.0	gallons Well l	Purged Dry: Yes) No
Parameters	Meter	Method	Initial	Accumulated Volume	Purged (gallons)	Sample
			Sample	2-5		5/13/20
Time			3:29	3.35		1:500
pН	Oakton pH 300	SM 18-20 4500HB	7.25	7.25		7,43
Spec.	Oakton	EPA	•			
Conductance	CON 5	120.1	1930	1960		1394
Temperature	Oakton CON 5	SM 18-20 2550B	49	50		5/
Eh	ORP	ASTM	-61	-69		
Turbidity	tester Hach	D1498 EPA	61	-61		-82
	2100P	180.1	201	203		15.8
Appearance			Reddsh	Clear		Clear
NYSDOH ELAF	No. 10475,	, Values in p		are duplicate values		
Depth to Wat	ter: <u> </u>	50	_ ft. S	Sample Method: <u>Bai</u>	ller Peristaltic Pi	amı
Meters Calibi	rated: Yes	<u>s</u> Dedicat	ed Samp	ole Equipment: Yes		
Notes/Weath	er:			***************************************	· · · · · · · · · · · · · · · · · · ·	
Sampling Pe	rsonnel: _	Dav	d H	arty		
Sampling Per	rsonnel Si	gnature:	LV.	My		



Experience is the solution

314 North Pearl Street ◆ Albany, New York 12207 (800) 848-4983 ◆ (518) 434-4546 ◆ Fax (518) 434-0891

Work Order No: 200514014

ELAP#: 10709

May 26, 2020

Kathy Wager Frontier Technical Associates 8675 Main Street Williamsville, NY 14221

TEL: (716) 634-2293

RE: Plant ND GW

CCR

Dear Kathy Wager:

Adirondack Environmental Services, Inc received 11 samples on 5/14/2020 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Christopher Hess

QA Manager

Old De

CASE NARRATIVE

CLIENT:

Frontier Technical Associates

Date: 26-May-20

Project:

Plant ND GW

Lab Order:

200514014

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit **DF: Dilution factor**

Qualifiers: ND: Not Detected at reporting limit

C: CCV below acceptable Limits

J: Analyte detected below quantitation limit

C+: CCV above acceptable Limits

B: Analyte detected in Blank

S: LCS Spike recovery is below acceptable limits

X: Exceeds maximum contamination limit

S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded

Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits

T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits

E: Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Client Sample ID: BR-6-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-001

Matrix: GROUNDWATER

Date: 26-May-20

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 (Pre					Analyst: KH
Lithium	ND	0.050	mg/L	1	5/22/2020 1:44:00 PM
ICP DISSOLVED META L- (Pre					Analyst: KH
Lithium, Dissolved	ND	0.050	mg/L	1	5/22/2020 3:50:00 PM

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Client Sample ID: BR-12-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-002

Matrix: GROUNDWATER

Date: 26-May-20

Analyses	R	Result	RL Qua	l Units	DF	Date Analyzed
ICP METALS - EPA 20	0.7 REV 4.4 Prep: - 5/15/2020)				Analyst: KH
Lithium		ND	0.050	mg/L	1	5/22/2020 1:48:00 PM
· · · · · · · · · · · · · · · · · · ·	A L- EPA 200.7 REV 4. Prep: - 5/15/2020	4				Analyst: KH
Lithium, Dissolved		ND	0.050	mg/L	1	5/22/2020 4:01:00 PM

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Client Sample ID: BR-13-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-003

Matrix: GROUNDWATER

Analyses]	Result	RL Qual	Units	DF	Date Analyzed
ICP METALS - EPA	200.7 REV 4.4 (Prep: - 5/15/2020)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Analyst: KH
Lithium		ND	0.050	mg/L	1	5/22/2020 1:52:00 PM
ICP DISSOLVED M	ETA L- EPA 200.7 REV 4 (Prep: - 5/15/2020).4				Analyst: KH
Lithium, Dissolved		ND	0.050	mg/L	1	5/22/2020 4:05:00 PM

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Date: 26-May-20

Client Sample ID: BR-15-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-004

Matrix: GROUNDWATER

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
ICP METALS - EPA 200.7 (Pre					Analyst: KH
Lithium	ND	0.050	mg/L	1	5/22/2020 2:04:00 PM
ICP DISSOLVED META L- (Pre					Analyst: KH
Lithium, Dissolved	ND	0.050	mg/L	1	5/22/2020 4:08:00 PM

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Date: 26-May-20

Client Sample ID: BR-20-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-005

Matrix: GROUNDWATER

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
ICP METALS - EPA 200.7					Analyst: KH
Lithium	0.208	0.050	mg/L	1	5/22/2020 2:38:00 PM
ICP DISSOLVED META L (Pro					Analyst: KH
Lithium, Dissolved	0.211	0.050	mg/L	1	5/22/2020 4:12:00 PM

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Client Sample ID: OB-5-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-006

Matrix: GROUNDWATER

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV (Prep:	4.4 - 5/15/2020)				Analyst: KH
Lithium	9.94	0.050	mg/L	1	5/22/2020 2:50:00 PM
ICP DISSOLVED META L- EPA (Prep:	200.7 REV 4.4 - 5/15/2020)				Analyst: KH
Lithium, Dissolved	10.1	0.050	mg/L	1	5/22/2020 4:16:00 PM

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Date: 26-May-20

Client Sample ID: OB-7-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-007

Matrix: GROUNDWATER

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
ICP METALS - EPA 200.7 RE (Prep:	V 4.4 - 5/15/2020)				Analyst: KH
Lithium	ND	0.050	mg/L	1	5/22/2020 2:55:00 PM
CP DISSOLVED META L- EF (Prep:	PA 200.7 REV 4.4 - 5/15/2020)				Analyst: KH
Lithium, Dissolved	ND	0.050	mg/L	1	5/22/2020 4:20:00 PM

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Date: 26-May-20

Client Sample ID: OB-11-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-008

Matrix: GROUNDWATER

Analyses		Result	RL Qua	l Units	DF	Date Analyzed
ICP METALS - EPA	200.7 REV 4.4 (Prep: - 5/15/2020)				Analyst: KH
Lithium		ND	0.050	mg/L	1	5/22/2020 3:00:00 PM
ICP DISSOLVED ME	TA L- EPA 200.7 REV 4 (Prep: - 5/15/2020	.4				Analyst: KH
Lithium, Dissolved		ND	0.050	mg/L	1	5/22/2020 4:33:00 PM

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Client Sample ID: OB-19-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-009 Matrix: GROUNDWATER

Analyses	R	Result	RL Q	ıal Units	DF	Date Analyzed
ICP METALS - EPA	200.7 REV 4.4 (Prep: - 5/15/2020)			, , , , , , , , , , , , , , , , , , , ,	Analyst: KH
Lithium		ND	0.050	mg/L	1	5/22/2020 3:04:00 PM
ICP DISSOLVED M	ETA L- EPA 200.7 REV 4. (Prep: - 5/15/2020	.4				Analyst: KH
Lithium, Dissolved		ND	0.050	mg/L	1	5/22/2020 4:36:00 PM

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Client Sample ID: OB-20-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-010

Matrix: GROUNDWATER

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV (Prep:	4.4 - 5/15/2020)				Analyst: KH
Lithium	0.095	0.050	mg/L	1	5/22/2020 3:09:00 PM
ICP DISSOLVED META L- EPA (Prep:	200.7 REV 4.4 - 5/15/2020)				Analyst: KH
Lithium, Dissolved	0.060	0.050	mg/L	1	5/22/2020 4:40:00 PM

CLIENT:

Frontier Technical Associates

Work Order:

200514014

Reference:

Plant ND GW / CCR

PO#:

Client Sample ID: FA-10-DG

Collection Date: 5/13/2020

Lab Sample ID: 200514014-011

Matrix: GROUNDWATER

Analyses	Result	RL Q	ıal Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV (Prep:	/ 4.4 - 5/15/2020)				Analyst: KH
Lithium	0.336	0.050	mg/L	1	5/22/2020 3:19:00 PM
ICP DISSOLVED META L- EPA (Prep:	A 200.7 REV 4.4 - 5/15/2020)				Analyst: KH
Lithium, Dissolved	0.313	0.050	mg/L	1	5/22/2020 4:43:00 PM



314 North Pearl Street Albany, NY 12207

518-434-4546 / FAX: 518-434-0891

CHAIN OF CUSTODY RECORD

200	\mathcal{L}	14	<u>U</u>	14
COC Reference	:			` 1

	A full service ar	alytical resea	rch laboi	ator	y offeri	ng solutio	ons to	environ	mental	concerns		00.000 00.000 00.000 00.000
Client Nar	me: Frontier Technical Associates,	Address: Inc.	KANDE SERVESTA SAS	o jega jemeski	8675	Main :	Stre	et, Wil	liamsv	ille, NY 14	221	
Send Rep	oort to: Kathy Wager	Project Na	me (Loc	atio	n):		management and	Sample	ers Nar	ne:		***************************************
•	Katny Wager					R		1 2	Ave	Harry	11 oth	4 la lanet
Client Pho	one #: 716-634-2293	Client PO	PINT UD LF CCR Solient PO#:					Sample			J KAY !!!	7 10 1
Client Em	ail: kathy.wager@frontiertechr	1						,	Va	the la	Jaga	
AES			Time	 8	T				1_	1) 00	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	********************************
Sample Number	Client Sample Identification & Location	Date A=am Sampled P=pm					ype G	# of Cont's	1	į.		8
Oui	BR- U-DG	5/13/28	1251	/A P	GU	J	X	2	2	78	D L	1
004	BR-12-DG		1234		Commerce and							n de menonierannoù en en en en en en en en en en en en en
JO 3'	BR-13-56		1260						<u> </u>			
204	BR-15-DG	CONTRACTOR OF THE PROPERTY OF	1:40	P						and to the state of the state o		
2051	BR-20-26-		1:15	P			Ц	 		#D (may page and a second property page 2000		
SUC	0B-5-DG		10:51	A P								
\mathcal{I}	03-7-26		11:5	8								
13 CC	0B-11-DG-	<u> </u>	11:3	A O			Ц				NAMES OF THE PERSON OF THE PER	1000 St. 64 8000CSCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC
229	03-19-50-		12:3	F _P	<u> </u>		<u> </u>	1/_	<u> </u>		•	
0/0	03-20-16-	IV	12:5		W		V	IA	17			
011	FA-10-06	1	1:50		1		A	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	4	u	•	
	nt. Which him to enhance the supportant prices are proposable and if it is not be a still individual which is the consequences are			A P						****	AND AND THE PROPERTY OF THE PARTY OF THE PAR	
	A COMPAN A MANAGER OF STRUCKER AND AND AND AND AND AND AND AND AND AND	augustatatatatatatatatatatatatatatatatatata		A P		MATERIAL DE PARTA DA	ļ			DOMESTICAL CONTROL OF THE PROPERTY OF THE PROP	**************************************	NACOTE, SATO MANNES PARA PARA CONTROLO SISTEMBRA
	NETONONO SE O SE MONOMES LE SE ESPANSO NO ROSE DE LA CONTROL DE LA CONTR	y juurey a ra monneco esculución.		A P							79.39.9 A. W. FREE PROPERTY ST. SEA. THE	
				A P								
	nt Arrived Via:			Sp	ecial l	nstruct	ions	/Rema	rks:	C. Iteres.		
	UPS Client AES Other:		**********	17	Diss	olved	L	He	ld t	L, ITEMEN,		
	und Time Requested:											
11 Day	•	Standard) _									
	mples received after 3:30pm are conside	red next busin	ess day.	ļ	-11	(01	_1	. 1	MOTORNIA DE LA FERENCE	~~~	IDoto.	Time
Helinquish	ed by/(Signature)			Received by: (Signature) COLOR			SIBIN	4:00				
Relinquish	ed by: (Signature)	NAMES OF THE PROPERTY OF THE P	Andrew Contract of Street Section 2015	Red		y: (Sign	ature	9)	**************************************	THE STREET STREET, STR	Date	Time
Relinguish	ed by: (Signature)	tead in the hand and the second of the secon	ANGERICA PERSONALA STATE	Rer	eived f	or Labor	ator	v bv:	het soor alle en sooi et e		Date	Time
	, , , , , , , , , , , , , , , , , , , ,				<u>Ónç</u>						5/14/20	10070
	Sample Temperature	ture			perly	Preser	vec	I:W/	N		ed Within	
_	bient) ~ Chilled ~ Chilling E	Begun	0=None		1-0		√H₄C			1	mes: 😗 /	N
Notes:	*****		1=H ₂ S0 2=HNO			6= <i>F</i> 7=F		rbic Acid		Notes:		
	1300		3=HCl					/NaOH p	H>9			
70175011204000100000000000		nima i incorrere con acquira e en que a que	4=Na ₂ S					nH>10		· · · · · · · · · · · · · · · · · · ·		
near commentation and accomment	Custody Seal Intact: (V)	****	e se constitue de la constitue	*****	etrotomoto escentrator	10=	Othe	9 -		2) (3) ; = == :		
	Bottles AES: 🏈 / N							r		Demo		

Appendix F

2nd Quarter 2020 CCR Assessment Monitoring Report (May 2020)



ATTORNEY CLIENT PRIVILEGED

QUARTERLY SAMPLING AND ANALYSIS REPORT FOR CCR PARAMETERS DUNKIRK FLYASH LANDFILL (Second Quarter 2020)

FTA Report CCR-D-20-02 DUN LF CCR 2 QTR 2020

June 12, 2020

Prepared for:

Mr. Gregory M. Brown, Esq. BROWN DUKE & FOGEL, P.C. 100 Madison Street, AXA Tower 1, Ste. 1820 Syracuse, New York 13202

Prepared by:

Frontier Technical Associates, Inc. 8675 Main Street
Williamsville, New York 14221

The analytical test results reported herein were performed to professional standards of the NYSDOH ELAP program. The analytical data are for management use only, and except for regulatory compliance reporting, are not intended for any other purpose.



TABLE OF CONTENTS

<u>Item</u>	<u>Pag</u>
Introduction	1
Scope	1
Data Quality Objectives	4
Site History	4
Monitoring Locations	5
Groundwater Elevations	5
Sampling Personnel	5
Sampling Equipment and Containers	5
Monitoring Point Assessment	7
Well Purging	7
Laboratories	7
Field Information	7
Analytical Testing	7
QA/QC	9
Results	9
Summary	9

Appendix

Graphical Representation of Groundwater Elevations Monitoring Point Assessment Forms Monitoring Field Forms Laboratory Data Chain-of-Custody Records



QUARTERLY SAMPLING AND ANALYSIS REPORT DUNKIRK FLYASH LANDFILL (Second Quarter 2020)

INTRODUCTION

NRG Dunkirk Power, LLC owns and operates the Dunkirk Solid Waste Management Facility (Dunkirk Flyash Landfill) for their exclusive use in the Town of Pomfret, New York. Wastes received at the landfill were limited to flyash, bottom ash, pyrites and wastewater treatment sludges from NRG Dunkirk fossil fuel combustion facilities.

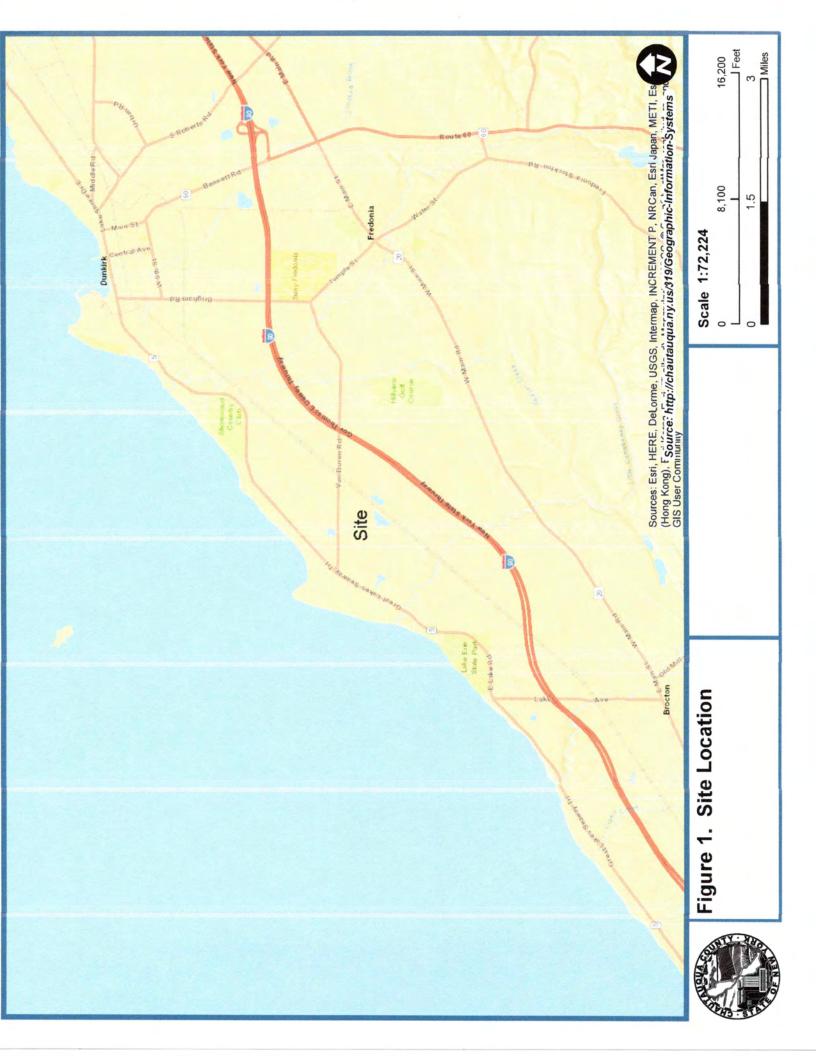
The landfill is located on a 339.6 acre property (9 parcels) of land at the location shown on Figure 1. Figure 2 is an aerial photograph of the site. The landfill is on the south side of Van Buren Road and is surrounded by railroads, industrial, farmland and vacant properties. Landfill activities in the southern portion of the site as shown are complete as these cells are closed (Phase 1). The active cells (Phase 2) are in the north side of the site.

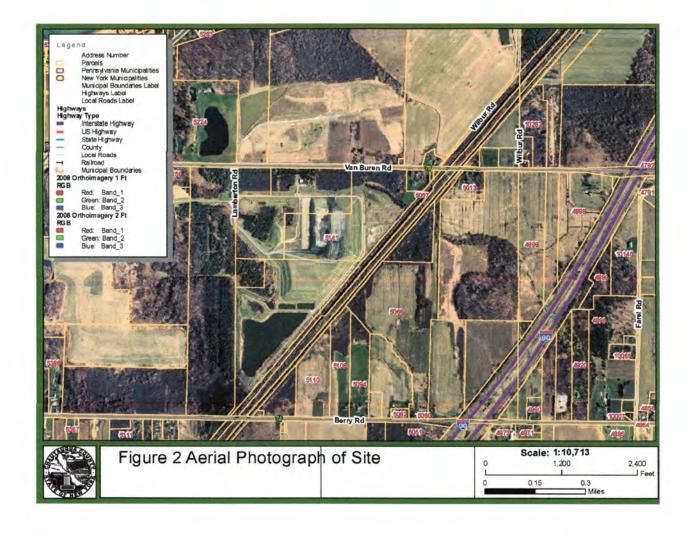
In response to the requirements of the EPA Coal Combustion Residue requirements, Frontier Technical Associates, Inc. has completed groundwater monitoring report for the Second Quarter of 2020 for the Dunkirk Landfill. This analytical data report provides the information for reporting to the USEPA and NYSDEC. The monitoring included five monitoring wells.

SCOPE

This report presents the sampling and analytical results for the quarterly monitoring event at the NRG Dunkirk Landfill. Groundwater sampling and field measurements were performed by Frontier Technical Associates, Inc. and laboratory measurements were performed by Adirondack Environmental Services, Inc. Adirondack Environmental Services is a NYSDOH ELAP certified laboratory (ELAP No. 10709). Pace Analytical performed the radium testing and they are a NYSDOH ELAP certified laboratory (ELAP No. 10888). This report includes the following elements:

- Figures showing the location of the sampling points.
- Field data sheets showing the purging and sampling information and field measurements for pH, specific conductance, temperature and turbidity.





- Analytical methods and laboratories used.
- Data summary tables.
- Quality control and quality assurance data.
- Chain-of-custody records.
- Monitoring Point Assessment Forms

DATA QUALITY OBJECTIVES

The primary data quality objectives of the monitoring program are to obtain representative samples and accurate analytical results of the groundwater at the Dunkirk Landfill. The results are to be used in the assessment of the groundwater.

SITE HISTORY

NRG Dunkirk has operated this facility since 1999 and prior to that the site was owned and operated by Niagara Mohawk from 1988 to 1999. Over its operating history the facility has been developed in phases. Phase I of the facility located in the southern portion of the site consists of two cells. The two cells A & B, approximately 18.8 acres, have been filled to capacity and are closed and capped. Phase I is monitored by three (3) wells, OB-19-DG, OB-20-DG, and BR-20-DG, all located in a cluster northwest of Phase I.

Phase II is located immediately north of the Phase I development and consists of approximately 35 acres which is divided into three (3) cells. Phase II Cell A consists of approximately 11.4 acres and was constructed in 1993. This cell is nearing its capacity and was partially capped in 2001 and 2008. Phase II Cell B-1 was constructed in 2004 and Phase II Cell B-2 was constructed in 2010. The total acreage of Cell B is 11.6 acres and it is adjacent to and west of Phase II Cell A. Leachate from both Phase I and Phase II development drains to the sedimentation basins on the south side of the site.

MONITORING LOCATIONS

The locations of the monitoring points are shown on Figure 3. These wells are also used for monitoring under the NYSDEC Part 360 requirements. The NYSDEC monitoring includes additional soil profile wells, leachate collection monitoring, leachate monitoring and surface water

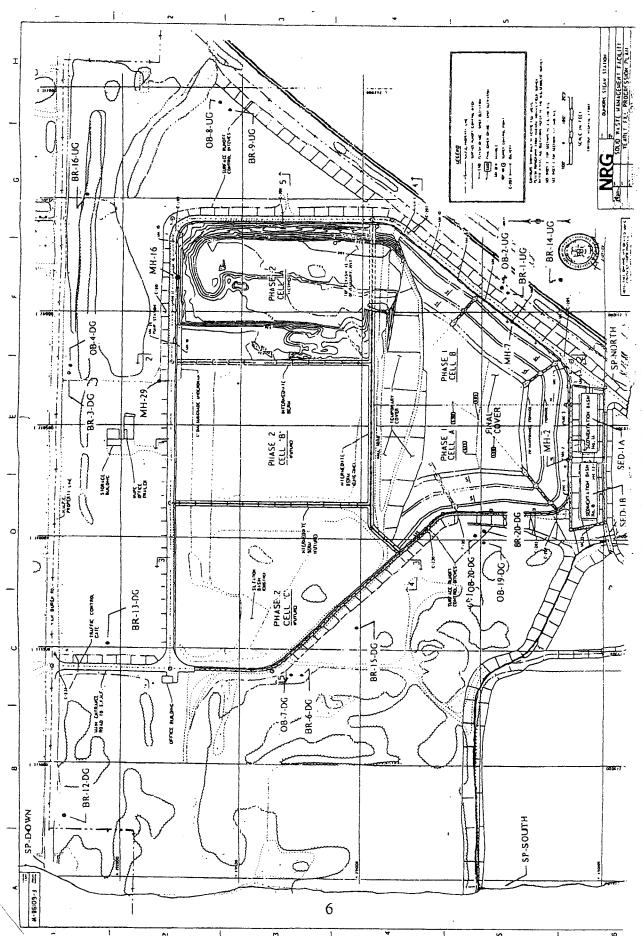


Figure 3- Monitoring Locations

monitoring. This additional data is reported to the NYSDEC under the provision of the Landfill Permit. The groundwater monitoring is sampled at the following locations:

BR-14-UG (up-gradient well of Phase 1 and Phase 2) – Bedrock Well

Downgradient Wells

BR-20-DG	Bedrock Well
BR-3-DG	Bedrock Well
BR-12-DG	Bedrock Well
BR-13-DG	Bedrock Well

GROUNDWATER ELEVATIONS

Groundwater elevations are measured quarterly in each of the wells. Table 1 is a summary of the groundwater elevations this quarter. Well BR-14-UG is the up-gradient well. Graphical representation of historical groundwater elevations can be found in the Appendix.

SAMPLING PERSONNEL

Field Crew – Kathy Wager and David Harty Frontier Technical Associates, Inc.

SAMPLING EQUIPMENT AND CONTAINERS

The sampling equipment is constructed of inert materials. Dedicated tubing is used to obtain the samples. The tubing used is polyethylene food grade tubing. The tubing is stored in the well casing.

The sample containers are polyethylene or glass as required by the analytical protocols and are prepared by the laboratory performing the analysis. The samples are preserved as required by the analytical methods immediately in the field. The samples collected are placed under chain-of-custody and a chain-of-custody record is shipped with the samples. The sample date, time of collection, analytical parameters to be tested, sampler identification and times of possession are marked on the chain-of-custody record.

TABLE 1
GROUNDWATER ELEVATION DATA
NRG DUNKIRK LANDFILL CCR
SECOND QUARTER 2020

MONITORING WELL	DATE	CASING ELEVATION (feet)	DEPTH TO WATER (feet)	WATER ELEVATION (feet)	WELL LENGTH (feet)	HEIGHT OF WATER COLUMN (feet)
BR-14-UG	5/13/2020	629.01	4.64	624.37	26.25	21.61
BR-3-DG	5/12/2020	618.20	4.25	613.95	18.75	14.50
BR-12-DG	5/12/2020	600.62	5.05	595.57	17.37	12.32
BR-13-DG	5/12/2020	607.41	3.94	603.47	19.21	15.27
BR-20-DG	5/12/2020	625.74	10.42	615.32	35.99	25.57

MONITORING POINT ASSESSMENT

Prior to purging and sampling at each of the wells, a physical assessment of the well is made to determine if the well is suitable. These monitoring point assessment forms are presented in the Appendix. All wells were determined to be in good condition.

WELL PURGING

The wells were purged with a peristaltic or submersible pump prior to sampling. The wells were purged to remove three standing well volumes of water or to dryness. The well purging information is recorded on the Field Observations Forms in the Appendix.

LABORATORIES

In accordance with the requirements of this project and the NYSDEC, Adirondack Environmental Services, Inc., (ELAP No. 10709) a NYSDOH ELAP certified laboratory, was contracted to perform the analyses for the samples collected. The EPA and Standard Methods analytical methods used are present in the laboratory report. The radium 226 and radium 228 are determined by Pace Analytical Services, Greensburg PA (ELAP No. 10888) under contract to Frontier Technical Associates.

FIELD INFORMATION

Field analyses were completed for pH, specific conductance, Eh, temperature and turbidity for each of the samples. These field data are summarized on Table 2. In general, the field parameters, pH, specific conductance, Eh, temperature and turbidity were typical of previous sampling episodes.

ANALYTICAL TESTING

The analytical parameters, results and test methods used are summarized in the Appendix. The appendices provide the following information:

- Laboratory Data Sheets
- QA/QC Documentation
- Field Data Sheets
- Chain-of-Custody Records

The complete data laboratory report for this sampling event is attached.

QA/QC

The elements of the QA/QC program for this round of sampling include the following:

- Case Narrative (See Appendix)
- Blind Duplicate (Well BR-20-DG)
- Method Blanks
- Matrix Spike/Matrix Spike Duplicate (Well BR-14-UG)

The impact these quality control samples had is discussed in the Case Narrative (See Appendix).

RESULTS

The analytical results are summarized in Table 2. The well samples were analyzed for the CCR Appendix IV parameters. The QA/QC on the data is acceptable. The data is to be evaluated after all the data under this program is gathered.

SUMMARY

The well monitoring was completed in accordance with the agreed on scope of work. The data will be summarized further for use under the CCR requirements.



TABLE 2 SUMMARY OF ANALYSIS OF CCR PARAMETERS NRG Dunkirk Landfill **SECOND QUARTER 2020 - May 13, 2020** CONCENTRATION (mg/l) unless noted Field BR-14-UG BR-3-DG BR-12-DG BR-13-DG BR-20-DG Dup BR-20-DG 607.41 629.01 625.74 Casing Elevation (feet) 618.20 600.62 3.94 Depth to Water (feet) 4.64 4.25 5.05 10.42 * Water Elevation (feet) 624.37 613.95 595.57 603.47 615.32 19.21 Well Length (feet) 26.25 18.75 17.37 35.99 Height of Water Column (feet) 15.27 25.57 21.61 14.5 12.32 ** 7.38 7.52 7.05 pH (SU) 7.21 7.52 ** Specific Conductance (umhos/cm) 516 580 982 633 1125 Temp (F) 56 52 52 54 ** 51 Turbidity (NTU) ** 44.9 24.4 13.5 12.7 13.8 Eh (MV) -100 -108 ** -144 -89 -91 Chloride 2.83 21.5 183 7.91 18.1 17.5 Fluoride < 0.20 < 0.20 < 0.20 < 0.20 0.31 0.32 Sulfate 67.4 230 194 159 < 4.00 < 4.00 TDS 420 625 815 545 635 595 Antimony < 0.0004 < 0.0004 < 0.0004 < 0.0004 0.0005 0.0005 Barium 0.175 0.032 0.038 0.077 1.95 2.00 Boron 0.164 0.097 0.079 0.153 1.47 1.50 Calcium 91.7 140 179 125 25.8 26.3 Lithium < 0.050 < 0.050 < 0.050 < 0.050 0.266 0.292 Mercury, ng/l 0.8 N 0.9 < 0.5 < 0.5 2.4 2.4 Radium 226, pCi/l 0.998 0.657 0.143 0.607 0.941 0.203

0.237

0.324

0.573

0.128

1.02

0.229

Radium 228, pCi/l

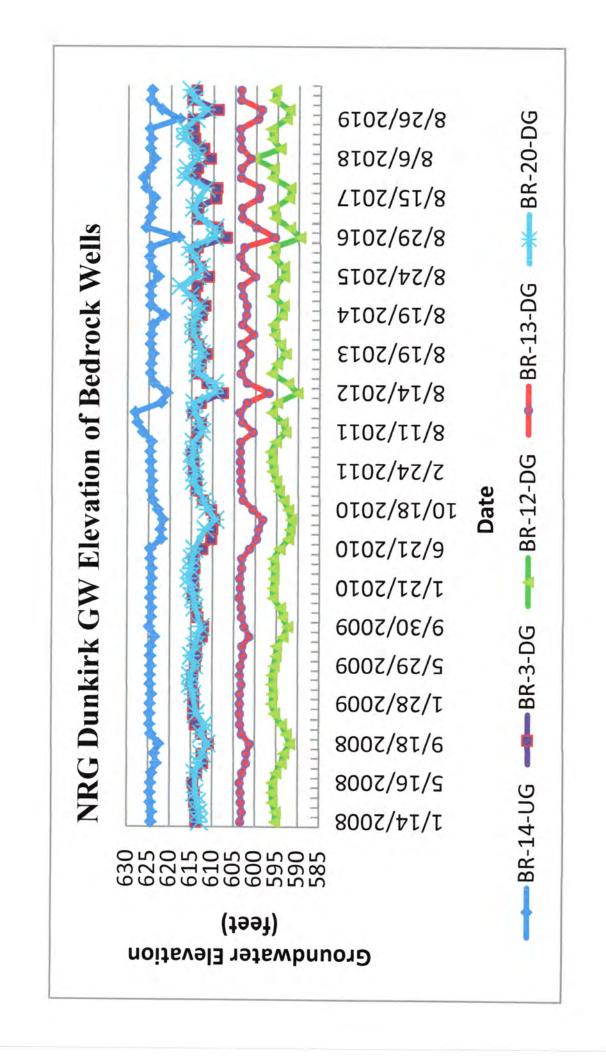
N: Matrix spike was below acceptable limits.

^{*:} See parent sample



APPENDIX

Graphical Representation of Groundwater Elevations
Well Monitoring Field Forms
Laboratory Reports
Chain-of-Custody Records





8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Sample Point I.D.: BR-3-DG Date: \$\frac{112}{100} \] Purge Information Purge Method: Bailer Peristaltic Pump	Site Location: NRG Dunkirk Landfill Phase II Well Project No.: ET-1066										
Depth to Bottom of Well: 18.75 ft Depth to Water Surface: 4.35 ft Depth of Water Column: 18.5 ft Volume of Standing Water in Well: 9.6 gallons Start of Purge – Time: 9.37 End of Purge – Time: 16.46 Total Volume Purged: 28.5 gallons Well Purged Dry: Yes No Parameters Meter Method Initial Sample 9.6 [9.2 38.6 5/13/26] Time 9.37 9.49 16.11 16.46 17.0 PH Oakton SM 18.20 PH 300 4500HB 7.32 7.36 7.39 7.42 7.52 Spec. Oakton EPA Conductance COM 5 120.1 50.1 120.1 50.	Sample Poin	Sample Point I.D.: BR-3-DG Date: 5/12 Co									
Depth to Water Surface: 4.75 ft 4" well = 0.66 gallons per foot Depth of Water Column: 45 ft Elevation of Casing: 618.15 Volume of Standing Water in Well: 9, 6 gallons Start of Purge - Time: 9.7	Purge Inform	mation		Purge N	∕lethod	: <u>Bailer /</u> F	Peristalt	ic Pum	2		
Depth of Water Column:						•					
Volume of Standing Water in Well:					4	4" well = 0).66 ga	llons pe	r foot		
Start of Purge – Time: End of Purge – Time: Total Volume Purged: District Feat	Depth of Wa	ter Columi	n: <u>14.5</u>			Elevation	of Casi	ng: <u>'618</u>	<u>. 15</u>		
End of Purge – Time: Total Volume Purged: 28.8 gallons Well Purged Dry: Yes No	Volume of St	tanding W	ater in We	II: <u> </u>	φ	gallons					
Total Volume Purged	Start of Purg	e – Time:									
Parameters Meter Method Initial Sample Accumulated Volume Purged (gallons) Sample G. (p. 19.2	End of Purge	e – Time:									
Time	Total Volume	e Purged:		38-8	(gallons W	ell Purç	ged Dry	Yes	(No)	-
Time	Parameters	Meter	Method	1	Accum	nulated Volu	ıme Purg	ged (gallo	ns)	1	
PH				Sample		9.6	19.2	28.8		5/13/20	
PH 300	Time			9:27		9:48	10:11	10.46		1:10	
Spec. Oakton COM 5 120.1 by 650 669 667 588 Temperature Oakton COM 5 2550B 9.5 /0.6 13.8 15.8 11.7 Eh ORP ASTM tester D1498 -11.2 -87 -141 -164 -11.5 Turbidity Hach EPA 2100P 180.1 31.5 97.6 56.8 11.2 24.9 Appearance Sh Cloud St. J.	рН	l .		7.32		7.36	7.39	7.42		7.52	#
Temperature Oakton COM 5 2550B 9.5 10 13.8 15.8 11.7 COM 5 2550B 9.5 10 13.8 15.8 11.7 COM 5 2550B 9.5 10 13.8 15.8 11.7 COM 5 2550B 11.2 11.7 COM 5 10.498 11.2 11.7 COM 5 10.498 11.2 11.7 COM 5 10.8 11.2 11.2 11.2 11.2 11.2 11.2 11.2 11	1 '	1				630	609	607		580	
Turbidity Hach EPA 2100P 180.1 31.5 97.6 56.8 112 34.4 Appearance Sli Cloud Chim Chim Chim Chim Chim Chim Chim Chim	Temperature	Oakton	SM 18-20							11.7	Rey
Appearance SI Cloud SI SI SI SI SI SI SI SI SI SI SI SI SI		ORP	ASTM	-112				-141		-118	
Appearance NYSDOH ELAP No. 10475, Values in parenthesis are duplicate values Depth to Water: Neters Calibrated: Yes Dedicated Sample Equipment: Yes Notes/Weather: Sampling Personnel: Mathy Way	Turbidity	Hach		31.5			50.8	,			
Depth to Water: 7.68 ft. Sample Method: Bailer Peristaltic Pump Meters Calibrated: Yes Dedicated Sample Equipment: Yes Notes/Weather: Sampling Personnel: 444 Way	Appearance			1 7.		deway	1	J. down			
Notes/Weather: Sampling Personnel: Wathy Way	NYSDOH ELAP No. 10475, Values in parenthesis are duplicate values Depth to Water: ft. Sample Method: Bailer Peristaltic Pump										
Sampling Personnel: KATHY WAST	Meters Calibrated: Yes_Dedicated Sample Equipment: Yes										
1/4 4	Notes/Weather:										
	1/4-1										



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location: NRG	Dunkirk Land	dfill Phas	e II Wel	I_Proje	ct No.:	ET-1066		
Sample Point I.D.:	BR-12	2-DG		Dat	te: ෮ /	12/20		
Purge Information		Purge N	/lethod:	<u>Bailer, F</u>	eristalt	ic Pump		
Depth to Bottom of V			2"	well = 0).17 gal	lons per foot		
Depth to Water Surf	ace: 5,05	_ ft						
Depth of Water Colu			El	evation	of Casi	ng: <u>'600.65</u>		
Volume of Standing		~	<u> </u> g	allons				
Start of Purge - Tim	e:	11:30						
End of Purge – Time	e:	11:47					_	
Total Volume Purge	d:	6.3	ga	allons W	ell Purg	ged Dry: Yes	No)	
Parameters Meter	Method	Initial	Accumu	lated Volu	ıme Purç	ged (gallons)	Sample	
		Sample		7.1	4.2	4.3	5/13/2	
Time		1432		11:37		11:47	12:35	
pH Oakto pH 30	1	7.17		7.18	7.18	7.76	7.05	
Spec. Oakto							982	
Conductance CON		758		755	762	756		(-)
Temperature Oakto		10.3		10.1	11.3	105	11.2	(50F)
CON		10,1	7	[0,]	11.7	160		
Eh ORP	Ì	-107		-131	-139	-137	-144	
tester Turbidity Hach		<u> </u>		')	 			
21006	1	3.36		3,05	1.41	2.36	13.5	
Appearance		dear		day	day	dear	Clean	
NYSDOH ELAP No. 10	475, Values in	parenthesi	s are dup	licate valu	ies		•	_
Depth to Water: 6.34 ft. Sample Method: Bailer Peristaltic Pump								
Meters Calibrated: Yes_Dedicated Sample Equipment: Yes_								
Notes/Weather:								
Sampling Personnel: KAthy Waxr								
Sampling Personnel Signature: Way								



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location: NRG Dunkirk Landfill Sed. Basin No. 2 Well Project No.: ET-1066							
Sample Point I.D.: BR-13-DG Date: 5/12/30							
Purge Infor	Purge Information Purge Method: Bailer, Peristaltic Pump						
Depth to Bot							
Depth to Wa	ter Surfac	e: 3.94	_ ft	4" well = 0.66 gallons per foot			
Depth of Wa	ter Colum	n: 15.2	<u>f</u> t .	Elevation of Casing: '607.42			
Volume of S	tanding W						
Start of Purg	e – Time:		13.92				
End of Purge	e – Time:				1		
Total Volume	e Purged:		19.5	gallons Well Purged Dry: Ye	s No		
Parameters	Meter	Method	Initial	Accumulated Volume Purged (gallons)	Sample		
			Sample	10	5/13/20		
Time			11:54	13:08	12:58		
рН	Oakton pH 300	SM 18-20 4500HB	7.36	7.33	7-21		
Spec. Conductance	Oakton CON 5	EPA 120.1	666	674	633		
Temperature	Oakton CON 5	SM 18-20 2550B	16.8	/0.1	12.2 (548		
Eh	ORP tester	ASTM D1498	-116	-135	-89		
Turbidity	Hach 2100P	EPA 180.1	مها، ما	15.0			
Appearance			dia	clean	12.7 Clay		
NYSDOH ELAP No. 10475, Values in parenthesis are duplicate values Depth to Water: ft. Sample Method: Bailer Peristaltic Pump							
Meters Calibrated: Yes Dedicated Sample Equipment: Yes							
Notes/Weather:							
Sampling Personnel: LATAN WASC							
Sampling Personnel Signature: Latty Ways							



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location: NRG Dunkirk Landfill Phase I & II Well Project No.: E1-1066								
	Sample Point I.D.: BR-14-UG Date: 5/13/20							
Purge Inform			Purge M	lethod: <u>Bailer, P</u> i	eristaltio Pu	<u>imp</u>)		
Depth to Bott								
Depth to Wat	er Surface	= 4.64	ft	4" well = 0				
Depth of Wat	er Column	1: 81.61		_	of Casing: <u>'6</u>	<u> 529.01</u>		
Volume of Sta	anding Wa	ater in Wel	1: <u>14.</u>	3 gallons				
Start of Purge	e – Time:	!	1.15					
End of Purge	- Time:		11145					
Total Volume	Purged:		27,5		ell Purged (No	1
Parameters	Meter	Method	Initial Sample	Accumulated Volu	me Purged (c	gallons)	Sample	
			Sample	14.3	285 W			
Time			11:15	11-31			12:03	
рН	Oakton pH 300	SM 18-20 4500HB	7.19	7.37			7.38(7	38
Spec.	Oakton	EPA	731	539			516	
Conductance	CON 5	120.1	121	331		1 6		\
Temperature	Oakton CON 5	SM 18-20 2550B	13.3	12.3		(30 F)	13-2(13	-21
Eh	ORP tester	ASTM D1498	-102	-106			-100	
Turbidity	Hach 2100P	EPA 180.1	3,90	4.28			44.9	
Appearance			clear	dear			31. Clausy	
NYSDOH ELAP No. 10475, Values in parenthesis are duplicate values Denth to Water: 10,57 ft Sample Method: Bailer Peristaltic Hump								
Depth to water.								
Meters Calibrated: Yes Dedicated Sample Equipment: Yes								
Notes/Weather: Sumy Mis 405								
nis ms b								
Sampling Pe			ryhy,	WAXI				
Sampling Personnel Signature: Latty Ways								

8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location: NRG Dunkirk Landfill Phase I Well Project No.: E1-1066									
Sample Poin	t I.D.:	OB-2	0-DG		_ Dat	:e:	5/12/0	20	
Purge Inform	mation		Purge N	Metho	d: <u>Bailer,(</u> P	<u>erista</u>	ltic Pum	9	
Depth to Bot	tom of We	ell: <u>17.61</u>	_ ft		2" well = 0	.17 ga	illons pe	r foot	
Depth to Wa	ter Surfac	e: <u>3.02</u>	<u>}</u> ft						
Depth of Wa	ter Colum	n: 14,59	ft		Elevation	of Cas	sing: <u>'625</u>	.35	
Volume of St	tanding W	ater in We	II: <u>2</u>	5	gallons				
Start of Purg			1:429		- •				
End of Purge	e – Time:		:346		-				
Total Volume			6,5		gallons W	ell Pur	ged Dry	Yes	No No
Parameters	Meter	Method	Initial	Accui	mulated Volu	me Pur	ged (gallo	ns)	Sample
			Sample		2.5		4.0	6.5	5/13/20
Time			10,42		10:52		11:04	11:34	,
рН	Oakton pH 300	SM 18-20 4500HB	6.82		7.02		7.06		_
Spec. Conductance	Oakton COM 6=	EPA 120.1	1393		1322		1308	1/08	945
Temperature	emi 550	SM 18-20 2550B	49		50		50	50	50
Eh	ORP tester	ASTM D1498	-6		5		1	-34	-94
Turbidity	Hach 2100P	EPA 180.1	7200	*****	18.1		9,97	9-68	
Appearance			Rack Flow		Clear				Clear
NYSDOH ELAP No. 10475, Values in parenthesis are duplicate values Depth to Water: 8.69 ft. Sample Method: Bailer Peristaltic Pump									
Meters Calibrated: Yes Dedicated Sample Equipment: Yes									
Notes/Weather:									
Sampling Personnel: David Hartz Sampling Personnel Signature: July My									



8675 Main Street, Williamsville, New York 14221 (716) 634-2293

MONITORING POINT ASSESSMENT FORM NRG – DUNKIRK LANDFILL WELLS

Monitoring Point: BR-3-DG	Date: 5/12/20
Inspectors Name (Print): Lathy ha Inspector's Company: Frontier Technical As Address: 8675 Main Street, Williamsville, No	ssociates, Inc. ew York 14221
Well Locked:	Yes No NA
Lock Functioning:	Yes No NA
Bailer and Rope OK:	Yes No NA
Tubing OK:	Yes No NA
Protective Casing OK:	Ves No NA
Concrete Pad in Good Condition:	Wes No NA
Heaving of Well or Casing:	Yes NA
Well Sand in Purge Water:	Yes NA NA
Well Constricted:	Yes (No NA
Debris in Well:	Yes NA NA
Insects in Well:	Yes 👀 NA Type:
Wind Blown Dust inside Protective Casing:	Yes (No) NA
Other Observations or Details on Condition	•
Push mathballs lusid u	vell CASING
Inspector's Signature: Lath Us	*************************************



8675 Main Street, Williamsville, New York 14221 (716) 634-2293

MONITORING POINT ASSESSMENT FORM NRG – DUNKIRK LANDFILL WELLS

Monitoring Point: BR-12-	Date: 5/12/20
Inspectors Name (Print): Inspector's Company: Frontier Te Address: 8675 Main Street, William	Athy Wash chnical Associates, Inc. nsville, New York 14221
Well Locked:	Yes No NA
Lock Functioning:	Yes No NA
Bailer and Rope OK:	Yes No (NA)
Tubing OK:	Yes No NA
Protective Casing OK:	(es) No NA
Concrete Pad in Good Conc	lition: Yes No NA
Heaving of Well or Casing:	Yes (No) NA
Well Sand in Purge Water:	Yes No NA
Well Constricted:	Yes No NA
Debris in Well:	Yes No NA
Insects in Well:	Yes No NA Type:
Wind Blown Dust inside Pr Casing:	Yes NA
Other Observations or Details on	
Fush mothballs in	sion well CASING.
Inspector's Signature:	ally Woges



8675 Main Street, Williamsville, New York 14221 (716) 634-2293

MONITORING POINT ASSESSMENT FORM NRG – DUNKIRK LANDFILL WELLS

Monitoring Point: BR-13-DG	Date: 5/12/20
Inspectors Name (Print):	sociates, Inc.
Well Locked:	(Yes) No NA
Lock Functioning:	Yes No NA
Bailer and Rope OK:	Yes No NA
Tubing OK:	Yes No NA
Protective Casing OK:	Ves No NA
Concrete Pad in Good Condition:	Ves) No NA
Heaving of Well or Casing:	Yes No NA
Well Sand in Purge Water:	Yes No NA
Well Constricted:	Yes NA NA
Debris in Well:	Yes Ng NA
Insects in Well:	Yes (No NA Type:
Wind Blown Dust inside Protective Casing:	Yes No NA
Other Observations or Details on Conditions	
Fresh morthbolls inside w	reil Casiua
Inspector's Signature: Lath Wa	~\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\



8675 Main Street, Williamsville, New York 14221 (716) 634-2293

MONITORING POINT ASSESSMENT FORM NRG – DUNKIRK LANDFILL WELLS

Monitoring Point: BR-14-UG	Date: 5/13/20
Inspectors Name (Print): HAHLY WA Inspector's Company: Frontier Technical Ass Address: 8675 Main Street, Williamsville, New	ociates, Inc.
Well Locked:	Yes No NA
Lock Functioning:	Ves No NA
Bailer and Rope OK:	Yes No NA
Tubing OK:	Yes No NA
Protective Casing OK:	Ves No NA
Concrete Pad in Good Condition:	Yes No NA
Heaving of Well or Casing:	Yes No NA
Well Sand in Purge Water:	Yes No NA
Well Constricted:	Yes No NA
Debris in Well:	Yes No NA
Insects in Well:	Yes No NA Type:
Wind Blown Dust inside Protective Casing:	Yes No NA
Other Observations or Details on Conditions	
Fresh mothballs inside	Well CASING
Inspector's Signature: Loth Wag	4



MONITORING POINT ASSESSMENT FORM NRG – DUNKIRK LANDFILL WELLS

Monitoring Point: 3R-20-DG	Date: <u>5/12/2</u> 0				
	Inspectors Name (Print): David Hay Inspector's Company: Frontier Technical Associates, Inc. Address: 8675 Main Street, Williamsville, New York 14221				
Well Locked:	Ves No NA				
Lock Functioning:	Yes No NA				
Bailer and Rope OK:	Yes No NA				
Tubing OK:	(es) No NA				
Protective Casing OK:	(es) No NA				
Concrete Pad in Good Condition:	Ves No NA				
Heaving of Well or Casing:	Yes NA				
Well Sand in Purge Water:	Yes 🔞 NA				
Well Constricted:	Yes No NA				
Debris in Well:	Yes No NA				
Insects in Well:	Yes NA Type:				
Wind Blown Dust inside Protective Casing:	Yes No NA				
Other Observations or Details on Conditions Identified Above:					
	1				
Inspector's Signature:					





June 09, 2020

David Harty Frontier Technical Associates 8675 Main Street Buffalo, NY 14221

RE: Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

Dear David Harty:

Enclosed are the analytical results for sample(s) received by the laboratory on May 15, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

• Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

rebeka.smith@pacelabs.com (631)694-3040

Rolling Smith

Project Manager

Rebeka K. Smith

Enclosures

cc: Kathy Wager, Frontier Technical Associates, Inc.



(631)694-3040



CERTIFICATIONS

Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

ANAB DOD-ELAP Rad Accreditation #: L2417

Alabama Certification #: 41590 Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA Colorado Certification #: PA01547 Connecticut Certification #: PH-0694

Delaware Certification EPA Region 4 DW Rad

Florida/TNI Certification #: E87683 Georgia Certification #: C040 Florida: Cert E871149 SEKS WET

Guam Certification Hawaii Certification Idaho Certification Illinois Certification Indiana Certification Iowa Certification #: 391

Kansas/TNI Certification #: E-10358 Kentucky Certification #: KY90133 KY WW Permit #: KY0098221 KY WW Permit #: KY0000221

Louisiana DHH/TNI Certification #: LA180012 Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: 2017020 Maryland Certification #: 308

Massachusetts Certification #: M-PA1457 Michigan/PADEP Certification #: 9991 Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1

New Hampshire/TNI Certification #: 297617 New Jersey/TNI Certification #: PA051 New Mexico Certification #: PA01457 New York/TNI Certification #: 10888 North Carolina Certification #: 42706 North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002-010 Pennsylvania/TNI Certification #: 65-00282 Puerto Rico Certification #: PA01457 Rhode Island Certification #: 65-00282

Texas/TNI Certification #: T104704188-17-3

South Dakota Certification
Tennessee Certification #: 02867

Ohio EPA Rad Approval: #41249

Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 9526
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C

Wisconsin Approve List for Rad Wyoming Certification #: 8TMS-L



SAMPLE ANALYTE COUNT

Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
70131260001	BR-14-UG	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
70131260002	BR-13-DG	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
70131260003	BR-12-DG	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
70131260004	BR-3-DG	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
70131260005	BR-20-DG	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
70131260006	DUP	EPA 903.1	MK1	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg



Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

Sample: BR-14-UG Lab ID: 70131260001 Collected: 05/13/20 12:03 Received: 05/15/20 10:10 Matrix: Water Site ID: Sample Type:

PWS: Method Act ± Unc (MDC) Carr Trac Units CAS No. **Parameters** Analyzed Qual Pace Analytical Services - Greensburg EPA 903.1 $0.998 \pm 0.636 \quad (0.799)$ Radium-226 pCi/L 06/08/20 14:37 13982-63-3 C:NA T:86% Pace Analytical Services - Greensburg 0.229 ± 0.415 (0.907) EPA 904.0 Radium-228 pCi/L 06/08/20 14:12 15262-20-1 C:77% T:77%



Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

Sample: BR-13-DG Lab ID: 70131260002 Collected: 05/13/20 12:50 Received: 05/15/20 10:10 Matrix: Water PWS: Site ID: Sample Type: Method Act ± Unc (MDC) Carr Trac Units CAS No. **Parameters** Analyzed Qual Pace Analytical Services - Greensburg EPA 903.1 $0.607 \pm 0.550 \quad (0.811)$ Radium-226 pCi/L 06/08/20 14:37 13982-63-3 C:NA T:83% Pace Analytical Services - Greensburg EPA 904.0 0.573 ± 0.587 (1.23) Radium-228 pCi/L 06/08/20 14:16 15262-20-1

C:75% T:84%



Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

Sample: BR-12-DG Lab ID: 70131260003 Collected: 05/13/20 12:34 Received: 05/15/20 10:10 Matrix: Water

C:72% T:89%

PWS: Site ID: Sample Type: Method Act ± Unc (MDC) Carr Trac Units CAS No. **Parameters** Analyzed Qual Pace Analytical Services - Greensburg EPA 903.1 0.143 ± 0.343 (0.664) Radium-226 pCi/L 06/08/20 14:37 13982-63-3 C:NA T:80% Pace Analytical Services - Greensburg $0.324 \pm 0.440 \quad (0.943)$ EPA 904.0 Radium-228 pCi/L 06/08/20 14:16 15262-20-1



Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

Sample: BR-3-DG Lab ID: 70131260004 Collected: 05/13/20 13:10 Received: 05/15/20 10:10 Matrix: Water

C:77% T:86%

PWS: Site ID: Sample Type: Method Act ± Unc (MDC) Carr Trac Units CAS No. **Parameters** Analyzed Qual Pace Analytical Services - Greensburg EPA 903.1 0.657 ± 0.567 (0.842) Radium-226 pCi/L 06/08/20 14:37 13982-63-3 C:NA T:89% Pace Analytical Services - Greensburg 0.237 ± 0.470 (1.03) EPA 904.0 Radium-228 pCi/L 06/08/20 14:16 15262-20-1



Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

Sample: BR-20-DG Lab ID: 70131260005 Collected: 05/13/20 13:15 Received: 05/15/20 10:10 Matrix: Water

C:74% T:78%

PWS: Site ID: Sample Type: Act ± Unc (MDC) Carr Trac Units CAS No. **Parameters** Method Analyzed Qual Pace Analytical Services - Greensburg EPA 903.1 $0.941 \pm 0.600 \quad (0.754)$ Radium-226 pCi/L 06/08/20 14:37 13982-63-3 C:NA T:90% Pace Analytical Services - Greensburg EPA 904.0 $0.128 \pm 0.530 \quad (1.19)$ Radium-228 pCi/L 06/08/20 14:16 15262-20-1



Project: PLANT ND LANDFILL 5/13

EPA 904.0

Pace Project No.: 70131260

Radium-228

Sample: DUP Lab ID: 70131260006 Collected: 05/13/20 00:00 Received: 05/15/20 10:10 Matrix: Water PWS: Site ID: Sample Type: Method Act ± Unc (MDC) Carr Trac Units CAS No. **Parameters** Analyzed Qual Pace Analytical Services - Greensburg EPA 903.1 $0.203 \pm 0.479 \quad (0.888)$ Radium-226 pCi/L 06/08/20 14:37 13982-63-3 C:NA T:94% Pace Analytical Services - Greensburg

pCi/L

06/08/20 14:12 15262-20-1

1.02 ± 0.424 (0.664)

C:75% T:91%



QUALITY CONTROL - RADIOCHEMISTRY

Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

QC Batch: 397243 Analysis Method: EPA 903.1

QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 70131260001, 70131260002, 70131260003, 70131260004, 70131260005, 70131260006

METHOD BLANK: 1924013 Matrix: Water

Associated Lab Samples: 70131260001, 70131260002, 70131260003, 70131260004, 70131260005, 70131260006

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-226
 0.103 ± 0.378 (0.726) C:NA T:85%
 pCi/L
 06/08/20 14:00

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALITY CONTROL - RADIOCHEMISTRY

Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

QC Batch: 397244 Analysis Method: EPA 904.0

QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 70131260001, 70131260002, 70131260003, 70131260004, 70131260005, 70131260006

METHOD BLANK: 1924014 Matrix: Water

Associated Lab Samples: 70131260001, 70131260002, 70131260003, 70131260004, 70131260005, 70131260006

 Parameter
 Act ± Unc (MDC) Carr Trac
 Units
 Analyzed
 Qualifiers

 Radium-228
 0.522 ± 0.355 (0.679) C:75% T:84%
 pCi/L
 06/08/20 10:59

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.



QUALIFIERS

Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Act - Activity

Date: 06/09/2020 01:23 PM

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: PLANT ND LANDFILL 5/13

Pace Project No.: 70131260

Date: 06/09/2020 01:23 PM

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytica Batch
70131260001	BR-14-UG	EPA 903.1	397243		
70131260002	BR-13-DG	EPA 903.1	397243		
70131260003	BR-12-DG	EPA 903.1	397243		
70131260004	BR-3-DG	EPA 903.1	397243		
70131260005	BR-20-DG	EPA 903.1	397243		
70131260006	DUP	EPA 903.1	397243		
70131260001	BR-14-UG	EPA 904.0	397244		
70131260002	BR-13-DG	EPA 904.0	397244		
70131260003	BR-12-DG	EPA 904.0	397244		
70131260004	BR-3-DG	EPA 904.0	397244		
70131260005	BR-20-DG	EPA 904.0	397244		
70131260006	DUP	EPA 904.0	397244		

Pace Analytical	CHAIN-OF-CUSTODY Analytical Re	F-CUS	TODY	Analytic	al Request	quest Document	ent		LAB USE ONLY- Affix Wor	Affix Workorder/Login Label Here or 70131260	LAB USE ONLY-Affix Workorder/Login Label Here or List Pace Workorder Number or Workorder Number or Laborate States of Laborate
Company: Erontier Technical Accordates Inc.		ustody	s a LEGAL Rilling Info	is a LEGAL DOCUMENT - C Billing Information: 52000	Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields Billion Information: comp	elevent field	s				
Address: 8675 Main Street, Williamsville, NY 14221	ville, NY 14221)	TIIduluii: Sa	<u>u</u>				70131260		NLY VIV
Report To: Kathy Wager			Email To: k	athy,wager@fro	Email To: kathy wager@frontiertechnical.com			1	tive Types: (1) nitric acid, (2) sul	furic acid, (3) hydrochloric acid	1 ** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate,
Сору То:			Site Collect	Site Collection Info/Address: P	dress: PLANT ND LF	- F		(6) methan (C) ammon	(6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) h (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other	ım thiosulfate, (9) hexane, (A) a eserved, (0) Other	(6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other
Customer Project Name/Number: Plant ND Landfill	nt ND Landfili		State:	County/City:		Time Zone Collected:	X X		Analyses	Lal	.6
Phone: 716-634-2293 S Email:	Site/Facility ID #:				Compliance Monitoring? [X] Yes [JNo					300	ures Present
Collected By (print): Kathy Wager P	Purchase Order # : Quote #:				DW PWS ID #: DW Location Code:	de:				S. Co	000
Collected By (signature):	Turnaround Date Required: STANDARD	equired	: STANDAF	Q	Immediately Packed on Ice. [] Yes [X] No	Packed on Ice:				Samp VOA	les Received on Ice - Headspace Acceptable N
Sample Disposal: [x] Dispose as appropriate [] Return [] Archive: [] Hold:	Rush: [] Same Day [] Next Day [] 2 Day [] 2 Day [] 5 Day	ne Day 3 Day [] Same Day [] Next Day [] 3 Day [] 4 Day []	Jay J 5 Day	ered	(if applicable): [X] No		8		S S S S S S S S S S S S S S S S S S S	
* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)	(Exp below): Drinking W Wipe (WP), Air (A	edite Cha /ater (D' .R), Tissu	(Expedite Charges Apply) R Water (DW), Ground ir (AR), Tissue (TS), Bio	l Water (GV assay (B), V.	Analysis:	WW),		726/22		HÅ. S. R.	
O olamor Campa D	Matrix *	Comp /	Collec	Collected (or	Composite End	nd Res	# of	uni		LA	LAB USE ONLY: Lab Sample # / Comments:
בתפנסוונבן פעווולווב ום		G 8 10	Date	Time	Date	Time		Rad			
BR-14-UG	QW	0	5/13/26	1263			1	×			
BR-13-DG	M9	G	_				1	×			
BR-12-DG	GW	9		45E1			-	×			
BR-3-DG	GW	ŋ		01)			1	×			
BR-20-DG	GW	9		(3)			1	×			
Dup	QW	9	>				П	×			
Customer Remarks / Special Conditions / Possible Hazards:	ns / Possible Haza	ırds:	Tvoe of Ice Used:	Used:	Wet	20	None	150	SHORT HOLDS PRESENT (<72 hours): Y	ours): Y N W/A	LAB Sample Temperature Info:
			Packing M	Packing Material Used	77	3		123	Lab Tracking #: 6750	10	Temp Blank Received: Y N Therm ID#:
			Radchem	Radchem sample(s) screened	reened (<500 cpm):	>	N AN	NS.	- 0	Courier Pace Courier	Cooler 1 Therm Corr. Factor: D. Cooler 1 Corrected Temp.
Relinguishedby/Company: (Signature	A	S	Date/Time:	1038	Regelyed by/Cor	d by/Company: (Signature)	ature)		Silfine: 1638	MTJL LAB USE ONLY Table #:	
distribution by Company: (Signature)	(e)	Date,	Date/Time: Srl4-20 [8	Received by/Cor	d by/Company: (Signature)	ghature)		Date/Time: 5(15/20 10.10	Acctnum: Template: Prelogin:	Trip Blank Received: Y N NA HCL MeOH TSP Other
Relinquished by/Company: (Signature)	(e)	Date,	Date/Time:		Received by/Company: (Signature)	npany: (Sign	ature)		Date/Time:	PM:	Non Conformance(s): Page:



Experience is the solution

314 North Pearl Street ♦ Albany, New York 12207 (800) 848-4983 ♦ (518) 434-4546 ♦ Fax (518) 434-0891

June 09, 2020

Kathy Wager Frontier Technical Associates 8675 Main Street Williamsville, NY 14221

TEL: (716) 634-2293

RE: Plant ND GW

Dear Kathy Wager:

Adirondack Environmental Services, Inc received 23 samples on 5/14/2020 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Christopher Hess

QA Manager

CC:

MS/MSD Report

Work Order No: 200514015

ELAP#: 10709

CASE NARRATIVE

CLIENT: Frontier Technical Associates Date: 09-Jun-20

Project: Plant ND GW
Lab Order: 200514015

Sample containers were supplied by Adirondack Environmental Services.

This report has been reissued to include Total Lithium results for samples 200514015-001 through -006 and Dissolved Lead results for samples 200514015-007 through -011.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit C: CCV below acceptable Limits

J: Analyte detected below quantitation limit C+: CCV above acceptable Limits

B: Analyte detected in Blank S: LCS Spike recovery is below acceptable limits X: Exceeds maximum contamination limit S+: LCS Spike recovery is above acceptable limits

H: Hold time exceeded Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

CLIENT: Frontier Technical Associates Client Sample ID: BR-14-UG

Work Order: 200514015 Collection Date: 5/13/2020 12:03:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / **Lab Sample ID:** 200514015-001

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 16	31E					Analyst: WB
(Prep: 1631E - :	5/14/2020)					
Mercury	0.8	0.5	N	ng/L	1	5/15/2020
ICD/MC FDA 200 0 DEV 5 4						Analyst CM
ICP/MS - EPA 200.8 REV 5.4 (Prep: - 5	5/15/2020)					Analyst: SM
Antimony	, ND	0.0004		mg/L	1	5/21/2020 3:42:28 PM
				-		A 1
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
(Prep: - !	5/15/2020)					
Total Hardness (As CaCO3)	386	5		mg/L CaCO3	1	5/28/2020
ICP METALS - EPA 200.7 REV 4.	4					Analyst: KH
(Prep: - !	5/15/2020)					
Arsenic	ND	0.005	Ν	mg/L	1	5/28/2020 11:58:00 AM
Barium	0.175	0.010		mg/L	1	5/28/2020 11:58:00 AM
Boron	0.164	0.050		mg/L	1	5/28/2020 11:58:00 AM
Cadmium	ND	0.005		mg/L	1	5/28/2020 11:58:00 AM
Calcium	91.7	0.050		mg/L	1	5/28/2020 11:58:00 AM
Iron	0.196	0.050		mg/L	1	5/28/2020 11:58:00 AM
Lead	ND	0.005		mg/L	1	5/28/2020 11:58:00 AM
Lithium	ND	0.050		mg/L	1	5/28/2020 11:58:00 AM
Magnesium	38.1	0.050		mg/L	1	5/28/2020 11:58:00 AM
Manganese	0.029	0.020		mg/L	1	5/28/2020 11:58:00 AM
Molybdenum	ND	0.010		mg/L	1	5/28/2020 11:58:00 AM
Potassium	3.98	0.050		mg/L	1	5/28/2020 11:58:00 AM
Selenium	ND	0.005	Ν	mg/L	1	5/28/2020 11:58:00 AM
Sodium	23.6	0.050		mg/L	1	5/28/2020 11:58:00 AM
ICP DISSOLVED META L- EPA 20	00 7 RFV 4 4					Analyst: KH
	5/15/2020)					, and you run
Arsenic, Dissolved	ND	0.005	N	mg/L	1	5/28/2020 1:45:00 PM
Barium, Dissolved	0.187	0.010		mg/L	1	5/28/2020 1:45:00 PM
Boron, Dissolved	0.173	0.050		mg/L	1	5/28/2020 1:45:00 PM
Cadmium, Dissolved	ND	0.005		mg/L	1	5/28/2020 1:45:00 PM
Calcium, Dissolved	90.4	0.050		mg/L	1	5/28/2020 1:45:00 PM
Iron, Dissolved	ND	0.050		mg/L	1	5/28/2020 1:45:00 PM
Lead, Dissolved	ND	0.005		mg/L	1	5/28/2020 1:45:00 PM
Magnesium, Dissolved	37.7	0.050		mg/L	1	5/28/2020 1:45:00 PM
Manganese, Dissolved	0.025	0.020		mg/L	1	5/28/2020 1:45:00 PM
Molybdenum, Dissolved	ND	0.010		mg/L	1	5/28/2020 1:45:00 PM
Potassium, Dissolved	4.02	0.050		mg/L	1	5/28/2020 1:45:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: BR-14-UG

Work Order: 200514015 Collection Date: 5/13/2020 12:03:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-001

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4 (Prep: - 5/15/2020	1.4					Analyst: KH
Selenium, Dissolved	ND	0.005		mg/L	1	5/28/2020 1:45:00 PM
Sodium, Dissolved	24.5	0.050		mg/L	1	5/28/2020 1:45:00 PM
ANIONS BY ION CHROMATOGRAPHY - EP	A 300.0 F	REV 2.1				Analyst: CS
Fluoride	ND	0.20		mg/L	2	5/14/2020 11:28:31 PM
Chloride	2.83	2.00		mg/L	2	5/14/2020 11:28:31 PM
Nitrate, Nitrogen (As N)	ND	0.04		mg/L	2	5/14/2020 11:28:31 PM
Sulfate	67.4	4.00		mg/L	2	5/14/2020 11:28:31 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011						Analyst: DAA
Alkalinity, Total (As CaCO3)	350	10		mgCaCO3/L	1	5/18/2020
AMMONIA (NON-DISTILLED) - EPA 350.1 R	EV 2.0					Analyst: NK
Nitrogen, Ammonia (As N)	0.5	0.1	N	mg/L	1	5/20/2020 10:01:54 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/26/2020)					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	Ν	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-20	011					Analyst: CC
TDS (Residue, Filterable)	420	5		mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 5310C-20	11					Analyst: NK
Total Organic Carbon	1.1	1.0		mg/L	1	5/19/2020 4:10:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: BR-3-DG

 Work Order:
 200514015
 Collection Date:
 5/13/2020 1:10:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-002

 PO#:
 Matrix:
 GROUNDWATER

Date: 09-Jun-20

Analyses Result **RL Qual** Units DF **Date Analyzed LOW LEVEL MERCURY - EPA 1631E** Analyst: WB (Prep: 1631E - 5/14/2020) Mercury 0.9 0.5 ng/L 1 5/15/2020 ICP/MS - EPA 200.8 REV 5.4 Analyst: SM (Prep: - 5/15/2020) Antimony ND 0.0004 mg/L 5/21/2020 3:57:27 PM HARDNESS - EPA 200.7 REV 4.4 Analyst: KH (Prep: - 5/15/2020) Total Hardness (As CaCO3) mg/L CaCO3 5/28/2020 544 5 1 ICP METALS - EPA 200.7 REV 4.4 Analyst: KH (Prep: - 5/15/2020) Arsenic ND 0.005 mg/L 5/28/2020 12:16:00 PM 1 Barium 0.032 0.010 mg/L 1 5/28/2020 12:16:00 PM Boron 0.097 0.050 mg/L 1 5/28/2020 12:16:00 PM Cadmium 0.005 mg/L 1 5/28/2020 12:16:00 PM ND Calcium 0.050 5/28/2020 12:16:00 PM 140 mg/L 1 Iron 1.38 0.050 mg/L 1 5/28/2020 12:16:00 PM Lead 0.005 mg/L 5/28/2020 12:16:00 PM ND 1 Lithium ND 0.050 mg/L 1 5/28/2020 12:16:00 PM Magnesium 47.0 0.050 mg/L 1 5/28/2020 12:16:00 PM Manganese 0.260 0.020 mg/L 5/28/2020 12:16:00 PM Molybdenum 0.010 5/28/2020 12:16:00 PM ND mg/L 1 Potassium 3.08 0.050 mg/L 1 5/28/2020 12:16:00 PM Selenium ND 0.005 mg/L 1 5/28/2020 12:16:00 PM Sodium 15.8 0.050 mg/L 1 5/28/2020 12:16:00 PM ICP DISSOLVED META L- EPA 200.7 REV 4.4 Analyst: KH (Prep: - 5/15/2020) ND Arsenic, Dissolved 0.005 mg/L 1 5/28/2020 2:08:00 PM Barium, Dissolved 0.029 0.010 5/28/2020 2:08:00 PM mg/L Boron, Dissolved 0.099 0.050 5/28/2020 2:08:00 PM mg/L 1 Cadmium, Dissolved 0.005 5/28/2020 2:08:00 PM ND mg/L 1 Calcium, Dissolved 0.050 5/28/2020 2:08:00 PM 135 mg/L 1 Iron, Dissolved 0.617 0.050 mg/L 1 5/28/2020 2:08:00 PM Lead, Dissolved 0.005 mg/L 1 5/28/2020 2:08:00 PM ND Magnesium, Dissolved 0.050 5/28/2020 2:08:00 PM 45.9 mg/L Manganese, Dissolved 0.020 5/28/2020 2:08:00 PM 0.267 mg/L 1 Molvbdenum, Dissolved 5/28/2020 2:08:00 PM ND 0.010 mg/L 1 Potassium, Dissolved 3.02 0.050 mg/L 1 5/28/2020 2:08:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: BR-3-DG

 Work Order:
 200514015
 Collection Date:
 5/13/2020 1:10:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-002

Date: 09-Jun-20

Analyses	Result	RL	Qual Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV (Prep: - 5/15/2020					Analyst: KH
Selenium, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:08:00 PM
Sodium, Dissolved	15.6	0.050	mg/L	1	5/28/2020 2:08:00 PM
ANIONS BY ION CHROMATOGRAPHY - E	PA 300.0 R	EV 2.1			Analyst: CS
Fluoride	ND	0.20	mg/L	2	5/15/2020 12:25:55 AM
Chloride	21.5	2.00	mg/L	2	5/15/2020 12:25:55 AM
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2	5/15/2020 12:25:55 AM
Sulfate	230	20.0	mg/L	10	5/28/2020 3:18:48 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	290	10	mgCaCO3/L	1	5/18/2020
AMMONIA (NON-DISTILLED) - EPA 350.1	REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.1	0.1	mg/L	1	5/20/2020 10:10:05 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/26/2020)				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-2	2011				Analyst: CC
TDS (Residue, Filterable)	625	5	mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 5310C-20	011				Analyst: NK
Total Organic Carbon	1.3	1.0	mg/L	1	5/19/2020 5:01:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: BR-12-DG

Work Order: 200514015 Collection Date: 5/13/2020 12:34:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / **Lab Sample ID:** 200514015-003

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 163	31E				Analyst: WB
(Prep: 1631E - 5	/14/2020)				
Mercury	ND	0.5	ng/L	1	5/15/2020
ICP/MS - EPA 200.8 REV 5.4					Analyst: SM
	/15/2020)				Analyst. Sw
Antimony	ND	0.0004	mg/L	1	5/21/2020 4:01:12 PM
•			9.=		
HARDNESS - EPA 200.7 REV 4.4	//=/aaaa				Analyst: KH
(Prep: - 5	/15/2020)				
Total Hardness (As CaCO3)	720	5	mg/L CaCO3	1	5/28/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5	/15/2020)				
Arsenic	ND	0.005	mg/L	1	5/28/2020 12:20:00 PM
Barium	0.038	0.010	mg/L	1	5/28/2020 12:20:00 PM
Boron	0.079	0.050	mg/L	1	5/28/2020 12:20:00 PM
Cadmium	ND	0.005	mg/L	1	5/28/2020 12:20:00 PM
Calcium	179	0.050	mg/L	1	5/28/2020 12:20:00 PM
Iron	ND	0.050	mg/L	1	5/28/2020 12:20:00 PM
Lead	ND	0.005	mg/L	1	5/28/2020 12:20:00 PM
Lithium	ND	0.050	mg/L	1	5/28/2020 12:20:00 PM
Magnesium	66.5	0.050	mg/L	1	5/28/2020 12:20:00 PM
Manganese	0.226	0.020	mg/L	1	5/28/2020 12:20:00 PM
Molybdenum	ND	0.010	mg/L	1	5/28/2020 12:20:00 PM
Potassium	4.07	0.050	mg/L	1	5/28/2020 12:20:00 PM
Selenium	ND	0.005	mg/L	1	5/28/2020 12:20:00 PM
Sodium	19.7	0.050	mg/L	1	5/28/2020 12:20:00 PM
ICP DISSOLVED META L- EPA 20	0 7 RFV 4 4				Analyst: KH
(Prep: - 5					, manyon Tur
Arsenic, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:12:00 PM
Barium, Dissolved	0.038	0.010	mg/L	1	5/28/2020 2:12:00 PM
Boron, Dissolved	0.080	0.050	mg/L	1	5/28/2020 2:12:00 PM
Cadmium, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:12:00 PM
Calcium, Dissolved	175	0.050	mg/L	1	5/28/2020 2:12:00 PM
Iron, Dissolved	ND	0.050	mg/L	1	5/28/2020 2:12:00 PM
Lead, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:12:00 PM
Magnesium, Dissolved	66.4	0.050	mg/L	1	5/28/2020 2:12:00 PM
Manganese, Dissolved	0.216	0.020	mg/L	1	5/28/2020 2:12:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	5/28/2020 2:12:00 PM
Potassium, Dissolved	4.10	0.050	mg/L	1	5/28/2020 2:12:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: BR-12-DG

Work Order: 200514015 Collection Date: 5/13/2020 12:34:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-003

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV 4 (Prep: - 5/15/2020	1.4				Analyst: KH
Selenium, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:12:00 PM
Sodium, Dissolved	19.7	0.050	mg/L	1	5/28/2020 2:12:00 PM
ANIONS BY ION CHROMATOGRAPHY - EP	A 300.0 F	REV 2.1			Analyst: CS
Fluoride	ND	0.20	mg/L	2	5/15/2020 12:44:57 AM
Chloride	183	2.00	mg/L	2	5/15/2020 12:44:57 AM
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2	5/15/2020 12:44:57 AM
Sulfate	194	4.00	mg/L	2	5/15/2020 12:44:57 AM
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	300	10	mgCaCO3/L	1	5/19/2020
AMMONIA (NON-DISTILLED) - EPA 350.1 R	EV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.2	0.1	mg/L	1	5/20/2020 10:11:42 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/26/2020)				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-20	011				Analyst: CC
TDS (Residue, Filterable)	815	5	mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 5310C-20	11				Analyst: NK
Total Organic Carbon	1.3	1.0	mg/L	1	5/19/2020 5:17:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: BR-13-DG

Work Order: 200514015 Collection Date: 5/13/2020 12:50:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-004

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 16	31E				Analyst: WB
(Prep: 1631E - 5	5/14/2020)				
Mercury	ND	0.5	ng/L	1	5/15/2020
ICP/MS - EPA 200.8 REV 5.4					Analyst: SM
	5/15/2020)				Analyst. Sw
	,				-/-//
Antimony	ND	0.0004	mg/L	1	5/21/2020 4:04:58 PM
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - :	5/15/2020)				
Total Hardness (As CaCO3)	489	5	mg/L CaCO3	1	5/28/2020
ICP METALS - EPA 200.7 REV 4.4	1				Analyst: KH
Prep: - !					raidiyət. Mi
Arsenic	•	0.005	ma/l	1	E/20/2020 42:24:00 DM
Barium	ND 0.077	0.005 0.010	mg/L	1 1	5/28/2020 12:24:00 PM 5/28/2020 12:24:00 PM
Boron	0.077 0.153	0.010	mg/L mg/L	1	5/28/2020 12:24:00 PM
Cadmium	0.193 ND	0.005	mg/L	1	5/28/2020 12:24:00 PM
Calcium	125	0.050	mg/L	1	5/28/2020 12:24:00 PM
Iron	0.053	0.050	mg/L	1	5/28/2020 12:24:00 PM
Lead	0.033 ND	0.005	mg/L	1	5/28/2020 12:24:00 PM
Lithium	ND ND	0.050	mg/L	1	5/28/2020 12:24:00 PM
Magnesium	43.2	0.050	mg/L	1	5/28/2020 12:24:00 PM
Manganese	0.106	0.020	mg/L	1	5/28/2020 12:24:00 PM
Molybdenum	ND	0.010	mg/L	1	5/28/2020 12:24:00 PM
Potassium	3.65	0.050	mg/L	1	5/28/2020 12:24:00 PM
Selenium	ND	0.005	mg/L	1	5/28/2020 12:24:00 PM
Sodium	44.0	0.050	mg/L	1	5/28/2020 12:24:00 PM
	-		3		A 1
ICP DISSOLVED META L- EPA 20 					Analyst: KH
Arsenic, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:17:00 PM
Barium, Dissolved	0.078	0.003	mg/L	1	5/28/2020 2:17:00 PM
Boron, Dissolved	0.153	0.050	mg/L	1	5/28/2020 2:17:00 PM
Cadmium, Dissolved	0.133 ND	0.005	mg/L	1	5/28/2020 2:17:00 PM
Calcium, Dissolved	126	0.050	mg/L	1	5/28/2020 2:17:00 PM
Iron, Dissolved	ND	0.050	mg/L	1	5/28/2020 2:17:00 PM
Lead, Dissolved	ND ND	0.005	mg/L	1	5/28/2020 2:17:00 PM
Magnesium, Dissolved	43.2	0.050	mg/L	1	5/28/2020 2:17:00 PM
Manganese, Dissolved	0.103	0.020	mg/L	1	5/28/2020 2:17:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	5/28/2020 2:17:00 PM
Potassium, Dissolved	3.64	0.050	mg/L	1	5/28/2020 2:17:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: BR-13-DG

Work Order: 200514015 Collection Date: 5/13/2020 12:50:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / **Lab Sample ID:** 200514015-004

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV (Prep: - 5/15/2020					Analyst: KH
Selenium, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:17:00 PM
Sodium, Dissolved	44.0	0.050	mg/L	1	5/28/2020 2:17:00 PM
ANIONS BY ION CHROMATOGRAPHY - E	PA 300.0 R	EV 2.1			Analyst: CS
Fluoride	ND	0.20	mg/L	2	5/15/2020 1:03:59 AM
Chloride	7.91	2.00	mg/L	2	5/15/2020 1:03:59 AM
Nitrate, Nitrogen (As N)	0.10	0.04	mg/L	2	5/15/2020 1:03:59 AM
Sulfate	159	4.00	mg/L	2	5/15/2020 1:03:59 AM
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	390	10	mgCaCO3/L	1	5/19/2020
AMMONIA (NON-DISTILLED) - EPA 350.1	REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.2	0.1	mg/L	1	5/20/2020 10:13:20 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/26/2020))				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-2	2011				Analyst: CC
TDS (Residue, Filterable)	545	5	mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 5310C-2	011				Analyst: NK
Total Organic Carbon	4.2	1.0	mg/L	1	5/19/2020 5:34:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: BR-20-DG

 Work Order:
 200514015
 Collection Date:
 5/13/2020 1:15:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-005

Date: 09-Jun-20

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA 1631E					Analyst: WB
(Prep: 1631E - 5/14/20	20)				
Mercury	2.4	0.5	ng/L	1	5/15/2020
ICP/MS - EPA 200.8 REV 5.4					Analyst: CM
(Prep: - 5/15/20	20)				Analyst: SM
Antimony	0.0005	0.0004	mg/L	1	5/21/2020 4:18:30 PM
·			ŭ		
HARDNESS - EPA 200.7 REV 4.4 (Prep: - 5/15/20	20)				Analyst: KH
Total Hardness (As CaCO3)	99	5	mg/L CaCO3	1	5/28/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/20	20)				Allaiyət. KI
` .	•	0.005	m a /l	4	E/00/0000 40:07:00 DM
Arsenic	ND	0.005	mg/L	1	5/28/2020 12:27:00 PM
Barium	1.95	0.010	mg/L	1	5/28/2020 12:27:00 PM
Boron	1.47	0.050	mg/L	1	5/28/2020 12:27:00 PM
Cadmium	ND	0.005	mg/L	1	5/28/2020 12:27:00 PM
Calcium	25.8	0.050	mg/L	1	5/28/2020 12:27:00 PM
Iron	0.092	0.050	mg/L	1	5/28/2020 12:27:00 PM
Lead	ND	0.005	mg/L	1	5/28/2020 12:27:00 PM
Lithium	0.266	0.050	mg/L	1	5/28/2020 12:27:00 PM
Magnesium	8.47	0.050	mg/L	1	5/28/2020 12:27:00 PM
Manganese	ND	0.020	mg/L	1	5/28/2020 12:27:00 PM
Molybdenum	ND	0.010	mg/L	1	5/28/2020 12:27:00 PM
Potassium	8.52	0.050	mg/L	1	5/28/2020 12:27:00 PM
Selenium	ND	0.005	mg/L	1	5/28/2020 12:27:00 PM
Sodium	264	0.500	mg/L	10	5/28/2020 12:32:00 PM
ICP DISSOLVED META L- EPA 200.7 RE (Prep: - 5/15/20					Analyst: KH
• •	•			_	
Arsenic, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:22:00 PM
Barium, Dissolved	1.89	0.010	mg/L	1	5/28/2020 2:22:00 PM
Boron, Dissolved	1.46	0.050	mg/L	1	5/28/2020 2:22:00 PM
Cadmium, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:22:00 PM
Calcium, Dissolved	25.5	0.050	mg/L	1	5/28/2020 2:22:00 PM
Iron, Dissolved	0.050	0.050	mg/L	1	5/28/2020 2:22:00 PM
Lead, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:22:00 PM
Magnesium, Dissolved	8.35	0.050	mg/L	1	5/28/2020 2:22:00 PM
Manganese, Dissolved	ND	0.020	mg/L	1	5/28/2020 2:22:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	5/28/2020 2:22:00 PM
Potassium, Dissolved	8.74	0.050	mg/L	1	5/28/2020 2:22:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: BR-20-DG

 Work Order:
 200514015
 Collection Date:
 5/13/2020 1:15:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-005

Date: 09-Jun-20

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV (Prep: - 5/15/2020	4.4				Analyst: KH
Selenium, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:22:00 PM
Sodium, Dissolved	262	0.500	mg/L	10	5/28/2020 2:25:00 PM
ANIONS BY ION CHROMATOGRAPHY - EF	PA 300.0 R	EV 2.1			Analyst: CS
Fluoride	0.31	0.20	mg/L	2	5/15/2020 1:23:01 AM
Chloride	18.1	2.00	mg/L	2	5/15/2020 1:23:01 AM
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2	5/15/2020 1:23:01 AM
Sulfate	ND	4.00	mg/L	2	5/15/2020 1:23:01 AM
ALKALINITY - SM 2320B-2011					Analyst: DAA
Alkalinity, Bicarbonate (As CaCO3)	560	10.0	mgCaCO3/L	1	5/21/2020
Alkalinity, Carbonate (As CaCO3)	40	10.0	mgCaCO3/L	1	5/21/2020
Alkalinity, Total (As CaCO3)	600	10.0	mgCaCO3/L	1	5/21/2020
AMMONIA (NON-DISTILLED) - EPA 350.1 F	REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	1.3	0.1	mg/L	1	5/20/2020 10:15:01 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/26/2020)				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-2	011				Analyst: CC
TDS (Residue, Filterable)	635	5	mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 5310C-20	111				Analyst: NK
Total Organic Carbon	3.1	1.0	mg/L	1	5/19/2020 5:50:00 PM

CLIENT: Frontier Technical Associates

Client Sample ID: DUP Work Order: 200514015 **Collection Date:** 5/13/2020 Reference: Plant ND GW / **Lab Sample ID:** 200514015-006

PO#: Matrix: GROUNDWATER

Date: 09-Jun-20

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed
LOW LEVEL MERCURY - EPA					Analyst: WB
(Prep: 1631E -	5/14/2020)				
Mercury	2.4	0.5	ng/L	1	5/15/2020
ICP/MS - EPA 200.8 REV 5.4					Analyst: SM
	5/15/2020)				7 thaiyoti Oili
Antimony	0.0005	0.0004	mg/L	1	5/21/2020 4:22:16 PM
•			3		A 1
HARDNESS - EPA 200.7 REV 4 (Prep: -	.4 · 5/15/2020)				Analyst: KH
Total Hardness (As CaCO3)	101	5	mg/L CaCO3	1	5/28/2020
ICP METALS - EPA 200.7 REV	4.4				Analyst: KH
(Prep: -	5/15/2020)				•
Arsenic	ND	0.005	mg/L	1	5/28/2020 12:35:00 PM
Barium	2.00	0.010	mg/L	1	5/28/2020 12:35:00 PM
Boron	1.50	0.050	mg/L	1	5/28/2020 12:35:00 PM
Cadmium	ND	0.005	mg/L	1	5/28/2020 12:35:00 PM
Calcium	26.3	0.050	mg/L	1	5/28/2020 12:35:00 PM
Iron	0.093	0.050	mg/L	1	5/28/2020 12:35:00 PM
Lead	ND	0.005	mg/L	1	5/28/2020 12:35:00 PM
Lithium	0.292	0.050	mg/L	1	5/28/2020 12:35:00 PM
Magnesium	8.67	0.050	mg/L	1	5/28/2020 12:35:00 PM
Manganese	0.020	0.020	mg/L	1	5/28/2020 12:35:00 PM
Molybdenum	ND	0.010	mg/L	1	5/28/2020 12:35:00 PM
Potassium	8.74	0.050	mg/L	1	5/28/2020 12:35:00 PM
Selenium	ND	0.005	mg/L	1	5/28/2020 12:35:00 PM
Sodium	232	0.500	mg/L	10	5/28/2020 12:40:00 PM
ICP DISSOLVED META L- EPA					Analyst: KH
(Prep: -	5/15/2020)				
Arsenic, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:30:00 PM
Barium, Dissolved	1.88	0.010	mg/L	1	5/28/2020 2:30:00 PM
Boron, Dissolved	1.47	0.050	mg/L	1	5/28/2020 2:30:00 PM
Cadmium, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:30:00 PM
Calcium, Dissolved	24.9	0.050	mg/L	1	5/28/2020 2:30:00 PM
Iron, Dissolved	ND	0.050	mg/L	1	5/28/2020 2:30:00 PM
Lead, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:30:00 PM
Magnesium, Dissolved	8.37	0.050	mg/L	1	5/28/2020 2:30:00 PM
Manganese, Dissolved	ND	0.020	mg/L	1	5/28/2020 2:30:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	5/28/2020 2:30:00 PM
Potassium, Dissolved	8.74	0.050	mg/L	1	5/28/2020 2:30:00 PM

CLIENT: Frontier Technical Associates

Client Sample ID: DUP Work Order: 200514015 **Collection Date:** 5/13/2020

Reference: Plant ND GW / **Lab Sample ID:** 200514015-006

PO#: Matrix: GROUNDWATER

Date: 09-Jun-20

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP DISSOLVED META L- EPA 200.7 REV (Prep: - 5/15/2020					Analyst: KH
Selenium, Dissolved	, ND	0.005	mg/L	1	5/28/2020 2:30:00 PM
Sodium, Dissolved	272	0.500	mg/L	10	5/28/2020 2:33:00 PM
ANIONS BY ION CHROMATOGRAPHY - E	PA 300.0 R	EV 2.1	-		Analyst: CS
Fluoride	0.32	0.20	mg/L	2	5/15/2020 1:42:04 AM
Chloride	17.5	2.00	mg/L	2	5/15/2020 1:42:04 AM
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2	5/15/2020 1:42:04 AM
Sulfate	ND	4.00	mg/L	2	5/15/2020 1:42:04 AM
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	610	10	mgCaCO3/L	1	5/19/2020
AMMONIA (NON-DISTILLED) - EPA 350.1	REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	1.3	0.1	mg/L	1	5/20/2020 10:16:40 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/26/2020))				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-2	2011				Analyst: CC
TDS (Residue, Filterable)	595	5	mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 5310C-2	011				Analyst: NK
Total Organic Carbon	2.0	1.0	mg/L	1	5/19/2020 6:07:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: OB-2-UG

Work Order: 200514015 Collection Date: 5/13/2020 11:48:00 AM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-007

	Result	RL (Qual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - !	5/15/2020)				•
Total Hardness (As CaCO3)	985	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.4	4				Analyst: KH
(Prep: - !	5/15/2020)				•
Arsenic	ND	0.005	mg/L	1	5/26/2020 1:22:00 PM
Barium	0.028	0.010	mg/L	1	5/26/2020 1:22:00 PM
Boron	0.053	0.050	mg/L	1	5/26/2020 1:22:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 1:22:00 PM
Calcium	294	0.500	mg/L	10	5/26/2020 1:27:00 PM
Iron	0.090	0.050	mg/L	1	5/26/2020 1:22:00 PM
Lead	ND	0.005	mg/L	1	5/26/2020 1:22:00 PM
Magnesium	61.0	0.050	mg/L	1	5/26/2020 1:22:00 PM
Manganese	0.028	0.020	mg/L	1	5/26/2020 1:22:00 PM
Molybdenum	ND	0.010	mg/L	1	5/26/2020 1:22:00 PM
Potassium	1.21	0.050	mg/L	1	5/26/2020 1:22:00 PM
Selenium	ND	0.005	mg/L	1	5/26/2020 1:22:00 PM
Sodium	11.4	0.050	mg/L	1	5/26/2020 1:22:00 PM
ICP DISSOLVED META L- EPA 20	00.7 REV 4.4				Analyst: KH
	00.7 REV 4.4 5/15/2020)				Analyst: KH
		0.005	mg/L	1	Analyst: KH 5/28/2020 2:37:00 PM
(Prep: - !	5/15/2020)	0.005 0.010	mg/L mg/L	1	
(Prep: - !	5/15/2020) ND		•		5/28/2020 2:37:00 PN 5/28/2020 2:37:00 PN
(Prep: - ! Arsenic, Dissolved Barium, Dissolved	5/15/2020) ND 0.028	0.010	mg/L	1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM
(Prep: - ! Arsenic, Dissolved Barium, Dissolved Boron, Dissolved	5/15/2020) ND 0.028 0.054	0.010 0.050	mg/L mg/L	1 1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM
(Prep: - & Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved	5/15/2020) ND 0.028 0.054 ND	0.010 0.050 0.005	mg/L mg/L mg/L	1 1 1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:46:00 PM
(Prep: - & Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved	5/15/2020) ND 0.028 0.054 ND 230	0.010 0.050 0.005 0.500	mg/L mg/L mg/L mg/L	1 1 1 10	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:46:00 PM 5/28/2020 2:37:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved	5/15/2020) ND 0.028 0.054 ND 230 ND	0.010 0.050 0.005 0.500 0.050	mg/L mg/L mg/L mg/L mg/L	1 1 1 10 1	5/28/2020 2:37:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved	5/15/2020) ND 0.028 0.054 ND 230 ND ND	0.010 0.050 0.005 0.500 0.050 0.005	mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 10 1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved	5/15/2020) ND 0.028 0.054 ND 230 ND ND ND 00.1	0.010 0.050 0.005 0.500 0.050 0.005 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 10 1 1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:46:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved	5/15/2020) ND 0.028 0.054 ND 230 ND ND ND 60.1 0.025	0.010 0.050 0.005 0.500 0.050 0.005 0.050 0.020	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 10 1 1 1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:46:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved	5/15/2020) ND 0.028 0.054 ND 230 ND ND ND 60.1 0.025 ND	0.010 0.050 0.005 0.500 0.050 0.005 0.050 0.020 0.010	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 10 1 1 1 1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved	5/15/2020) ND 0.028 0.054 ND 230 ND ND 0.025 ND 1.24	0.010 0.050 0.005 0.500 0.050 0.005 0.020 0.010 0.050	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 10 1 1 1 1 1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:46:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved Sodium, Dissolved	ND 0.028 0.054 ND 230 ND ND 60.1 0.025 ND 1.24 ND 11.6	0.010 0.050 0.005 0.500 0.050 0.005 0.020 0.010 0.050 0.005 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 10 1 1 1 1 1 1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:46:00 PM 5/28/2020 2:37:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved Sodium, Dissolved Sodium, Dissolved	5/15/2020) ND 0.028 0.054 ND 230 ND ND 60.1 0.025 ND 1.24 ND 11.6 APHY - EPA 300.0 RI	0.010 0.050 0.005 0.500 0.050 0.005 0.020 0.010 0.050 0.005 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 10 1 1 1 1 1 1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM 5/28/2020 2:46:00 PM 5/28/2020 2:37:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved Sodium, Dissolved Sodium, Dissolved Sodium, Dissolved	ND 0.028 0.054 ND 230 ND ND 60.1 0.025 ND 1.24 ND 11.6	0.010 0.050 0.005 0.500 0.050 0.050 0.020 0.010 0.050 0.005 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 10 1 1 1 1 1 1	5/28/2020 2:37:00 PM 5/28/2020 2:37:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: OB-2-UG

Work Order: 200514015 Collection Date: 5/13/2020 11:48:00 AM

Date: 09-Jun-20

Reference: Plant ND GW / **Lab Sample ID:** 200514015-007

Analyses	Result	RL Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	310	10	mgCaCO3/L	1	5/19/2020
AMMONIA (NON-DISTILLED) - EPA 350.1	REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.2	0.1	mg/L	1	5/20/2020 10:18:21 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/26/2020)				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-2	2011				Analyst: CC
TDS (Residue, Filterable)	890	5	mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 5310C-20	011				Analyst: NK
Total Organic Carbon	ND	1.0	mg/L	1	5/19/2020 7:16:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: OB-4-DG

 Work Order:
 200514015
 Collection Date:
 5/13/2020 1:20:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-008

Date: 09-Jun-20

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4	ļ				Analyst: KH
(Prep: -	5/15/2020)				
Total Hardness (As CaCO3)	285	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.	.4				Analyst: KH
(Prep: -	5/15/2020)				•
Arsenic	ND	0.005	mg/L	1	5/26/2020 1:31:00 PM
Barium	0.072	0.010	mg/L	1	5/26/2020 1:31:00 PM
Boron	ND	0.050	mg/L	1	5/26/2020 1:31:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 1:31:00 PM
Calcium	83.5	0.050	mg/L	1	5/26/2020 1:31:00 PM
Iron	0.132	0.050	mg/L	1	5/26/2020 1:31:00 PM
Lead	0.132 ND	0.005	mg/L	1	5/26/2020 1:31:00 PM
Magnesium	18.7	0.050	mg/L	1	5/26/2020 1:31:00 PM
Manganese	0.052	0.030	mg/L	1	5/26/2020 1:31:00 PM
Molybdenum	0.032 ND	0.020	mg/L	1	5/26/2020 1:31:00 PM
Potassium	2.14	0.010	-	1	5/26/2020 1:31:00 PM
Selenium		0.005	mg/L	1	5/26/2020 1:31:00 PM
Sodium	ND 4.54	0.005	mg/L mg/L	1	5/26/2020 1:31:00 PM
Codium	4.54	0.000	mg/L	•	0/20/2020 1.01.00 1 W
ICP DISSOLVED META L- EPA 2	00.7 REV 4.4				Analyst: KH
(Prep: -	5/15/2020)				
Arsenic, Dissolved	ND	0.005	mg/L	1	5/28/2020 2:52:00 PM
Barium, Dissolved	0.073	0.010		1	5/28/2020 2:52:00 PM
·	0.073 ND	0.010 0.050	mg/L		5/28/2020 2:52:00 PM
Boron, Dissolved	ND		mg/L mg/L	1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved	ND ND	0.050 0.005	mg/L mg/L mg/L	1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved	ND ND 87.7	0.050 0.005 0.050	mg/L mg/L mg/L mg/L	1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved	ND ND 87.7 ND	0.050 0.005 0.050 0.050	mg/L mg/L mg/L mg/L mg/L	1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved	ND ND 87.7 ND ND	0.050 0.005 0.050 0.050 0.005	mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved	ND ND 87.7 ND ND 19.0	0.050 0.005 0.050 0.050 0.005 0.005	mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved	ND ND 87.7 ND ND 19.0 ND	0.050 0.005 0.050 0.050 0.005 0.050 0.050	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved	ND ND 87.7 ND ND 19.0 ND	0.050 0.005 0.050 0.050 0.005 0.050 0.020 0.010	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved	ND ND 87.7 ND ND 19.0 ND ND	0.050 0.005 0.050 0.050 0.005 0.050 0.020 0.010 0.050	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved	ND ND 87.7 ND ND 19.0 ND ND 2.11	0.050 0.005 0.050 0.050 0.005 0.050 0.020 0.010 0.050 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved	ND ND 87.7 ND ND 19.0 ND ND	0.050 0.005 0.050 0.050 0.005 0.050 0.020 0.010 0.050	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved Sodium, Dissolved	ND ND 87.7 ND ND 19.0 ND ND 2.11 ND 4.77	0.050 0.005 0.050 0.050 0.005 0.050 0.020 0.010 0.050 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved	ND ND 87.7 ND ND 19.0 ND ND 2.11 ND 4.77	0.050 0.005 0.050 0.050 0.005 0.050 0.020 0.010 0.050 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM
Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved Sodium, Dissolved ANIONS BY ION CHROMATOGR	ND ND 87.7 ND ND 19.0 ND ND 2.11 ND 4.77	0.050 0.005 0.050 0.050 0.050 0.050 0.020 0.010 0.050 0.005 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1 1 1 1	5/28/2020 2:52:00 PM 5/28/2020 2:52:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: OB-4-DG

 Work Order:
 200514015
 Collection Date:
 5/13/2020 1:20:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-008

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-008
PO#: Matrix: GROUNDWATER

Analyses	Result	RL Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	240	10	mgCaCO3/L	1	5/19/2020
AMMONIA (NON-DISTILLED) - EPA 350.1 F	REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	5/20/2020 10:19:59 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/26/2020)				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-2	011				Analyst: CC
TDS (Residue, Filterable)	235	5	mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 5310C-20	11				Analyst: NK
Total Organic Carbon	2.7	1.0	mg/L	1	5/19/2020 7:33:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: OB-7-DG

Work Order: 200514015 Collection Date: 5/13/2020 11:58:00 AM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-009

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5	/15/2020)				
Total Hardness (As CaCO3)	1085	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5	/15/2020)				,
Arsenic	ND	0.005	mg/L	1	5/26/2020 1:35:00 PM
Barium	0.019	0.000	mg/L	1	5/26/2020 1:35:00 PM
Boron	0.398	0.050	mg/L	1	5/26/2020 1:35:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 1:35:00 PM
Calcium	344	0.500	mg/L	10	5/26/2020 1:41:00 PM
Iron	0.086	0.050	mg/L	1	5/26/2020 1:35:00 PM
Lead	ND	0.005	mg/L	1	5/26/2020 1:35:00 PM
Magnesium	54.8	0.050	mg/L	1	5/26/2020 1:35:00 PM
Manganese	0.027	0.020	mg/L	1	5/26/2020 1:35:00 PM
Molybdenum	ND	0.010	mg/L	1	5/26/2020 1:35:00 PM
Potassium	1.53	0.050	mg/L	1	5/26/2020 1:35:00 PM
Selenium	ND	0.005	mg/L	1	5/26/2020 1:35:00 PM
Sodium	9.91	0.050	mg/L	1	5/26/2020 1:35:00 PM
ICP DISSOLVED META L- EPA 20	0.7 REV 4.4				Analyst: KH
	(15/2020)				Analyst. Kil
Arsenic, Dissolved	ND	0.005	mg/L	1	5/28/2020 3:20:00 PM
Barium, Dissolved	0.019	0.010	mg/L	1	5/28/2020 3:20:00 PM
Boron, Dissolved	0.399	0.050	mg/L	1	5/28/2020 3:20:00 PM
Cadmium, Dissolved	ND	0.005	mg/L	1	5/28/2020 3:20:00 PM
Calcium, Dissolved	247	0.500	mg/L	10	5/28/2020 3:24:00 PM
Iron, Dissolved	ND	0.050	mg/L	1	5/28/2020 3:20:00 PM
Lead, Dissolved	ND	0.005	mg/L	1	5/28/2020 3:20:00 PM
Magnesium, Dissolved	52.6	0.050	mg/L	1	5/28/2020 3:20:00 PM
Manganese, Dissolved	0.022	0.020	mg/L	1	5/28/2020 3:20:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	5/28/2020 3:20:00 PM
Potassium, Dissolved	1.43	0.050	mg/L	1	5/28/2020 3:20:00 PM
Selenium, Dissolved	ND	0.005	mg/L	1	5/28/2020 3:20:00 PM
Sodium, Dissolved	9.52	0.050	mg/L	1	5/28/2020 3:20:00 PM
ANIONS BY ION CHROMATOGRA	PHY - EPA 300.0 R	EV 2.1			Analyst: CS
Chloride	ND	2.00	mg/L	2	5/15/2020 3:58:48 AM
Nitrate, Nitrogen (As N)	ND	0.04	mg/L	2	5/15/2020 3:58:48 AM
	.,,		<i>y</i>		

CLIENT: Frontier Technical Associates Client Sample ID: OB-7-DG

Work Order: 200514015 Collection Date: 5/13/2020 11:58:00 AM

Date: 09-Jun-20

Reference: Plant ND GW / **Lab Sample ID:** 200514015-009

Analyses	Result	RL Qua	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	350	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA 350.1	REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	5/20/2020 10:21:36 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/26/2020)				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-2	2011				Analyst: CC
TDS (Residue, Filterable)	940	5	mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 5310C-20	011				Analyst: NK
Total Organic Carbon	1.5	1.0	mg/L	1	5/19/2020 7:49:00 PM

CLIENT: Frontier Technical Associates **Client Sample ID:** OB-19-DG

Work Order: 200514015 Collection Date: 5/13/2020 12:39:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / **Lab Sample ID:** 200514015-010

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - :	5/15/2020)				
Total Hardness (As CaCO3)	1244	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.4	4				Analyst: KH
(Prep: - !	5/15/2020)				,
Arsenic	ND	0.005	mg/L	1	5/26/2020 1:47:00 PM
Barium	0.011	0.010	mg/L	1	5/26/2020 1:47:00 PM
Boron	0.113	0.050	mg/L	1	5/26/2020 1:47:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 1:47:00 PM
Calcium	337	0.500	mg/L	10	5/26/2020 1:51:00 PM
Iron	0.074	0.050	mg/L	1	5/26/2020 1:47:00 PM
Lead	ND	0.005	mg/L	1	5/26/2020 1:47:00 PM
Magnesium	97.9	0.050	mg/L	1	5/26/2020 1:47:00 PM
Manganese	ND	0.020	mg/L	1	5/26/2020 1:47:00 PM
Molybdenum	ND	0.010	mg/L	1	5/26/2020 1:47:00 PM
Potassium	2.05	0.050	mg/L	1	5/26/2020 1:47:00 PM
Selenium	ND	0.005	mg/L	1	5/26/2020 1:47:00 PM
			3		
Sodium	9.42	0.050	mg/L	1	5/26/2020 1:47:00 PM
	-	0.050	mg/L	1	5/26/2020 1:47:00 PM Analyst: KH
Sodium ICP DISSOLVED META L- EPA 20	-	0.050	mg/L	1	
Sodium ICP DISSOLVED META L- EPA 20	00.7 REV 4.4	0.050	mg/L mg/L	1	Analyst: KH
Sodium ICP DISSOLVED META L- EPA 20 (Prep: - 5	00.7 REV 4.4 5/15/2020)		-		Analyst: KH 5/28/2020 3:27:00 PM
Sodium ICP DISSOLVED META L- EPA 20 (Prep: - ! Arsenic, Dissolved	00.7 REV 4.4 5/15/2020) ND	0.005	mg/L	1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM
Sodium ICP DISSOLVED META L- EPA 20 (Prep: - ! Arsenic, Dissolved Barium, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012	0.005 0.010	mg/L mg/L	1 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM
Sodium ICP DISSOLVED META L- EPA 20 (Prep: - 5 Arsenic, Dissolved Barium, Dissolved Boron, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114	0.005 0.010 0.050	mg/L mg/L mg/L	1 1 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM
Sodium CP DISSOLVED META L- EPA 20 (Prep: - 5 Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND	0.005 0.010 0.050 0.005	mg/L mg/L mg/L mg/L	1 1 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:31:00 PM
Sodium ICP DISSOLVED META L- EPA 20 (Prep: - { Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND 423	0.005 0.010 0.050 0.005 0.500	mg/L mg/L mg/L mg/L mg/L	1 1 1 1 10	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:31:00 PM 5/28/2020 3:27:00 PM
Sodium CP DISSOLVED META L- EPA 20 (Prep: - 4 Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND 423 ND	0.005 0.010 0.050 0.005 0.500 0.050	mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 10 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:31:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM
Sodium ICP DISSOLVED META L- EPA 20 (Prep: - 5 Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND 423 ND ND	0.005 0.010 0.050 0.005 0.500 0.050 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 10 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:31:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM
Sodium CP DISSOLVED META L- EPA 20 (Prep: - 5 Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND 423 ND ND 98.9	0.005 0.010 0.050 0.005 0.500 0.050 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 10 1 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:31:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM
CP DISSOLVED META L- EPA 20 (Prep: - 5) Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND 423 ND ND 98.9 ND	0.005 0.010 0.050 0.005 0.500 0.050 0.005 0.050	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 10 1 1 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:31:00 PM 5/28/2020 3:27:00 PM
Sodium ICP DISSOLVED META L- EPA 20 (Prep: - 5 Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND 423 ND ND 98.9 ND ND	0.005 0.010 0.050 0.005 0.500 0.050 0.005 0.050 0.020 0.010	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 10 1 1 1 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:31:00 PM 5/28/2020 3:27:00 PM
Sodium ICP DISSOLVED META L- EPA 20 (Prep: - 4) Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND 423 ND ND 98.9 ND ND ND	0.005 0.010 0.050 0.005 0.500 0.050 0.005 0.050 0.020 0.010	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 10 1 1 1 1 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:31:00 PM 5/28/2020 3:27:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved Sodium, Dissolved Sodium, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND 423 ND ND 98.9 ND ND ND ND 2.04 ND	0.005 0.010 0.050 0.005 0.500 0.050 0.050 0.020 0.010 0.050 0.005 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 10 1 1 1 1 1	
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved Sodium, Dissolved Sodium, Dissolved Sodium, Dissolved Sodium, Dissolved Sodium, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND 423 ND ND 98.9 ND ND ND 2.04 ND 10.1	0.005 0.010 0.050 0.005 0.500 0.050 0.050 0.050 0.050 0.050 0.050 0.050	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 10 1 1 1 1 1 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM
Arsenic, Dissolved Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved Sodium, Dissolved Sodium, Dissolved	00.7 REV 4.4 5/15/2020) ND 0.012 0.114 ND 423 ND ND 98.9 ND ND ND ND 2.04 ND	0.005 0.010 0.050 0.005 0.500 0.050 0.050 0.020 0.010 0.050 0.005 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 10 1 1 1 1 1	Analyst: KH 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:27:00 PM 5/28/2020 3:31:00 PM 5/28/2020 3:27:00 PM

CLIENT: Frontier Technical Associates **Client Sample ID:** OB-19-DG

Work Order: 200514015 Collection Date: 5/13/2020 12:39:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-010

Analyses	Result	RL Qual	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	380	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA 350.	1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	5/20/2020 10:23:14 AM
PHENOLS, TOTAL - EPA 420.1 REV 1970 (Prep: Method - 5/28/202					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 25400	C-2011				Analyst: CC
TDS (Residue, Filterable)	1640	5	mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 5310C-	2011				Analyst: NK
Total Organic Carbon	1.5	1.0	mg/L	1	5/19/2020 8:05:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: OB-20-DG

Work Order: 200514015 Collection Date: 5/13/2020 12:51:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-011

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5	/15/2020)				
Total Hardness (As CaCO3)	290	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
	/15/2020)				,
Arsenic	ND	0.005	mg/L	1	5/26/2020 2:04:00 PM
Barium	0.154	0.010	mg/L	1	5/26/2020 2:04:00 PM
Boron	0.973	0.050	mg/L	1	5/26/2020 2:04:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 2:04:00 PM
Calcium	69.9	0.050	mg/L	1	5/26/2020 2:04:00 PM
Iron	0.199	0.050	mg/L	1	5/26/2020 2:04:00 PM
Lead	ND	0.005	mg/L	1	5/26/2020 2:04:00 PM
Magnesium	28.1	0.050	mg/L	1	5/26/2020 2:04:00 PM
Manganese	0.189	0.020	mg/L	1	5/26/2020 2:04:00 PM
Molybdenum	ND	0.010	mg/L	1	5/26/2020 2:04:00 PM
Potassium	8.22	0.050	mg/L	1	5/26/2020 2:04:00 PM
Selenium	ND	0.005	mg/L	1	5/26/2020 2:04:00 PM
Sodium	142	0.500	mg/L	10	5/26/2020 2:07:00 PM
ICP DISSOLVED META L- EPA 20	0.7 REV 4.4				Analyst: KH
(Prep: - 5	/15/2020)				
Arsenic, Dissolved	ND	0.005	mg/L	1	5/28/2020 3:34:00 PM
,		0.000	9/ =	•	.,,
Barium, Dissolved	0.132	0.010	mg/L	1	5/28/2020 3:34:00 PM
•			-		5/28/2020 3:34:00 PM
Barium, Dissolved	0.132	0.010	mg/L	1	5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved	0.132 0.977	0.010 0.050	mg/L mg/L	1 1	5/28/2020 3:34:00 PN 5/28/2020 3:34:00 PN 5/28/2020 3:34:00 PN
Barium, Dissolved Boron, Dissolved	0.132 0.977 ND	0.010 0.050 0.005	mg/L mg/L mg/L	1 1 1	5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved	0.132 0.977 ND 71.1 ND	0.010 0.050 0.005 0.050	mg/L mg/L mg/L mg/L	1 1 1 1	
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved	0.132 0.977 ND 71.1 ND ND	0.010 0.050 0.005 0.050 0.050	mg/L mg/L mg/L mg/L mg/L	1 1 1 1	5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved	0.132 0.977 ND 71.1 ND ND 27.9	0.010 0.050 0.005 0.050 0.050 0.050	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1	5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved	0.132 0.977 ND 71.1 ND ND 27.9	0.010 0.050 0.005 0.050 0.050 0.005 0.005	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1	5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved	0.132 0.977 ND 71.1 ND ND 27.9 0.172	0.010 0.050 0.005 0.050 0.050 0.005 0.050 0.020	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1	5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved	0.132 0.977 ND 71.1 ND ND 27.9	0.010 0.050 0.005 0.050 0.050 0.005 0.050 0.020 0.010	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1	5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved	0.132 0.977 ND 71.1 ND ND 27.9 0.172 ND 8.05	0.010 0.050 0.005 0.050 0.050 0.005 0.050 0.020 0.010	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1 1	5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved Sodium, Dissolved	0.132 0.977 ND 71.1 ND ND 27.9 0.172 ND 8.05 ND 93.5	0.010 0.050 0.005 0.050 0.050 0.050 0.050 0.020 0.010 0.050 0.005 0.500	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1 1 1	5/28/2020 3:34:00 PM 5/28/2020 3:34:00 PM
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved Sodium, Dissolved Sodium, Dissolved	0.132 0.977 ND 71.1 ND ND 27.9 0.172 ND 8.05 ND 93.5	0.010 0.050 0.005 0.050 0.050 0.005 0.020 0.010 0.050 0.005 0.500	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1 1 1 1 1	5/28/2020 3:34:00 PM 5/28/2020 3:39:00 PM
Barium, Dissolved Boron, Dissolved Cadmium, Dissolved Calcium, Dissolved Iron, Dissolved Lead, Dissolved Magnesium, Dissolved Manganese, Dissolved Molybdenum, Dissolved Potassium, Dissolved Selenium, Dissolved	0.132 0.977 ND 71.1 ND ND 27.9 0.172 ND 8.05 ND 93.5	0.010 0.050 0.005 0.050 0.050 0.050 0.050 0.020 0.010 0.050 0.005 0.500	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	1 1 1 1 1 1 1 1 1 1	5/28/2020 3:34:00 PM 5/28/2020 3:39:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: OB-20-DG

Work Order: 200514015 Collection Date: 5/13/2020 12:51:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-011

PO#: Matrix: GROUNDWATER

Analyses	Result	RL Qua	Units	DF	Date Analyzed
ALKALINITY TO PH 4.5 -SM 2320B-20				Analyst: DAA	
Alkalinity, Total (As CaCO3)	480	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA 35	50.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.7	0.1	mg/L	1	5/20/2020 10:24:51 AM
PHENOLS, TOTAL - EPA 420.1 REV 1 (Prep: Method - 5/28/2					Analyst: KB
Phenolics, Total Recoverable	0.004	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 254	0C-2011				Analyst: CC
TDS (Residue, Filterable)	580	5	mg/L	1	5/20/2020
TOTAL ORGANIC CARBON - SM 5310				Analyst: NK	
Total Organic Carbon	ND	1.0	mg/L	1	5/19/2020 8:21:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: MH-2

Work Order: 200514015 **Collection Date:** 5/12/2020 12:20:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / **Lab Sample ID:** 200514015-012 **PO#:**

Matrix: LEACHATE

Analyses	Result	RL	Qual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/1	5/2020)				
Total Hardness (As CaCO3)	1081	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/1	5/2020)				
Arsenic	0.008	0.005	mg/L	1	5/26/2020 2:11:00 PM
Barium	0.028	0.010	mg/L	1	5/26/2020 2:11:00 PM
Boron	7.28	0.050	mg/L	1	5/26/2020 2:11:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 2:11:00 PM
Calcium	270	0.500	mg/L	10	5/26/2020 2:16:00 PM
Iron	0.702	0.050	mg/L	1	5/26/2020 2:11:00 PM
Lead	ND	0.005	mg/L	1	5/26/2020 2:11:00 PM
Magnesium	99.0	0.050	mg/L	1	5/26/2020 2:11:00 PM
Manganese	1.40	0.020	mg/L	1	5/26/2020 2:11:00 PM
Molybdenum	0.426	0.010	mg/L	1	5/26/2020 2:11:00 PM
Potassium	19.5	0.050	mg/L	1	5/26/2020 2:11:00 PM
Selenium	ND	0.005	mg/L	1	5/26/2020 2:11:00 PM
Sodium	64.5	0.500	mg/L	10	5/26/2020 2:16:00 PM
ANIONS BY ION CHROMATOGRAP	HY - EPA 300.0 R	EV 2.1			Analyst: CS
Chloride	6.45	2.00	mg/L	2	5/28/2020 4:53:58 PM
Chloride	ND	20.0	mg/L	20	5/28/2020 6:49:59 PM
Sulfate	933	40.0	mg/L	20	5/28/2020 6:49:59 PM
ALKALINITY TO PH 4.5 -SM 2320B-	2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	340	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	5/20/2020 10:31:19 AM
PHENOLS, TOTAL - EPA 420.1 REV (Prep: Method - 5/2					Analyst: KB
Phenolics, Total Recoverable	0.006	0.004	mg/L	1	6/1/2020
·		3.004	9, =	•	
TOTAL DISSOLVED SOLIDS - SM 2	540C-2011				Analyst: CC

CLIENT: Frontier Technical Associates

Client Sample ID: MH-2 Work Order: 200514015 **Collection Date:** 5/12/2020 12:20:00 PM

Reference: Plant ND GW / **Lab Sample ID:** 200514015-012

PO#: Matrix: LEACHATE

Analyses	Result	RL Qı	al Units	DF	Date Analyzed
TOTAL ORGANIC CARBON - SI				Analyst: NK	
Total Organic Carbon	5.0	1.0	mg/L	1	5/19/2020 8:38:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: MH-7

 Work Order:
 200514015
 Collection Date:
 5/12/2020 1:28:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-013

 PO#:
 Matrix:
 LEACHATE

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/2020)				
Total Hardness (As CaCO3)	2143	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/2020)				·
Arsenic	ND	0.005	mg/L	1	5/26/2020 2:20:00 PM
Barium	0.014	0.010	mg/L	1	5/26/2020 2:20:00 PM
Boron	0.306	0.050	mg/L	1	5/26/2020 2:20:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 2:20:00 PM
Calcium	574	0.500	mg/L	10	5/26/2020 2:27:00 PM
Iron	ND	0.050	mg/L	1	5/26/2020 2:20:00 PM
Lead	ND	0.005	mg/L	1	5/26/2020 2:20:00 PM
Magnesium	172	0.050	mg/L	1	5/26/2020 2:20:00 PM
Manganese	ND	0.020	mg/L	1	5/26/2020 2:20:00 PM
Molybdenum	ND	0.010	mg/L	1	5/26/2020 2:20:00 PM
Potassium	7.57	0.050	mg/L	1	5/26/2020 2:20:00 PM
Selenium	ND	0.005	mg/L	1	5/26/2020 2:20:00 PM
Sodium	74.9	0.500	mg/L	10	5/26/2020 2:27:00 PM
ANIONS BY ION CHROMATOGRAPHY - EI	PA 300.0 F	REV 2.1			Analyst: CS
Chloride	36.5	2.00	mg/L	2	5/28/2020 7:09:01 PM
Sulfate	1990	100	mg/L	50	5/28/2020 7:28:03 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	360	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA 350.1	REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.1	0.1	mg/L	1	5/20/2020 10:32:56 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/28/2020)				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-2011					Analyst: CC
TDS (Residue, Filterable)	3070	5	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates

 Work Order:
 200514015
 Collection Date:
 5/12/2020 1:28:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-013

PO#: Matrix: LEACHATE

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed
TOTAL ORGANIC CARBON - SM				Analyst: NK	
Total Organic Carbon	4.7	1.0	mg/L	1	5/19/2020 8:54:00 PM

Date: 09-Jun-20

Client Sample ID: MH-7

CLIENT: Frontier Technical Associates **Client Sample ID:** MH-16 PR

Work Order: 200514015 **Collection Date:** 5/12/2020 1:10:00 PM Reference: Plant ND GW / **Lab Sample ID:** 200514015-014 **PO#:**

Date: 09-Jun-20

Matrix: LEACHATE

Analyses	Result	RL (Qual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/1	5/2020)				
Total Hardness (As CaCO3)	1463	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/1	5/2020)				•
Arsenic	ND	0.005	mg/L	1	5/26/2020 2:31:00 PM
Barium	0.033	0.010	mg/L	1	5/26/2020 2:31:00 PM
Boron	38.9	0.050	mg/L	1	5/26/2020 2:31:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 2:31:00 PM
Calcium	522	5.00	mg/L	100	5/26/2020 2:34:00 PM
Iron	0.114	0.050	mg/L	1	5/26/2020 2:31:00 PM
Lead	ND	0.005	mg/L	1	5/26/2020 2:31:00 PM
Magnesium	38.4	0.050	mg/L	1	5/26/2020 2:31:00 PM
Manganese	ND	0.020	mg/L	1	5/26/2020 2:31:00 PM
Molybdenum	2.79	0.010	mg/L	1	5/26/2020 2:31:00 PM
Potassium	98.3	5.00	mg/L	100	5/26/2020 2:34:00 PM
Selenium	ND	0.005	mg/L	1	5/26/2020 2:31:00 PM
Sodium	514	5.00	mg/L	100	5/26/2020 2:34:00 PM
ANIONS BY ION CHROMATOGRAP	PHY - EPA 300.0 R	EV 2.1			Analyst: CS
Chloride	23.5	2.00	mg/L	2	5/28/2020 7:47:06 PM
Sulfate	2680	200	mg/L	100	5/28/2020 8:06:08 PM
ALKALINITY TO PH 4.5 -SM 2320B	-2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	160	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.2	0.1	mg/L	1	5/20/2020 10:34:37 AM
PHENOLS, TOTAL - EPA 420.1 REV					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2			-		Analyst: CC
TDS (Residue, Filterable)	3840	5	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates Client Sample ID: MH-16 PR

 Work Order:
 200514015
 Collection Date:
 5/12/2020 1:10:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-014

PO#: Matrix: LEACHATE

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed
TOTAL ORGANIC CARBON - S				Analyst: NK	
Total Organic Carbon	ND	1.0	mg/L	1	5/19/2020 9:11:00 PM

CLIENT: Frontier Technical Associates **Client Sample ID:** MH-16

Work Order: 200514015 **Collection Date:** 5/12/2020 12:58:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / **Lab Sample ID:** 200514015-015 **PO#:**

Matrix: LEACHATE

Analyses	Result	RL Qu	ual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/2020)				
Total Hardness (As CaCO3)	1371	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/2020)				
Arsenic	ND	0.005	mg/L	1	5/26/2020 2:38:00 PM
Barium	0.026	0.010	mg/L	1	5/26/2020 2:38:00 PM
Boron	3.55	0.050	mg/L	1	5/26/2020 2:38:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 2:38:00 PM
Calcium	442	0.500	mg/L	10	5/26/2020 2:42:00 PM
Iron	0.131	0.050	mg/L	1	5/26/2020 2:38:00 PM
Lead	ND	0.005	mg/L	1	5/26/2020 2:38:00 PM
Magnesium	64.8	0.050	mg/L	1	5/26/2020 2:38:00 PM
Manganese	ND	0.020	mg/L	1	5/26/2020 2:38:00 PM
Molybdenum	0.223	0.010	mg/L	1	5/26/2020 2:38:00 PM
Potassium	17.3	0.050	mg/L	1	5/26/2020 2:38:00 PM
Selenium	ND	0.005	mg/L	1	5/26/2020 2:38:00 PM
Sodium	194	0.500	mg/L	10	5/26/2020 2:42:00 PM
ANIONS BY ION CHROMATOGRAPHY - EI	PA 300.0 F	REV 2.1			Analyst: CS
Chloride	19.7	2.00	mg/L	2	5/28/2020 8:25:10 PM
Sulfate	890	40.0	mg/L	20	5/28/2020 10:02:27 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	410	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA 350.1 I	REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	5/20/2020 10:36:16 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/29/2020)				Analyst: KB
Phenolics, Total Recoverable	, ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-2				Analyst: CC	
TDS (Residue, Filterable)	1650	5	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates

Client Sample ID: MH-16 Work Order: 200514015 **Collection Date:** 5/12/2020 12:58:00 PM

Reference: Plant ND GW / **Lab Sample ID:** 200514015-015 **PO#:**

Matrix: LEACHATE

Analyses	Result	RL Qı	ıal Units	DF	Date Analyzed
TOTAL ORGANIC CARBON - S				Analyst: NK	
Total Organic Carbon	2.5	1.0	mg/L	1	5/19/2020 9:27:00 PM

CLIENT: Frontier Technical Associates **Client Sample ID:** MH-19

Work Order: 200514015 **Collection Date:** 5/12/2020 12:48:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / **Lab Sample ID:** 200514015-016 **PO#:**

Matrix: LEACHATE

Analyses	Result	RL	Qual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/20	20)				
Total Hardness (As CaCO3)	447	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/20	20)				
Arsenic	0.008	0.005	mg/L	1	5/26/2020 2:57:00 PM
Barium	0.102	0.010	mg/L	1	5/26/2020 2:57:00 PM
Boron	0.281	0.050	mg/L	1	5/26/2020 2:57:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 2:57:00 PM
Calcium	130	0.050	mg/L	1	5/26/2020 2:57:00 PM
Iron	0.098	0.050	mg/L	1	5/26/2020 2:57:00 PM
Lead	ND	0.005	mg/L	1	5/26/2020 2:57:00 PM
Magnesium	29.9	0.050	mg/L	1	5/26/2020 2:57:00 PM
Manganese	ND	0.020	mg/L	1	5/26/2020 2:57:00 PM
Molybdenum	ND	0.010	mg/L	1	5/26/2020 2:57:00 PM
Potassium	9.18	0.050	mg/L	1	5/26/2020 2:57:00 PM
Selenium	ND	0.005	mg/L	1	5/26/2020 2:57:00 PM
Sodium	27.7	0.050	mg/L	1	5/26/2020 2:57:00 PM
ANIONS BY ION CHROMATOGRAPHY -	EPA 300.0 R	EV 2.1			Analyst: CS
Chloride	6.84	2.00	mg/L	2	5/28/2020 10:40:49 PM
Sulfate	253	20.0	mg/L	10	5/28/2020 10:59:52 PM
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	210	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA 350.	1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	5/20/2020 10:37:53 AM
PHENOLS, TOTAL - EPA 420.1 REV 197 (Prep: Method - 5/29/20					Analyst: KB
Phenolics, Total Recoverable	, ND	0.004	mg/L	1	6/1/2020
TOTAL DISSOLVED SOLIDS - SM 25400	C-2011				Analyst: CC
TDS (Residue, Filterable)	645	5	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates

Client Sample ID: MH-19 Work Order: 200514015 **Collection Date:** 5/12/2020 12:48:00 PM

Reference: Plant ND GW / **Lab Sample ID:** 200514015-016

PO#: Matrix: LEACHATE

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
TOTAL ORGANIC CARBON - S				Analyst: NK	
Total Organic Carbon	3.2	1.0	mg/L	1	5/19/2020 9:43:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: SED-1A

Work Order: 200514015 Collection Date: 5/12/2020 12:28:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-017
PO#: Matrix: LEACHATE

Analyses	Result	RL (Qual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/	2020)				
Total Hardness (As CaCO3)	1537	5	mg/L CaCO3	1	5/26/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/	(2020)				,
Arsenic	0.008	0.005	mg/L	1	5/26/2020 3:01:00 PM
Barium	0.032	0.010	mg/L	1	5/26/2020 3:01:00 PM
Boron	4.14	0.050	mg/L	1	5/26/2020 3:01:00 PM
Cadmium	ND	0.005	mg/L	1	5/26/2020 3:01:00 PM
Calcium	457	0.500	mg/L	10	5/26/2020 3:05:00 PM
Iron	3.53	0.050	mg/L	1	5/26/2020 3:01:00 PM
Lead	ND	0.005	mg/L	1	5/26/2020 3:01:00 PM
Magnesium	96.4	0.050	mg/L	1	5/26/2020 3:01:00 PM
Manganese	0.697	0.020	mg/L	1	5/26/2020 3:01:00 PM
Molybdenum	0.159	0.010	mg/L	1	5/26/2020 3:01:00 PM
Potassium	23.1	0.050	mg/L	1	5/26/2020 3:01:00 PM
Selenium	ND	0.005	mg/L	1	5/26/2020 3:01:00 PM
Sodium	110	0.500	mg/L	10	5/26/2020 3:05:00 PM
ANIONS BY ION CHROMATOGRAPH	Y - EPA 300.0 R	EV 2.1			Analyst: CS
Chloride	7.15	2.00	mg/L	2	5/28/2020 11:18:54 PM
Sulfate	1210	40.0	mg/L	20	5/28/2020 11:37:56 PM
ALKALINITY TO PH 4.5 -SM 2320B-20) 11				Analyst: DAA
Alkalinity, Total (As CaCO3)	260	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA 3	50.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.3	0.1	mg/L	1	5/20/2020 10:39:29 AM
PHENOLS, TOTAL - EPA 420.1 REV 1 (Prep: Method - 5/29/					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/4/2020
TOTAL DISSOLVED SOLIDS - SM 254	40C-2011				Analyst: CC
TDS (Residue, Filterable)	1850	5	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates

Client Sample ID: SED-1A Work Order: 200514015 **Collection Date:** 5/12/2020 12:28:00 PM

Reference: Plant ND GW / **Lab Sample ID:** 200514015-017 **PO#:**

Matrix: LEACHATE

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
TOTAL ORGANIC CARBON - S				Analyst: NK	
Total Organic Carbon	1.8	1.0	mg/L	1	5/19/2020 11:11:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: SED-1B

Work Order: 200514015 Collection Date: 5/12/2020 12:47:00 PM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-018
PO#: Matrix: LEACHATE

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/2	020)				
Total Hardness (As CaCO3)	1167	5	mg/L CaCO3	1	5/27/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/2	020)				·
Arsenic	0.020	0.005	mg/L	1	5/27/2020 2:25:00 PM
Barium	0.029	0.010	mg/L	1	5/27/2020 2:25:00 PM
Boron	17.9	0.050	mg/L	1	5/27/2020 2:25:00 PM
Cadmium	ND	0.005	mg/L	1	5/27/2020 2:25:00 PM
Calcium	328	0.500	mg/L	10	5/27/2020 2:31:00 PM
Iron	4.23	0.050	mg/L	1	5/27/2020 2:25:00 PM
Lead	ND	0.005	mg/L	1	5/27/2020 2:25:00 PM
Magnesium	84.4	0.050	mg/L	1	5/27/2020 2:25:00 PM
Manganese	0.469	0.020	mg/L	1	5/27/2020 2:25:00 PM
Molybdenum	1.22	0.010	mg/L	1	5/27/2020 2:25:00 PM
Potassium	78.1	0.050	mg/L	1	5/27/2020 2:25:00 PM
Selenium	0.012	0.005	mg/L	1	5/27/2020 2:25:00 PM
Sodium	351	0.500	mg/L	10	5/27/2020 2:31:00 PM
ANIONS BY ION CHROMATOGRAPHY	- EPA 300.0 R	EV 2.1			Analyst: CS
Chloride	13.7	2.00	mg/L	2	5/28/2020 11:56:59 PM
Sulfate	1640	100	mg/L	50	5/29/2020 12:16:00 AM
ALKALINITY TO PH 4.5 -SM 2320B-201	1				Analyst: DAA
Alkalinity, Total (As CaCO3)	280	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA 350	0.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.3	0.1	mg/L	1	5/20/2020 10:41:06 AM
PHENOLS, TOTAL - EPA 420.1 REV 19 (Prep: Method - 5/29/2					Analyst: KB
Phenolics, Total Recoverable	, ND	0.004	mg/L	1	6/4/2020
TOTAL DISSOLVED SOLIDS - SM 2540			-		Analyst: CC
TDS (Residue, Filterable)	2560	5	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates

Client Sample ID: SED-1B Work Order: 200514015 **Collection Date:** 5/12/2020 12:47:00 PM

Reference: Plant ND GW / **Lab Sample ID:** 200514015-018

PO#: Matrix: LEACHATE

Analyses	Result	RL Qu	al Units	DF	Date Analyzed
TOTAL ORGANIC CARBON - SI		Analyst: NK			
Total Organic Carbon	6.2	1.0	mg/L	1	5/19/2020 11:27:00 PM

CLIENT: Frontier Technical Associates Client Sample ID: SP-D

Work Order: 200514015 **Collection Date:** 5/12/2020 2:02:00 PM Reference: Plant ND GW / **Lab Sample ID:** 200514015-019 **PO#:**

Date: 09-Jun-20

Matrix: LEACHATE

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15	/2020)				
Total Hardness (As CaCO3)	194	5	mg/L CaCO3	1	5/27/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15	/2020)				
Arsenic	ND	0.005	mg/L	1	5/27/2020 2:40:00 PM
Barium	0.059	0.010	mg/L	1	5/27/2020 2:40:00 PM
Boron	0.578	0.050	mg/L	1	5/27/2020 2:40:00 PM
Cadmium	ND	0.005	mg/L	1	5/27/2020 2:40:00 PM
Calcium	59.3	0.050	mg/L	1	5/27/2020 2:40:00 PM
Iron	0.451	0.050	mg/L	1	5/27/2020 2:40:00 PM
Lead	ND	0.005	mg/L	1	5/27/2020 2:40:00 PM
Magnesium	11.0	0.050	mg/L	1	5/27/2020 2:40:00 PM
Manganese	0.068	0.020	mg/L	1	5/27/2020 2:40:00 PM
Molybdenum	0.017	0.010	mg/L	1	5/27/2020 2:40:00 PM
Potassium	4.75	0.050	mg/L	1	5/27/2020 2:40:00 PM
Selenium	ND	0.005	mg/L	1	5/27/2020 2:40:00 PM
Sodium	29.0	0.050	mg/L	1	5/27/2020 2:40:00 PM
ANIONS BY ION CHROMATOGRAPH	IY - EPA 300.0 R	EV 2.1			Analyst: CS
Chloride	41.8	2.00	mg/L	2	5/29/2020 12:35:03 AM
Sulfate	86.5	4.00	mg/L	2	5/29/2020 12:35:03 AM
ALKALINITY TO PH 4.5 -SM 2320B-2	011				Analyst: DAA
Alkalinity, Total (As CaCO3)	110	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA 3	50.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	5/20/2020 10:42:43 AM
PHENOLS, TOTAL - EPA 420.1 REV (Prep: Method - 5/29					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/4/2020
TOTAL DISSOLVED SOLIDS - SM 25	40C-2011				Analyst: CC
TDS (Residue, Filterable)	200	5	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates

Work Order: 200514015 Collection Date: 5/12/2020 2:02:00 PM

Reference: Plant ND GW / Lab Sample ID: 200514015-019
PO#: Matrix: LEACHATE

Analyses	Result	RL Q	ıal Units	DF	Date Analyzed
TOTAL ORGANIC CARBON - SM 5310C-2011					Analyst: NK
Total Organic Carbon	5.7	1.0	mg/L	1	5/19/2020 11:44:00 PM

Date: 09-Jun-20

Client Sample ID: SP-D

CLIENT: Frontier Technical Associates Client Sample ID: SP-N

Work Order: 200514015 **Collection Date:** 5/12/2020 1:16:00 PM Reference: Plant ND GW / **Lab Sample ID:** 200514015-020 **PO#:**

Date: 09-Jun-20

Matrix: LEACHATE

Analyses	Result	RL Q	Qual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/1	5/2020)				
Total Hardness (As CaCO3)	158	5	mg/L CaCO3	1	5/27/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/1	5/2020)				•
Arsenic	ND	0.005	mg/L	1	5/27/2020 2:50:00 PM
Barium	0.086	0.010	mg/L	1	5/27/2020 2:50:00 PM
Boron	ND	0.050	mg/L	1	5/27/2020 2:50:00 PM
Cadmium	ND	0.005	mg/L	1	5/27/2020 2:50:00 PM
Calcium	49.3	0.050	mg/L	1	5/27/2020 2:50:00 PM
Iron	0.709	0.050	mg/L	1	5/27/2020 2:50:00 PM
Lead	ND	0.005	mg/L	1	5/27/2020 2:50:00 PM
Magnesium	8.52	0.050	mg/L	1	5/27/2020 2:50:00 PM
Manganese	0.100	0.020	mg/L	1	5/27/2020 2:50:00 PM
Molybdenum	ND	0.010	mg/L	1	5/27/2020 2:50:00 PM
Potassium	3.22	0.050	mg/L	1	5/27/2020 2:50:00 PM
Selenium	ND	0.005	mg/L	1	5/27/2020 2:50:00 PM
Sodium	33.7	0.050	mg/L	1	5/27/2020 2:50:00 PM
ANIONS BY ION CHROMATOGRAP	HY - EPA 300.0 R	EV 2.1			Analyst: CS
Chloride	63.0	2.00	mg/L	2	5/29/2020 2:32:43 AM
Sulfate	31.7	4.00	mg/L	2	5/29/2020 2:32:43 AM
ALKALINITY TO PH 4.5 -SM 2320B-	2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	110	10	mgCaCO3/L	1	5/20/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	5/20/2020 10:44:22 AM
PHENOLS, TOTAL - EPA 420.1 REV (Prep: Method - 5/2					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/4/2020
TOTAL DISSOLVED SOLIDS - SM 2					Analyst: CC
TDS (Residue, Filterable)	220	5	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates

 Work Order:
 200514015
 Collection Date:
 5/12/2020 1:16:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-020

PO#: Matrix: LEACHATE

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed
TOTAL ORGANIC CARBON - SM		Analyst: NK			
Total Organic Carbon	4.4	1.0	mg/L	1	5/20/2020 12:01:00 AM

Date: 09-Jun-20

Client Sample ID: SP-N

CLIENT: Frontier Technical Associates Client Sample ID: SP-S

Work Order: 200514015 Collection Date: 5/12/2020 11:55:00 AM

Date: 09-Jun-20

Reference: Plant ND GW / Lab Sample ID: 200514015-021

PO#: Matrix: LEACHATE

Analyses	Result	RL	Qual Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/2020))				
Total Hardness (As CaCO3)	135	5	mg/L CaCO3	1	5/27/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/15/2020)				•
Arsenic	ND	0.005	mg/L	1	5/27/2020 2:55:00 PM
Barium	0.069	0.010	mg/L	1	5/27/2020 2:55:00 PM
Boron	0.092	0.050	mg/L	1	5/27/2020 2:55:00 PM
Cadmium	ND	0.005	mg/L	1	5/27/2020 2:55:00 PM
Calcium	40.8	0.050	mg/L	1	5/27/2020 2:55:00 PM
Iron	1.26	0.050	mg/L	1	5/27/2020 2:55:00 PM
Lead	ND	0.005	mg/L	1	5/27/2020 2:55:00 PM
Magnesium	8.15	0.050	mg/L	1	5/27/2020 2:55:00 PM
Manganese	0.235	0.020	mg/L	1	5/27/2020 2:55:00 PM
Molybdenum	ND	0.010	mg/L	1	5/27/2020 2:55:00 PM
Potassium	2.74	0.050	mg/L	1	5/27/2020 2:55:00 PM
Selenium	ND	0.005	mg/L	1	5/27/2020 2:55:00 PM
Sodium	15.8	0.050	mg/L	1	5/27/2020 2:55:00 PM
ANIONS BY ION CHROMATOGRAPHY - E	PA 300.0 R	EV 2.1			Analyst: CS
Chloride	26.1	2.00	mg/L	2	5/29/2020 3:10:48 AM
Sulfate	39.5	4.00	mg/L	2	5/29/2020 3:10:48 AM
ALKALINITY TO PH 4.5 -SM 2320B-2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	92	5	mgCaCO3/L	1	5/21/2020
AMMONIA (NON-DISTILLED) - EPA 350.1	REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	0.2	0.1	mg/L	1	5/20/2020 10:49:17 AM
PHENOLS, TOTAL - EPA 420.1 REV 1978 (Prep: Method - 5/29/2020))				Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/4/2020
TOTAL DISSOLVED SOLIDS - SM 2540C-2	2011				Analyst: CC
101AL DIGGOLVED GOLIDG - GIVI 23400-7	2011				ruidiyət. CC
TDS (Residue, Filterable)	150	5	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates

Client Sample ID: SP-S Work Order: 200514015 **Collection Date:** 5/12/2020 11:55:00 AM

Reference: Plant ND GW / **Lab Sample ID:** 200514015-021

PO#: Matrix: LEACHATE

Analyses	Result	RL Qu	ial Units	DF	Date Analyzed
TOTAL ORGANIC CARBON - SM 5310C-2011					Analyst: NK
Total Organic Carbon	5.0	1.0	mg/L	1	5/20/2020 12:17:00 AM

CLIENT: Frontier Technical Associates Client Sample ID: MH-13

 Work Order:
 200514015
 Collection Date:
 5/12/2020 1:03:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-022

 PO#:
 Matrix:
 LEACHATE

Analyses	Result	RL Qu	ıal Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/1	5/2020)				
Total Hardness (As CaCO3)	1044	5	mg/L CaCO3	1	5/27/2020
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 5/1	5/2020)				
Aluminum	ND	0.100	mg/L	1	5/27/2020 3:03:00 PM
Arsenic	0.029	0.005	mg/L	1	5/27/2020 3:03:00 PM
Barium	0.037	0.010	mg/L	1	5/27/2020 3:03:00 PM
Boron	27.5	0.500	mg/L	10	5/27/2020 3:42:00 PM
Cadmium	ND	0.005	mg/L	1	5/27/2020 3:03:00 PM
Calcium	290	0.500	mg/L	10	5/27/2020 3:42:00 PM
Chromium	0.005	0.005	mg/L	1	5/27/2020 3:03:00 PM
Copper	ND	0.005	mg/L	1	5/27/2020 3:03:00 PM
Iron	0.091	0.050	mg/L	1	5/27/2020 3:03:00 PM
Lead	ND	0.005	mg/L	1	5/27/2020 3:03:00 PM
Magnesium	77.7	0.050	mg/L	1	5/27/2020 3:03:00 PM
Manganese	0.127	0.020	mg/L	1	5/27/2020 3:03:00 PM
Molybdenum	1.83	0.010	mg/L	1	5/27/2020 3:03:00 PM
Nickel	ND	0.020	mg/L	1	5/27/2020 3:03:00 PM
Potassium	79.6	0.500	mg/L	10	5/27/2020 3:42:00 PM
Selenium	0.028	0.005	mg/L	1	5/27/2020 3:03:00 PM
Sodium	483	0.500	mg/L	10	5/27/2020 3:42:00 PM
Zinc	ND	0.010	mg/L	1	5/27/2020 3:03:00 PM
MERCURY - EPA 245.1 REV 3.0					Analyst: AVB
(Prep: E245.1 - 5/19	9/2020)				
Mercury	ND	0.0002	mg/L	1	5/19/2020 1:17:47 PM
ANIONS BY ION CHROMATOGRAPI	HY - EPA 300.0 R	EV 2.1			Analyst: CS
Chloride	16.7	2.00	mg/L	2	5/29/2020 3:29:50 AM
Sulfate	1720	100	mg/L	50	5/29/2020 3:48:52 AM
ALKALINITY TO PH 4.5 -SM 2320B-2	2011				Analyst: DAA
Alkalinity, Total (As CaCO3)	280	10	mgCaCO3/L	1	5/21/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0				Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	mg/L	1	5/20/2020 10:50:57 AM

CLIENT: Frontier Technical Associates Client Sample ID: MH-13

 Work Order:
 200514015
 Collection Date:
 5/12/2020 1:03:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-022

Date: 09-Jun-20

PO#: Matrix: LEACHATE

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
PHENOLS, TOTAL - EPA 420.1 REV (Prep: Method - 5/29					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/4/2020
TOTAL DISSOLVED SOLIDS - SM 25	540C-2011				Analyst: CC
TDS (Residue, Filterable)	2690	5	mg/L	1	5/18/2020
TOTAL ORGANIC CARBON - SM 53	10C-2011				Analyst: NK
Total Organic Carbon	8.3	1.0	mg/L	1	5/20/2020 12:53:00 AM
TOTAL SUSPENDED SOLIDS - SM 2540D-2011 (Prep: Gen Prep - 5/18/2020)					Analyst: JW
TSS (Residue, Non-Filterable)	16.6	2.0	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates **Client Sample ID:** MH-29

Work Order: 200514015 **Collection Date:** 5/12/2020 1:45:00 PM Reference: Plant ND GW / **Lab Sample ID:** 200514015-023 **PO#:**

Date: 09-Jun-20

Matrix: LEACHATE

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
HARDNESS - EPA 200.7 REV 4.4						Analyst: KH
(Prep: - 5/15	5/2020)					
Total Hardness (As CaCO3)	1318	5		mg/L CaCO3	1	5/27/2020
ICP METALS - EPA 200.7 REV 4.4						Analyst: KH
(Prep: - 5/15	5/2020)					·
Aluminum	ND	0.100		mg/L	1	5/27/2020 3:45:00 PM
Arsenic	ND	0.005		mg/L	1	5/27/2020 3:45:00 PM
Barium	0.046	0.010		mg/L	1	5/27/2020 3:45:00 PM
Boron	0.137	0.050		mg/L	1	5/27/2020 3:45:00 PM
Cadmium	ND	0.005		mg/L	1	5/27/2020 3:45:00 PM
Calcium	365	0.500	Z	mg/L	10	5/27/2020 3:50:00 PM
Chromium	ND	0.005		mg/L	1	5/27/2020 3:45:00 PM
Copper	ND	0.005		mg/L	1	5/27/2020 3:45:00 PM
Iron	0.104	0.050	Z	mg/L	1	5/27/2020 3:45:00 PM
Lead	ND	0.005		mg/L	1	5/27/2020 3:45:00 PM
Magnesium	98.6	0.050		mg/L	1	5/27/2020 3:45:00 PM
Manganese	1.05	0.020		mg/L	1	5/27/2020 3:45:00 PM
Molybdenum	ND	0.010		mg/L	1	5/27/2020 3:45:00 PM
Nickel	ND	0.020		mg/L	1	5/27/2020 3:45:00 PM
Potassium	2.29	0.050		mg/L	1	5/27/2020 3:45:00 PM
Selenium	ND	0.005		mg/L	1	5/27/2020 3:45:00 PM
Sodium	27.9	0.050		mg/L	1	5/27/2020 3:45:00 PM
Zinc	ND	0.010		mg/L	1	5/27/2020 3:45:00 PM
MERCURY - EPA 245.1 REV 3.0						Analyst: AVB
(Prep: E245.1 - 5/15	5/2020)					•
Mercury	ND	0.0002		mg/L	1	5/15/2020 10:47:37 AM
ANIONS BY ION CHROMATOGRAPH	IY - EPA 300.0 R	EV 2.1				Analyst: CS
Chloride	19.2	2.00		mg/L	2	5/29/2020 4:07:54 AM
Sulfate	533	40.0		mg/L	20	5/29/2020 4:26:56 AM
ALKALINITY TO PH 4.5 -SM 2320B-2	2011					Analyst: DAA
Alkalinity, Total (As CaCO3)	560	10		mgCaCO3/L	1	5/21/2020
AMMONIA (NON-DISTILLED) - EPA	350.1 REV 2.0					Analyst: NK
Nitrogen, Ammonia (As N)	ND	0.1	N	mg/L	1	5/20/2020 10:52:35 AM

CLIENT: Frontier Technical Associates Client Sample ID: MH-29

 Work Order:
 200514015
 Collection Date:
 5/12/2020 1:45:00 PM

 Reference:
 Plant ND GW /
 Lab Sample ID:
 200514015-023

Date: 09-Jun-20

PO#: Matrix: LEACHATE

Analyses	Result	RL Qı	ual Units	DF	Date Analyzed
PHENOLS, TOTAL - EPA 420.1 REV (Prep: Method - 5/2					Analyst: KB
Phenolics, Total Recoverable	ND	0.004	mg/L	1	6/4/2020
TOTAL DISSOLVED SOLIDS - SM 2	540C-2011				Analyst: CC
TDS (Residue, Filterable)	1310	5	mg/L	1	5/19/2020
TOTAL ORGANIC CARBON - SM 53	310C-2011				Analyst: NK
Total Organic Carbon	5.0	1.0	mg/L	1	5/20/2020 1:10:00 AM
TOTAL SUSPENDED SOLIDS - SM (Prep: Gen Prep - 5/1					Analyst: JW
TSS (Residue, Non-Filterable)	ND	1.0	mg/L	1	5/18/2020

CLIENT: Frontier Technical Associates

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

Date: 09-Jun-20

MS	SeqNo: 2842122 Samp ID: 200514015-001	(BR-14-UG)	, , ,					stNo: E1631 nits: ng/L	Anal		2842 15/2020	
Analyte Mercury		Result 8.62	<u>PQL</u> 0.500	SPK value 12.5	<u>SPK Ref Val</u> 0.777	<u>%REC</u> 62.7	LowLimit 71	HighLimit 125	RPD Ref Val 0	<u>%RPD</u> 0	RPDLimit	<u>Qual</u> S
MSD	SeqNo: 2842123 Samp ID: 200514015-001	(BR-14-UG)		•	Pate:5/14/2020 Ref:(1631E)			stNo: E1631 nits: ng/L	Δnal		2 2842 15/2020	
				ιισριν	ei.(1031E)		Oil	າເວ. IIY/∟	Anai	yolo Dale. Ji	13/2020	

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

ms	SeqNo: 2841609			PrepDate	e:5/15/2020		Tes	tNo: E245.1		RunNo: 182836	
	Samp ID: 200514073-001			PrepRef.	:(E245.1)		Un	its: mg/L	Ana	lysis Date: 5/15/2020	
Analyte		Result	<u>PQL</u>	SPK value SI	PK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPDLimit	Qual
Mercury		0.002133	0.000200	0.002	0	107	75.8	125	0	0	
dup	SeqNo: 2841608			PrepDate	e:5/15/2020		Tes	tNo: E245.1		RunNo: 182836	
	Samp ID: 200514073-001			PrepRef.	7		Un	its: mg/L	Ana	lysis Date: 5/15/2020	
Analyte		Result	<u>PQL</u>	SPK value SI	PK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPDLimit	Qual
Mercury		ND	0.000200	0	0	0	0	0	0	0 16.	,)

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

BatchID: 79500

MS	SeqNo: 2848358 Samp ID: 200514015-001F	(BR-14-UG)		PrepE PrepR	Pate:5/15/2020 Ref:			tNo: E200.7 its: mg/L	-	_	83203 /28/2020	
<u>Analyte</u>		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic,	Dissolved	0.03207	0.00500	0.04	0.003373	71.7	75	123	0	0		S
Barium,	Dissolved	2.264	0.0100	2	0.1874	104	75	124	0	0		
Cadmiun	n, Dissolved	0.05017	0.00500	0.05	0	100	75	125	0	0		
Iron, Dis	solved	1.005	0.0500	1	0.01588	98.9	75	120	0	0		
Lead, Dis	ssolved	0.0196	0.00500	0.02	0.001003	93	75	125	0	0		
Mangane	ese, Dissolved	0.5033	0.0200	0.5	0.02549	95.6	75	115	0	0		
Selenium	n, Dissolved	0.008088	0.00500	0.01	0	80.9	75	125	0	0		
DUP	SeqNo: 2848357			PrepD	Pate:5/15/2020		Tes	tNo: E200.7	 F	RunNo: 1	83203	
	Samp ID: 200514015-001F			PrepR	Ref:		Un	its: mg/L	Ana	lysis Date: 5	/28/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic,	Dissolved	ND	0.00500	0	0	0	0	0	0.003373	0	17.3	
Barium,	Dissolved	0.1845	0.0100	0	0	0	0	0	0.1874	1.57	15.4	
Boron, D	issolved	0.1702	0.0500	0	0	0	0	0	0.1729	1.59	18.9	
Cadmiun	n, Dissolved	ND	0.00500	0	0	0	0	0	0	0	20	
Calcium,	Dissolved	92.04	0.0500	0	0	0	0	0	90.42	1.78	13.9	
Iron, Dis	solved	ND	0.0500	0	0	0	0	0	0.01588	0	17.9	
Lead, Dis	ssolved	ND	0.00500	0	0	0	0	0	0.001003	0	22	
Magnesi	um, Dissolved	38.09	0.0500	0	0	0	0	0	37.72	0.974	13.7	
Mangane	ese, Dissolved	0.02536	0.0200	0	0	0	0	0	0.02549	0.496	17.2	
Molybde	num, Dissolved	ND	0.0100	0	0	0	0	0	0	0	17.3	
Potassiu	m, Dissolved	4.021	0.0500	0	0	0	0	0	4.017	0.0946	15.2	
Selenium	n, Dissolved	ND	0.00500	0	0	0	0	0	0	0	16.6	
	Dissolved	24.31	0.0500				0		24.54	0.950	15	

Qualifiers:

Work Order: 200514015 **Project:** Plant ND GW

ANALYTICAL QC SUMMARY REPORT

MS	SeqNo: 2845675			Prepl	Date:5/15/2020		Tes	tNo: E200.8		RunNo: 1	83046	
	Samp ID: 200514015-001	(BR-14-UG)		Prepl	Ref:		Un	its: mg/L	Ana	alysis Date: 5	/21/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		0.3674	0.000400	0.5	0.00007343	73.5	70	130	0	0		
Arsenic		0.03945	0.00100	0.04	0.005748	84.2	70	130	0	0		
Barium		1.617	0.00200	2	0.1582	72.9	70	130	0	0		
Cadmium		0.04421	0.00100	0.05	0	88.4	70	130	0	0		
Lead		0.01956	0.00100	0.02	0.0002019	96.8	70	130	0	0		
Selenium		0.007367	0.00100	0.01	0	73.7	70	130	0	0		
MS	SeqNo: 2845676			Prepl	Date:5/15/2020		Tes	tNo: E200.8		RunNo: 1	83046	
	Samp ID: 200514015-001	(BR-14-UG)		Prepl	Ref:		Un	its: mg/L	Ana		/21/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Iron		1.412	0.200	1	0.2537	116	70	130	0	0		
Mangane	se	0.6191	0.0500	0.5	0.02041	120	70	130	0	0		
DUP	SeqNo: 2845674			Prepl	Date:5/15/2020		Tes	tNo: E200.8		RunNo: 1	83046	
	Samp ID: 200514015-001			Prepl	Ref:			its: mg/L	Ana	alysis Date: 5		
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		ND	0.000400	0	0	0	0	0	0.00007343	0	20	
Arsenic		0.005702	0.00100	0	0	0	0	0	0.005748	0.806	20	
Barium		0.1623	0.00200	0	0	0	0	0	0.1582	2.56	20	
Cadmium		ND	0.00100	0	0	0	0	0	0	0	20	
Iron		0.2409	0.0200	0	0	0	0	0	0.2537	5.20	20	
Lead		ND	0.00100	0	0	0	0	0	0.0002019	0	20	
Mangane	se	0.02001	0.00500	0	0	0	0	0	0.02041	1.95	20	
Selenium		ND	0.00100	0	0	0	0	0	0	0	20	
MS	SeqNo: 2848284			Prepi	Date:5/15/2020		Tes	tNo: E200.7		RunNo: 1	83203	
	Samp ID: 200514015-001	(BR-14-UG)		Prepl	Ref:		Un	its: mg/L	Ana	alysis Date: 5	/28/2020	
<u>Analyte</u>		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony		0.5138	0.0600	0.5	0	103	80.6	120	0	0		
Arsenic		0.03244	0.00500	0.04	0.003709	71.8	75	125	0	0		S
Barium		2.331	0.0100	2	0.1752	108	75	119	0	0		
Qualifiers	s: ND - Not Detected at	the Reporting Limit		S - Sp	ike Recovery outside	e accepted rec	overy limits]	B - Analyte detect	ed in the associa	ated Method B	lank

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

BatchID: 79502

MS	SeqNo: 2848284			PrepL	Pate:5/15/2020		Tes	tNo: E200.7		RunNo: 1	83203	
	Samp ID: 200514015-001	(BR-14-UG)		Prepl	Ref:		Un	its: mg/L	Ana		/28/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Cadmium	า	0.05077	0.00500	0.05	0	102	75	118	0	0		
Iron		1.225	0.0500	1	0.1964	103	75	122	0	0		
Lead		0.01994	0.00500	0.02	0.001194	93.7	75	125	0	0		
Mangane	ese	0.5137	0.0200	0.5	0.02901	96.9	75	123	0	0		
Selenium	1	0.007083	0.00500	0.01	0	70.8	75	125	0	0		S
DUP	SeqNo: 2848283			PrepL	Date:5/15/2020		Tes	tNo: E200.7		RunNo: 1	83203	
	Samp ID: 200514015-001			Prepl	Ref:			its: mg/L	Ana	alysis Date: 5	/28/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Antimony	/	ND	0.0600	0	0	0	0	0	0	0	20	
Arsenic		ND	0.00500	0	0	0	0	0	0.003709	0	20	
Barium		0.1881	0.0100	0	0	0	0	0	0.1752	7.12	20	
Boron		0.1734	0.0500	0	0	0	0	0	0.1641	5.52	20	
Cadmiun	n	ND	0.00500	0	0	0	0	0	0	0	20	
Calcium		91.04	0.0500	0	0	0	0	0	91.66	0.685	13.9	
Iron		0.1818	0.0500	0	0	0	0	0	0.1964	7.73	19.4	
Lead		ND	0.00500	0	0	0	0	0	0.001194	0	18.9	
Lithium		ND	0.0500	0	0	0	0	0	0	0	18.8	
Magnesi	um	37.94	0.0500	0	0	0	0	0	38.12	0.486	15.6	
Mangane	ese	0.02851	0.0200	0	0	0	0	0	0.02901	1.75	16.6	
Molybder	num	ND	0.0100	0	0	0	0	0	0	0	15.3	
Potassiu	m	4.023	0.0500	0	0	0	0	0	3.979	1.09	15.2	
Selenium	1	ND	0.00500	0	0	0	0	0	0	0	15	
Sodium		24.54	0.0500	0	0	0	0	0	23.64	3.72	15.7	

Qualifiers:

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

MS	SeqNo: 2847660			Prepi	Date:5/15/2020		Tes	tNo: E200.7		RunNo: 1	83173	
	Samp ID: 200514015-023	(MH-29)		Prepi	Ref:		Un	its: mg/L	Ana	alysis Date: 5	/27/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminur	m	1.884	0.100	2	0	94.2	75	124	0	0		
Arsenic		0.03198	0.00500	0.04	0.001169	77	75	125	0	0		
Barium		2.113	0.0100	2	0.04636	103	75	119	0	0		
Cadmiun	m	0.05081	0.00500	0.05	0	102	75	118	0	0		
Chromiu	m	0.2137	0.00500	0.2	0	107	75	124	0	0		
Copper		0.2799	0.00500	0.25	0.003871	110	75	125	0	0		
Iron		1.089	0.0500	1	0.1039	98.5	75	122	0	0		
Lead		0.01712	0.00500	0.02	0	85.6	75	125	0	0		
Mangane	ese	1.609	0.0200	0.5	1.054	111	75	123	0	0		
Nickel		0.4923	0.0200	0.5	0.001913	98.1	75.9	121	0	0		
Seleniun	n	0.00774	0.00500	0.01	0	77.4	75	125	0	0		
Zinc		0.543	0.0100	0.5	0	109	76.9	125	0	0		
DUP	SeqNo: 2847658			Prepi	Date:5/15/2020		Tes	tNo: E200.7		RunNo: 1	83173	
	Samp ID: 200514015-023			Prepi	Ref:		Un	its: mg/L	Ana	alysis Date: 5	/27/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Aluminur	m	ND	0.100	0	0	0	0	0	0	0	13.1	
Arsenic		ND	0.00500	0	0	0	0	0	0.001169	0	20	
Barium		0.04704	0.0100	0	0	0	0	0	0.04636	1.47	20	
Boron		0.1355	0.0500	0	0	0	0	0	0.1368	0.970	20	
Cadmiun	m	ND	0.00500	0	0	0	0	0	0	0	20	
Chromiu	m	ND	0.00500	0	0	0	0	0	0	0	20	
Copper		ND	0.00500	0	0	0	0	0	0.003871	0	20	
Iron		0.165	0.0500	0	0	0	0	0	0.1039	45.4	19.4	Z
Lead		ND	0.00500	0	0	0	0	0	0	0	18.9	
Magnesi	um	99.33	0.0500	0	0	0	0	0	98.57	0.770	15.6	
Mangane	ese	1.057	0.0200	0	0	0	0	0	1.054	0.275	16.6	
Molybde	num	ND	0.0100	0	0	0	0	0	0.0005437	0	15.3	
Nickel		ND	0.0200	0	0	0	0	0	0.001913	0	13	
Potassiu	m	2.323	0.0500	0	0	0	0	0	2.294	1.22	15.2	
Seleniun	n	ND	0.00500	0	0	0	0	0	0	0	15	
Sodium		28.25	0.0500	0	0	0	0	0	27.88	1.29	15.7	

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits

R - RPD outside accepted recovery limits

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

DUP	SeqNo: 2847658 Samp ID: 200514015-023		PrepDate:5/15/2020 PrepRef:					tNo: E200.7 its: mg/L	Ana		1 83173 5/27/2020	
Analyte Zinc		Result ND	<u>PQL</u> 0.0100	SPK value 0	SPK Ref Val 0	<u>%REC</u> 0	LowLimit 0	HighLimit 0	RPD Ref Val 0	<u>%RPD</u> 0	RPDLimit 16.2	Qual
DUP	SeqNo: 2847659			PrepD	Pate:5/15/2020		Tes	tNo: E200.7		RunNo: 1	183173	
	Came ID. 000E4404E 000								_			
	Samp ID: 200514015-023			PrepR	Ref:		Un	its: mg/L	Ana	lysis Date: 5	5/27/2020	
<u>Analyte</u>	Samp ID: 200514015-023	Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	Un <u>LowLimit</u>	its: mg/L HighLimit	Ana RPD Ref Val	lysis Date: 5 <u>%RPD</u>	RPDLimit	Qual

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

DUP	SeqNo: 2843360 Samp ID: 200512022-003		PrepDate:5/18/2020 PrepRef: ult PQL SPK value SPK Ref Val					stNo: SM254 nits: mg/L	-	_	82933 /18/2020	
Analyte TSS (Re	sidue, Non-Filterable)	Result 398	<u>PQL</u> 10.0	SPK value SPK	<u>%REC</u> 0	LowLimit 0	HighLimit 0	RPD Ref Val 367	<u>%RPD</u> 8.10	RPDLimit 10	<u>Qual</u>	
DUP	SeqNo: 2843370 Samp ID: 200513022-001			PrepDate:5 PrepRef:			stNo: SM254 hits: mg/L	-	_	82933 /18/2020		
Analyte TSS (Re	sidue, Non-Filterable)	Result PQL SPK value SPK Ref Val 1640 100 0 0				<u>%REC</u> 0	LowLimit 0	HighLimit 0	RPD Ref Val 1810	<u>%RPD</u> 9.86	RPDLimit 10	Qual

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

ms	SeqNo: 2843350 Samp ID: 200518007-001			-	Date:5/19/2020 Ref:(E245.1)			itNo: E245.1 iits: mg/L	Ana		32932 19/2020	
Analyte Mercury		Result 0.001962						HighLimit 125	RPD Ref Val 0	<u>%RPD</u> 0	RPDLimit	Qual
dup	SeqNo: 2843349 Samp ID: 200518007-001		PrepDate:5/19/2020 PrepRef:					itNo: E245.1 its: mg/L	Ana		32932 19/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

MS	SeqNo: 2849897							tNo: E420.1		RunNo: 18	83309	
	Samp ID: 200514015-001	(BR-14-UG)		Prepl	Ref:(Method)		Un	its: mg/L	Anal	ysis Date: 6/	/1/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Phenolics	s, Total Recoverable	0.035	0.00400					119	0	0		S
MSD	SegNo: 2849898			Descri	Date:5/26/2020		_					
11.02	Seq110. 2049090			Prepi	Jate.3/20/2020		Tes	tNo: E420.1		RunNo: 18	83309	
MOD	Samp ID: 200514015-001	(BR-14-UG)		-	Ref:(Method)			itNo: E420.1 its: mg/L	Anal		83309 /1/2020	
Analyte	•	(BR-14-UG)	<u>PQL</u>	-		%REC			Anal			Qual

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

MS	SeqNo: 2849334 Samp ID: 200521040-001			•	Date:5/28/2020 Ref:(Method)			stNo: E420.1 nits: mg/L	Ana	RunNo: 183276 Ilysis Date: 5/29/2020	
Analyte Phenolic	s, Total Recoverable	<u>Result</u> 0.034	<u>PQL</u> 0.00400	SPK value 0.04	SPK Ref Val 0.003	<u>%REC</u> 77.5	LowLimit 81	HighLimit 119	RPD Ref Val 0	%RPD RPDLimit 0	<u>Qual</u> S
DUP	SeqNo: 2849338 Samp ID: 200521042-002		PrepDate:5/28/2020 PrepRef:					stNo: E420.1 nits: mg/L	Ana	RunNo: 183276 Ilysis Date: 5/29/2020	
Analyte Phenolic	s, Total Recoverable	<u>Result</u> ND	ult PQL SPK value SPK Ref Val				LowLimit 0	HighLimit 0	RPD Ref Val 0.003	<u>%RPD</u> <u>RPDLimit</u> 0 20	Qual

Work Order: 200514015 Plant ND GW **Project:**

ANALYTICAL QC SUMMARY REPORT

BatchID: 79696

MS	SeqNo: 2851952			PrepL	Date:6/1/2020 1		Tes	stNo: E420.1		RunNo: 183424	
	Samp ID: 200522026-001			PrepF	Ref:(Method)		Un	nits: mg/L	Ana	llysis Date: 6/4/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPDLimit	Qual
Phenolic	s, Total Recoverable	0.04	0.00400	0.04	0	100	81	119	0	0	
DUP	SeqNo: 2851950			PrepL	Pate:6/1/2020 1		Tes	stNo: E420.1		RunNo: 183424	
	Samp ID: 200519040-001						Un	nits: mg/L	Ana	llysis Date: 6/4/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPDLimit	Qual
Phenolic	s, Total Recoverable	0.00500	0	0	0	0	0	0.0625	1.98 20		

Page 12 of 23

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

SeqNo: 2841246						Tes	tNo: E300		RunNo: 18281 ;	7	
Samp ID: 200514015-001a (BR-14-UG)					Un	its: mg/L	Ana	lysis Date: 5/14/20	20	
	Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPD	<u>Limit</u>	Qual
	23.16	2.00	20	2.83	102	90	110	0	0		
itrogen (As N)	4.712	0.0400	4.5	0	105	90	110	0	0		
	89.82	4.00	20	67.37	112	90	110	0	0		S
SeqNo: 2841271						Tes	tNo: E300		RunNo: 18281	7	
Samp ID: 200430012-004a						Un	its: mg/L	Ana	lysis Date: 5/14/20	20	
	Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPD	<u>Limit</u>	Qual
	85.14	2.00	20	64.77	102	90	110	0	0		
	10.39	0.200	10	0.536	98.6	90	110	0	0		
SeqNo: 2841274						Tes	tNo: E300		RunNo: 18281	7	
Samp ID: 200430012-004a						Un	its: mg/L	Ana	lysis Date: 5/14/20	20	
	Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPD	<u>Limit</u>	Qual
	639.8	10.0	100	535.4	104	90	110	0	0		
SeqNo: 2841247						Tes	tNo: E300		RunNo: 18281	7	
Samp ID: 200514015-001a (BR-14-UG)					Un	its: mg/L	Ana	lysis Date: 5/15/20	20	
	<u>Result</u>	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPD	<u>Limit</u>	Qual
	23.33	2.00	20	2.83	103	90	110	23.16	0.740	20	
itrogen (As N)	4.724	0.0400	4.5	0	105	90	110	4.712	0.254	20	
	85.65	4.00	20	67.37	91.4	90	110	89.82	4.75	20	
SeqNo: 2841272						Tes	tNo: E300		RunNo: 18281	7	
Samp ID: 200430012-004a						Un	its: mg/L	Ana	lysis Date: 5/14/20	20	
	Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPD	<u>Limit</u>	Qual
	85.02	2.00	20	64.77	101	90	110	85.14	0.141	20	
	10.21	0.200	10	0.536	96.8	90	110	10.39	1.77	20	
	Samp ID: 200514015-001a (Introgen (As N) SeqNo: 2841271 Samp ID: 200430012-004a SeqNo: 2841274 Samp ID: 200430012-004a SeqNo: 2841247 Samp ID: 200514015-001a (Introgen (As N)) SeqNo: 2841272	Samp ID: 200514015-001a (BR-14-UG) Result 23.16 4.712 89.82 SeqNo: 2841271 Samp ID: 200430012-004a Result 85.14 10.39 SeqNo: 2841274 Samp ID: 200430012-004a Result 639.8 SeqNo: 2841247 Samp ID: 200514015-001a (BR-14-UG) Result 23.33 trogen (As N) 4.724 85.65 SeqNo: 2841272 Samp ID: 200430012-004a	Samp ID: 200514015-001a (BR-14-UG) Result PQL 23.16 2.00 2.0	Result	Result PQL SPK value SPK Ref Value SPK Ref Value 23.16 2.00 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.00 2.83 2.83 2.00 2.83 2.83 2.83 2.00 2.83 2.3	Samp ID: 200514015-001a (BR-14-UG) Result PQL SPK value SPK Ref Val 23.16 2.00 20 2.83 102 1	Samp ID: 200514015-001a (BR-14-UG) Result PQL SPK value SPK Ref Val %REC LowLimit	Samp ID: 200514015-001a (BR-14-UG) PQL SPK value SPK ref Val	Samp ID: 200514015-001a (BR-14-UG) Besult 23.16 PQL 23.16 SPK value 23.16 20.00 20 2.83 March 200 20 2.83 LowLimit High Limit 10 0 20 20 2.83 Hope Per Value 23.16 PQL 23.16 2.00 20 2.83 102 90 110 0 0 105 90 110 0 0 105 90 110 0 0 0 100 0 0 105 90 110 0 0 0 100 0 0 105 90 110 0 0 0 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	Samp ID: 200514015-001a (BR-14-UG) PQL SPK value 23.16 (2.00 2.00 2.00 2.00 2.00 2.00 2.00 2.0	Samp ID: 200514015-001a (BR-14-UG)

B - Analyte detected in the associated Method Blank

Plant ND GW

Work Order: 200514015

Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: R182817

 MSD
 SeqNo: 2841275
 TestNo: E300
 RunNo: 182817

 Samp ID: 200430012-004a
 Units: mg/L
 Analysis Date: 5/14/2020

<u>Analyte</u>	Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	<u>RPDLimit</u>	Qual
Sulfate	632.9	10.0	100	535.4	97.5	90	110	639.8	1.10	20	

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

MS	SeqNo: 2842772 Samp ID: 200508018-001							tNo: SM232 its: mgCaC			82900 /18/2020	
<u>Analyte</u>		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity	, Total (As CaCO3)	870	10.0	500	350	104	80	120	0	0		
MS	SeqNo: 2842806 Samp ID: 200514015-001	(BR-14-UG)						tNo: SM232 its: mgCaC			82900 /18/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	<u>LowLimit</u>	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity	, Total (As CaCO3)	860	10.0	500	350	102	80	120	0	0		
MSD	SeqNo: 2842773						Tes	tNo: SM232	0B	RunNo: 1	82900	
	Samp ID: 200508018-001						Ur	its: mgCaC	O3/L Ana	alysis Date: 5/	/18/2020	
<u>Analyte</u>		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
					O. 111101 Tal	701 CL O	LOWLIIIII	riigiiEiiiii	IN D INCI Val	701X1 D	IXI DEIIIII	Quai
Alkalinity	, Total (As CaCO3)	850	10.0	500	350	100	80	120	870	2.33	15	Quai
Alkalinity MSD	, Total (As CaCO3) SeqNo: 2842807	850					80		870	2.33		Quai
	,	850 (BR-14-UG)					80 Tes	120	870 0B	2.33 RunNo: 1 8	15	Quai
	SeqNo: 2842807						80 Tes	120 tNo: SM232	870 0B	2.33 RunNo: 1 8	15 82900	Qual

Work Order: 200514015 Plant ND GW **Project:**

ANALYTICAL QC SUMMARY REPORT

MS	SeqNo: 2843842 Samp ID: 200514015-001	(BR-14-UG)						tNo: SM531 its: mg/L		RunNo: 182957 alysis Date: 5/19/2020	
Analyte Total Org	ganic Carbon	Result 25.95	<u>PQL</u> 1.00	SPK value 25	SPK Ref Val 1.072	<u>%REC</u> 99.5	LowLimit 82	HighLimit 120	RPD Ref Val	%RPD RPDLimit 0	Qual
MSD	SeqNo: 2843843 Samp ID: 200514015-001	(BR-14-UG)						tNo: SM531 its: mg/L		RunNo: 182957 alysis Date: 5/19/2020	
Analyte Total Org	ganic Carbon	Result 25.15	<u>PQL</u> 1.00	SPK value 25	SPK Ref Val 1.072	<u>%REC</u> 96.3	LowLimit 82	HighLimit 120	RPD Ref Val 25.95	%RPD RPDLimit 3.14 21.2	Qual
DUP	SeqNo: 2843871 Samp ID: 200514015-023							tNo: SM531 its: mg/L		RunNo: 182957 alysis Date: 5/20/2020	
Analyte Total Org	ganic Carbon	<u>Result</u> 4.977	<u>PQL</u> 1.00	SPK value 0	SPK Ref Val 0	<u>%REC</u> 0	LowLimit 0	HighLimit 0	RPD Ref Val 5.015	%RPD RPDLimit 0.759 14.6	Qual

Work Order: 200514015 Plant ND GW **Project:**

ANALYTICAL QC SUMMARY REPORT

MS	SeqNo: 2844127 Samp ID: 200514015-001	(BR-14-UG)						stNo: E350.1 nits: mg/L	Ana	RunNo: 182972 alysis Date: 5/20/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPDLimit	Qual
Nitrogen	, Ammonia (As N)	1.117	0.100	1	0.4564	66	90	110	0	0	S
MS	SeqNo: 2844158						Tes	stNo: E350.1		RunNo: 182972	
	Samp ID: 200514015-023	(MH-29)					Un	its: mg/L	Ana	alysis Date: 5/20/2020	
<u>Analyte</u>		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	<u>LowLimit</u>	<u>HighLimit</u>	RPD Ref Val	%RPD RPDLimit	<u>Qual</u>
Nitrogen	, Ammonia (As N)	1.106	0.100	1	0	111	90	110	0	0	S
MS	SeqNo: 2844180						Tes	stNo: E350.1		RunNo: 182972	
	Samp ID: 200519001-001						Un	its: mg/L	Ana	alysis Date: 5/20/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	<u>LowLimit</u>	<u>HighLimit</u>	RPD Ref Val	%RPD RPDLimit	Qual
Nitrogen	, Ammonia (As N)	2.444	0.500	1	1.274	117	90	110	0	0	S
MSD	SeqNo: 2844128						Tes	stNo: E350.1		RunNo: 182972	
	Samp ID: 200514015-001	(BR-14-UG)					Un	nits: mg/L	Ana	alysis Date: 5/20/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPDLimit	Qual
Nitrogen	, Ammonia (As N)	1.11	0.100	1	0.4564	65.4	90	110	1.117	0.557 20	S
DUP	SeqNo: 2844171						Tes	stNo: E350.1		RunNo: 182972	
	Samp ID: 200519047-001							nits: mg/L	Ana	alysis Date: 5/20/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD RPDLimit	Qual
Nitrogen	, Ammonia (As N)	ND	0.100	0	0	0	0	0	0	0 11.1	

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

DUP	SeqNo: 2844186 Samp ID: 200513049-002							stNo: SM254 hits: mg/L		_	82973 /18/2020	
Analyte TDS (Re	sidue, Filterable)	<u>Result</u> ND	<u>PQL</u> 5.00	SPK value SI	PK Ref Val 0	<u>%REC</u> 0	LowLimit 0	HighLimit 0	RPD Ref Val 5	<u>%RPD</u> 0	RPDLimit 10	Qual
DUP	SeqNo: 2844198 Samp ID: 200514015-013							stNo: SM254 hits: mg/L		_	82973 /18/2020	
Analyte TDS (Re	sidue, Filterable)	Result 3030	<u>PQL</u> 5.00	SPK value SI	PK Ref Val 0	<u>%REC</u> 0	<u>LowLimit</u> 0	<u>HighLimit</u> 0	RPD Ref Val 3075	<u>%RPD</u> 1.47	RPDLimit 10	Qual

Work Order: 200514015 Plant ND GW **Project:**

ANALYTICAL QC SUMMARY REPORT

DUP	SeqNo: 2844999 Samp ID: 200514015-001							stNo: SM254 hits: mg/L			2988 19/2020	
Analyte TDS (Re	sidue, Filterable)	Result 445	<u>PQL</u> 5.00	SPK value 0	SPK Ref Val 0	<u>%REC</u> 0	LowLimit 0	HighLimit 0	RPD Ref Val 420	<u>%RPD</u> 5.78	RPDLimit 10	Qual
DUP	SeqNo: 2845022 Samp ID: 200514015-003							stNo: SM254 hits: mg/L			12988 19/2020	
Analyte TDS (Re	sidue, Filterable)	Result 790	<u>PQL</u> 5.00	SPK value 0	SPK Ref Val 0	<u>%REC</u> 0	LowLimit 0	HighLimit 0	RPD Ref Val 815	<u>%RPD</u> 3.12	RPDLimit 10	Qual

Plant ND GW

Work Order: 200514015 ANALYTICAL QC SUMMARY REPORT

BatchID: R182997

DUP SeqNo: 2844476

Project:

TestNo: SM2320B RunNo: 182997

Samp ID: 200514015-016 Units: mgCaCO3/L Analysis Date: 5/20/2020

<u>Analyte</u>	Result	<u>PQL</u>	SPK value SP	PK Ref Val	%REC	<u>LowLimit</u>	<u>HighLimit</u>	RPD Ref Val	%RPD	<u>RPDLimit</u>	Qual
Alkalinity, Total (As CaCO3)	220	10.0	0	0	0	0	0	210	4.65	9.9	

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

MS	SeqNo: 2845616 Samp ID: 200515038-003F							stNo: SM232			1 83043 5/21/2020	
Analyte Alkalinity	y, Total (As CaCO3)	Result 640	<u>PQL</u> 10.0	SPK value 500	SPK Ref Val 140	<u>%REC</u> 100	LowLimit 80	HighLimit 120	RPD Ref Val	<u>%RPD</u> 0	RPDLimit	Qual
MS	SeqNo: 2845620 Samp ID: 200519003-001							stNo: SM232 hits: mgCaC			1 83043 5/21/2020	
Analyte Alkalinity	y, Total (As CaCO3)	Result 770	<u>PQL</u> 10.0	SPK value 500	SPK Ref Val 260	<u>%REC</u> 102	LowLimit 80	HighLimit 120	RPD Ref Val 0	<u>%RPD</u> 0	RPDLimit	Qual
MSD	SeqNo: 2845617 Samp ID: 200515038-003F							stNo: SM232			1 83043 5/21/2020	
Analyte Alkalinity	y, Total (As CaCO3)	Result 640	<u>PQL</u> 10.0	SPK value 500	SPK Ref Val 140	<u>%REC</u> 100	LowLimit 80	HighLimit 120	RPD Ref Val 640	<u>%RPD</u> 0	RPDLimit 15	Qual
MSD	SeqNo: 2845621						Tes	stNo: SM232	0B	RunNo:	183043	
	Samp ID: 200519003-001						Ur	its: mgCaC	O3/L Ana	lysis Date: 5	5/21/2020	

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

DUP	SeqNo: 2845925 Samp ID: 200515038-001							stNo: SM254 nits: mg/L		RunNo: 1	83061 /20/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	<u>LowLimit</u>	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	<u>Qual</u>
TDS (Re	sidue, Filterable)	1300	5.00	0	0	0	0	0	1325	1.90	10	
DUP	SeqNo: 2845941 Samp ID: 200519002-001							stNo: SM254 hits: mg/L		RunNo: 1	83061 /20/2020	
Analyte TDS (Re	sidue, Filterable)	Result 1455	<u>PQL</u> 5.00	SPK value 0	SPK Ref Val	<u>%REC</u> 0	<u>LowLimit</u> 0	<u>HighLimit</u> 0	RPD Ref Val	<u>%RPD</u> 2.43	RPDLimit 10	<u>Qual</u>

Work Order: 200514015
Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

BatchID: R183228

MS	SeqNo: 2848648						Too	stNo: E300		RunNo:	183228	
	Samp ID: 200514015-010	(OB-19-DG)						its: mg/L	Ana	lysis Date:		
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		1177	40.0	200	958.8	109	90	110	0	0		
MS	SeqNo: 2848664						Tes	stNo: E300		RunNo:	183228	
	Samp ID: 200514015-015a	(MH-16)					Ur	its: mg/L	Ana	ysis Date:	5/28/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	<u>LowLimit</u>	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Sulfate		1106	40.0	200	889.5	108	90	110	0	0		
MS	SeqNo: 2848675						Tes	tNo: E300		RunNo:	183228	
	Samp ID: 200514015-019a	(SP-D)					Ur	its: mg/L	Ana	ysis Date:	5/29/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	<u>LowLimit</u>	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		63.75	2.00	20	41.84	110	90		0	0		
Sulfate		107.9	4.00	20	86.5	107	90	110	0	0		
DUP	SeqNo: 2848653						Tes	stNo: E300		RunNo:	183228	
	Samp ID: 200514015-012a						Ur	its: mg/L	Ana	ysis Date:	5/28/2020	
<u>Analyte</u>		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	<u>LowLimit</u>	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		6.47	2.00	0	0	0	0	0	6.448	0.341	19.6	
DUP	SeqNo: 2848660						Tes	tNo: E300		RunNo:	183228	
	Samp ID: 200514015-015						Un	its: mg/L	Ana	ysis Date:	5/28/2020	
Analyte		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		19.61	2.00	0	0	0	0	0	19.66	0.265	19.6	
DUP	SeqNo: 2848677						Tes	tNo: E300		RunNo:	183228	
	Samp ID: 200514015-020a							its: mg/L	Ana	ysis Date:	5/29/2020	
<u>Analyte</u>		Result	<u>PQL</u>	SPK value	SPK Ref Val	%REC	LowLimit	<u>HighLimit</u>	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride		62.28	2.00	0	0	0	0	0	63.01	1.16	19.6	
Sulfate		31.31	4.00	0	0	0	0	0	31.67	1.17	10.9	

Qualifiers: ND - Not Detected at the Reporting Limit

S - Spike Recovery outside accepted recovery limits

B - Analyte detected in the associated Method Blank

J - Analyte detected below quantitation limits



EXPERIENCE IS THE SOLUTION

Client Name: Address: Frontier Technical Associates, Inc.

314 Nort	h Pearl St	reet						CHAIN	OF CUSTODY RECORD					
	VY 1220						AES Work Order#:							
•	546 / FAX		34-C	891		Ì	2005/4017							
TION						ı	COC Re	eference:						
A full service an	alytical resea	rch labora	itory	y offering s	olutio	ons to	environ	mental co	oncerns					
ıl Associates,	Address:	the second secon	Self-Alberta (appropriate)	**************************************	100700001000	111111111111111111111111111111111111111	reet, Williamsville, NY 14221							
**************************************	Project Nar	ne (Loca	atio	1):	erennemen.		Sample	ers Nam	ne:					
•	PIAA Client PO#	14 N	0	free from					tanky / Kathy Wager					
93	Client PO#		o po po por esta de la composição de la composição de la composição de la composição de la composição de la co	31 47 47 48 74 74 74 74 74 74 74 74 74 74 74 74 74		Sample	ers Sign	lature.						
frontiertechn	ical.com							L	ath Woss					
	_	Time		Sample	ъ Т,	VNA	# of	Preser-	ensurencement en la processa de la composition della composition d					
entification & on	Date Sampled	A=am P=pm		Matrix	grana and deline	G	Cont's	vative	Analysis (
Gr.	5/13/20		A (P)	GW	<u> </u>	<u> </u>	2	7,	T. metals D-metals hamo					
i e e e e e e e e e e e e e e e e e e e	3115130	1705	A				2	1	T. phenols NHZ YW					
	ļ		P A											
			P			-	L	<u> </u>	CI SOUT TOS UBS FIAL					
neensaanaka kareeneenseenseenseenseenseense			P					16	L TOC WI					
			A P				3	3	LL H3 5/14/201					
er energiae en en en en en en en en en en en en en		110	٨											
caracteristicon de la company	i i	1254	Α		-		m							
G- G- G- G- F-		1350	P P			h								
		L	(P)	+		₩,	1-17		1					
) (G		1:15	P A	<u> </u>		N								
y y wyddiadaid acananan ei felliwedd ei felliwei ac			P											
			A P											
BR-14-UG	1.1,	1305	A P	V		V	1		1					
en Brazon sur sur sur la caractería de l	1		A	************	-	-	***************************************							
······································	lac II		P A	1 *	一	Hn	1 41	MILIA	Hy AND					
) L 40.0	Y 200		P A	ļ	┼-°	+	1/1	Last	ande alleativite					
			D			<u></u>	W'(TANDO	NATE Allcalinity					
NEC 0+6		ļ	Sp	ecial insi	ruci	ions . 🗘	⊬ema ∂	KKS:	da, Fe, Pb, Mg, Mn,					
AES Other:			T	META	12		2, W,	1001C	C. S.					

		1									
Send Rep	ort to: Kathy Wager	Project Nar	ne (Loca	ation				ers Nam		1 1/ 1/	,
		PLAN	14 N	D	James Com	**************************************	104	ue 1	tauty	[Kathy	WASI
	one #: 716-634-2293	Client PO#			, _{en e} ggene en der elevit de de de de de de de de de de de de de		Sampl	ers Siaii	alure: //)
Client Ema	ail: kathy.wager@trontiertechn	ical.com						L	ath	Was	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=am P=pm	ı İ	Sample <u>Matrix</u>	a a company and a second second	# of Cont's	Preser- vative)	⊖ / <u>Analysi</u>	S
00/	BR-14-46	5/13/20	1263	(P)	GW	I IX	2	Z	T. refa	& D-meta	6 harra
	aaaaad diittibaadaan aa aa aa daadaa aa aa ah dadaa ah in ah ah ah ah aa ah aa ah aa ah aa ah aa ah aa ah aa a	1	cara a a mass committe de comité de	A P			12	1	T. ph	enals. Nt	13 KW
	\$\rm \text{\tin}\text{\tett{\text{\tetx{\text{\text{\text{\text{\text{\text{\text{\text{\text{\text{\texi}\text{\text{\texi}\text{\text{\texi}\text{\text{\text{\text{\texit{\texit{\texitit{\text{\texi}\text{\texi}\texit{\texit{\ti}\text{\text{\texi}\text{\texit{\texit{\texit{\texi}\tex{			A P	***************************************		7	10	A	OUT TOS.	
				A			1	16	TOC		03
				A P			3	13	2222222222	Hy S	Wilson.
LOC	B7-3-36-		114	A							Antifoliones
003	B2-12-DG-	,	110	A						and the second s	raggangayen) dan silah dan bahan bahan da da da da da da da da da da da da da
793	gagagagagagagagagagagagagagagagagagaga		Carlo de la company de la comp	2		-	-		***************************************		ng arawanan araway arawa da da da da arawanan da da da da da da da da da da da da da
MA	BZ-13-DG-+		1250	(P)		1-11,	+ +	<u> </u>			
205	DK- JON DG X		1:15	P A	<u> </u>	 	X				an an ann an ann an an an an an an an an
		ļ		P A				-			1886 (1886) 1886 1886 1886 1887 1887 1889 1889 1884 1884 1884 1885 1885 1885 1885 1885
2006	DUP			P A		 -\	1				
XX/	MSIMOD BR14-UG	1-1	1305	P	V	1 1	12				an an si si na singgan pangangan pangangan pangan pangan pangan pangan pangan pangan pangan pangan pangan pang
				P A		-		Val	4. 4		
******	Antimony DL 40.0	2004		P A	*	Tota	/t	MALLIN	144 A	ND LU-L	yerregenissessessessessesses
	A			3	2002550000000000000000		1 101	GAND	TNAY	Allealini	M
	nt Arrived Via:			Spe	ecial Inst	truction	s/Hema ेर	arks: >	W Ca	Fe. Ph A	no Ma.
unancong phoreocc	UPS Client AES Other: und Time Requested:				MEIN	12 0	s, D, M k	5 50	16	16. 4+ to	# Ku
1 Dav	-	Standard		7	auto). Ic : A	(B.)	Ba.C	On F	Ph. Mo.	my mo,
,	mples received after 3:30pm are consider		ness day.	1	, , , , , , , ,	.0	TE.	Se, W	2/7-17	1/2/11	7 7 1
Relinguish	ed by: (Signature)	ooroooroorooroorooroorooroo	nggg gung pagagap sest arawaran	Rec	eived by:		e)	en gasadeau ori ori firo	e e e e e e e e e e e e e e e e e e e	Date	Time
Ka	th Worg ed by) (Signature)		and the second s	Received by: (Signatur			ananzaszerenene		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	5 /3) _A Date	7:00 Time
Relinquish	ed by) (Signature)			Rec	eivea by:	(Signatur	е)			Date	11110
Relinquish	ed by: (Signature)		NONE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGUIS CONTRACTOR OF THE PORTUGIS CONTRACTOR OF THE P	Rec	eived for l	_aborato	y by:		***************************************	Date	Time
	THE CONTROL OF THE CO		and the second of the second o	107	and the second second		agussimoronos	5/14/2	and comments of the second		
	Sample Temperature	_	perly Pr		The state of the s	N	Rec	eived Withir: Times: Y			
	bient ~ Chilled ~ Chilling E	e D₄p⊢	l<2	5=NH ₄ 6=Asc	CI orbic Acid	b	Notes:	i iiiies. Y			
	400		2=HNO	₃ pH	<2	7=FAS			110103.		
Notes:			3=HCl p	5H<2	!	8=ZnA	:/NaOH	pH>9			
<u>Notes.</u>	and a second						HpH>10)			
MOLES.	Custody Seal Intact(Y // N	essa naceanamenamenamenteti titti titistittii	4=Na ₂ S				H pH>10 ie				=
ANGERS ANGES	T.	edialectric consistence de la consistence della			DALOKTORO BERKERARIA	9=NaC				iemo	



314 North Pearl Street Albany, NY 12207

Bottles AES: (Y)/ N

CHAIN OF CUSTODY RECORD

	<u> </u>	NY 12207 1546 / FAX: :	518-434-	0891		AES Wo 20 COC Re		4015		
	A full service a	ıalytical research	ı laborator	v offering so	olutions to	environi	mental co	ncerns		
Client Na		Address:		NAME OF STREET STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET, STREET,	**************	220119119100000000		ile, NY 142	221	
Send Rep	oort to: Kathy Wager	Project Name	•	,		Sample	ers Nam	e:		
	one #: 716-634-2293	Client PO #:	ND.	les l'		Sample)	Ifmy	1 LAHAY	WAST
	nail: kathy.wager@frontiertechr	1					Kr	th W	224	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
AES Sample Number	Client Sample Identification & Location	Sampled	Time A=am P=pm	Sample Matrix	: Type <u>C G</u>	# of Cont's	Preser- vative		O / <u>Analysis</u>	
٥٥٦	OB-7-UG	5/13/20	// A P A A P	6 4		2 2 2	2 1 0	T. pho	Nols, A	tols, HARD 1 Hz 3, AIK
008 008	0B-4-DG 0B-7-DG 0B-19-DG		170 P				ld	TOC		55 S/b
010	03-19-26		12:13					2		CONTRACTOR AND AND AND AND AND AND AND AND AND AND
611	03-20-26-	V	12-5-R	\(\)		W_	\mathcal{V}_{-}	entransas ar aras ar af en elektrik likelik likelik likelik likelik likelik likelik likelik likelik likelik li	- V	
			P A P A						에 있는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 없는 것이 	
en en en en en en en en en en en en en e			P A P				~*********		CALLED AL S CALL COLCUTTO COPPED PI	//************************************
aasaasaasaasasaasaasaasaa			A P						TELESTES SE SE SE SE SE SE SE SE SE SE SE SE S	
			A P A						occonnensos en és e é e é e e e e e e e e e e e e e e	
FedEx/	that Arrived Via: UPS Client AES Other: Dound Time Requested:		Sp.	pecial Inst	ructions (7 4	Rema D)-/-	rks: 15,B,	Ba,Cd, no, K, Se	Ca, Fe, I	Bb, Mg,
11 Day	ll2 Day 3 Day 5 Day	Standard ered next busines	ss day.			C	المراج ا	107	7	<i>коминаличеру и пругуна</i>
Relinquish	ned by: (\$ignature) At Logy ned by: (\$ignature)	en per e en caracteraria de destronada e esta en esta en esta en esta en esta en esta en esta en esta en esta e	Re	eceived by: (CPO eceived by: (X	25.55 cm 200000000000000000000000000000000000			Date Date	Time 4:70 Time
	hed by: (Signature)	TI TI TI TI TI TI TI TI TI TI TI TI TI T	Re	eceived for L	aboratory	/ by:			Date 5/14/20	Time ≀007 αι
Ar <u>Notes:</u>	Sample Temperature mbient Chilled ~ Chilling	- 2 2	Pro D=None 1=H ₂ SO ₄ p 2=HNO ₃ pl 3=HCl pH< 4=Na ₂ S ₂ O ₃	H<2 <2	5=NH ₄ C 6=Asco 7=FAS 8=ZnAc 9=NaOH	rbic Acid /NaOH p H pH>10	H>9	1	red Within mes: Y /	Holding
	Custody Seal Intact: (Y)			-	10=Oth	er_ <i>H 3[#]</i>	94			



314 North Pearl Street Albany, NY 12207 518-434-4546 / FAX: 518-434-0891

Custody Seal Intact: Y / N Bottles AES: Y / N

CHAIN	OF C	USTODY	RECORD
-------	------	--------	--------

	Albany, N	1 Pearl Str NY 12207 546 / FAX:		4-08	391			AES Wo	- Completion	* 00517	1015	
	A full service an	alytical resear	ch labora	tory	offering sol	utior	L is to	environi	nental co	ncerns	an electrica de la la la compresión de la la la la la compresión de la la la la la la la la la la la la la	oca energy-cross-state and area.
lient Nan		0.11			8675 Ma	n S	tree	et, Will	liamsvil	lle, NY 142	21	
Send Rep	ort to: Kathy Wager	Project Nar	int	ution): > LP		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	DAI	ers Name	rety/KA	thy WA	3:
Client Pho	one #: 716-634-2293	Client PO #						Sample	ers Sign	LWa	1 44	ELECTRICAL PROPERTY AND AND AND AND AND AND AND AND AND AND
Client Em	ail: kathy.wager@frontiertechr	ncal.com	(New No. 2017) 1 (1988) 1 (1982) 1 (1982) 1 (1988) 1 (1988) 1 (1982) 1 (1988) 1 (1982) 1 (1982) 1 (1982) 1 (19	waaanning	000 TT TO THE STATE OF THE STAT	rana renen	······································	gg company white the distribution	poc		(})	
AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=am P=pm	า า	Sample Matrix	Ту <u>С</u>	/pe <u>G</u>	Cont's	Preser- vative		\nalysis	
212	MH-V	5/12/20	1770	P	leach		X	2	2		D-ALFAS	
ng ang ang ang ang ang ang ang ang ang a	wanted a conference of the contract of the con			A P		224468°°		2		T. pnen	ols: NH	3
19.27 (1.58 d. 18.28 d. 18.28 d. 18.28 d. 18.27 d. 18.28 d. 18.28 d. 18.28 d. 18.28 d. 18.28 d. 18.28 d. 18.28				A P		and the second		2	9	161 201	100 700	ALK
	According to the Control of the Cont	***		A P		noszannen	$\Vdash \downarrow$	<u> </u>	W	100		surer saaan feeres saaan
112	MH-7		128	(P)		********	-	-		C1, SOUT. TOC	13/11	4/20
1-1-) 17 / U	MIT-10 PR		110	P	The second second	e de la Contraction de la Cont	1	-		ago a amplanta a arentengen eta a a alababa a arentengen eta a		
115	mH-10	nga pina kanananga pina manana kanananan araw	1258	P			$\!$			may anana di didaka menengalah andi didaka penengah sahan		ar grant of the articles are transferred and the second
0//	mH-19		1348	6	2		1			rani pelanadah kerana dahan mahah		
(1)	SCD-LA		1328	P	٨		1			ng a spiritual de la company de la company de la company de la company de la company de la company de la compa		
his	ISO-IB		1247	-	<u> </u>	-					22 000000000000000000000000000000000000	and the second of the second s
1/5	5 P - D		1202	P	<u> </u>	<u> </u>	4		_			
5 7	5P-1		116	G.	Description of the second				4-7		1/	
ha ha	180-5	IV	1155	P			N		V		V 	
	and a reason of the second control of the se		.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	A P							1 1 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1	and statement accomplished accomplished of statement and defining
				A F				- / Def =	Arka	naminal secund was winness come design more.	بالاختار والاختار	A / A
Shipm	ent Arrived Via:			S	pecial Ins	truc /_	ction	15/17/9/1	garks. A< B	Ba, Cd	, Ca, Fe,	Pb./ng
R 8	UPS Client AES Othe	r:		_	NCHAIS	10		u) 	So lh	î. X		
	round Time Requested: 12 Day 3 Day 5 Day	Standard		-	(m) ₁ /	110	. 1		X1/0°	· · · · · · · · · · · · · · · · · · ·		See to the second
11 Day	Samples received after 3:30pm are cons			y.	and the state of the state of the state of the state of the state of the state of the state of the state of the	populación	AND DUTCH	anametric construction of the construction of	and the second s	generacy in this is they had a simple lightly in a control of the	Date	Time
	shed by: (Signature)	CCCC 4 (1000 CCCCC) 4 (1000 CCCCC) 4 (1000 CCCCCC) 4 (1000 CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	an an an Aire ann an Aire ann an Aire ann an Aire ann an Aire ann an Aire ann an Aire ann an Aire ann an Aire	R	eceived by:	(Sig	inatu V	ıre)			5/12/20	1 1
on and the second second second	lath way	ekkana eritin kepana ayı kana anılışı o neri	anna a ceresco e e e e e e e e e e e	 R	leceived by	(Sig	ghati	ıre)		anni dhe e e e e e e e e e e e e e e e e e e	Date	Time
Relinqui	shed by: (Signature)				agrapy photococky by his sign process of the con-	eggazzenik (on the	andrew personal and the		Date	Time
Relinqu	ished by: (Signature)	CONTRACTOR CONTRACTOR CONTRACTOR CONTRACTOR AND CONTRACTOR AND CONTRACTOR AND CONTRACTOR AND CONTRACTOR AND CO		F	Received for			ory by:			5/14/2	and recommendation and the second
	O HOLE TO BE A MADILLA	garan o shiinnan ay ay an ay an ay ah an araa	anarapahan sang dalah kerbasan dalah	ىلىـــ Pı	roperly P			ed; Y	/_N		ived Within	
Notes	Sample Temperature Ambient ~ Chilled ~ Chilling :	g Begun		one ₂SO₄ NO₃ CI pł	pH<2 pH<2 H<2	5 7 8	5=NH 5=As 7=FA 3=Zn 9=Na	l₄Cl corbic A	cid H pH>9	Notes:	Times: Y	/(N)



314 North Pearl Street Albany, New York 12207 518-434-4546/434-0891 FAX

CHAIN OF CUSTODY RECORD

AES Work Order # 3(D)2

Experience	is	the	solution
------------	----	-----	----------

A full service analytical research laboratory offering solutions to environmental concerns

xperience is t	us zoimuou		A Iuli Sei	vice a	naiy licai	research labo	atory	Onc	ing sc	Jiuli	Onc	, to cire	nioninental concerns
Client Name: Fr	ontier Techni	cal Asso	Addre ociates		5 Main	Street, Willi	amsvi	lle,	NY :	142	21	-	
Send Report To: Ka	athy Wager	***************************************	Proje	ct Name	e (Location nt ND])			Samp		(Na	mes) David	Harty/Kathy Wager
Client Phone No:	6-634-2293	Client Em Kath	ail: iy.wager@	front	iertechn	lumber: 1cal.com			Samp		(Si	gnature)	lazer
AES Sample Number	Sa		tient ication & Local	ion		Date Sampled	Time A=a.n P=p.n	ı. 「	Sample Matrix		Grab	Number of Cont's	Analysis Required
	MH-1		ication of Local	1011		1 1		A P)	leach	CONTRACTOR OF	Х	7	Ammonia, Chloride,
097	MH-2	9				5/12/20		A	lech		X	U	Hard., Nitrate, Sulfate,
2								A P					TDS,TOC,Alkalinity,
								A P					Phenols , TSS,
								A P					Total metals
								A P					
								A P					
	·							A P					
								A P					
								A P					
-								A P					
								A P					
-								A P					
								A P					
Shipment Arriv			versite ka di kate ka masa ka sa kum uni		CC Repor	t To / Special Ins T					, \ B. (cd. Ca	a, Fe, Pb,
FedEy UPS	Client AES	Other:		······································	4								As, Cr6+, Cr, Cu,
Turnaround Tim 1 Day 2 Day	□ 3 Day□ 5 Day	Norm					g, Ni			7	, 1	, 2 22,	5/16/2
Note: Samples re	r: (Signature)	are considere	ed next business	day		by: (Signature)	and the second second	•			 		S/12/20 4:00
Relinquished by	y: (Signature)					by: (Signature)							Date/Time
Relinquished by	. (Signatura)				Received	for Laboratory b	v·						Date/Time
nemigaisiied D	y. (orgnature)				Hereiven	Knaz	y .				na kata kalandar	******************************	5/14/20 1007a
	TEMPERATURE		AES Bottles			PERLY PRESERVED)					RECEIVE	D WITHIN HOLDING TIMES
A Notes:	mbient or C	Chilled	YN] Note		Ŷ N				ħ	ote	s:	y) (u)

WHITE - Lab Copy

YELLOW - Sampler Copy

PINK - Generator Copy



Experience is the solution

314 North Pearl Street * Albany, New York 12207 * (518) 434-4546 * Fax (518) 434-0891

TERMS, CONDITIONS & LIMITATIONS

All service rendered by the Adirondack Environmental Services, Inc. are undertaken and all rates are based upon the following terms:

- (a) Neither Adirondack Environmental Services, Inc., nor any of its employees, agents or sub-contractors shall be liable for any loss or damage arising out of Adirondack Environmental Services, Inc.'s performance or nonperformance, whether by way of negligence or breach of contract, or otherwise, in any amount greater than twice the amount billed to the customer for the work leading to the claim of the customer. Said remedy shall be the sole and exclusive remedy against Adirondack Environmental Services, Inc. arising out of its work.
- (b) All claims made must be in writing within forty-five (45) days after delivery of the Adirondack Environmental Services, Inc. report regarding said work or such claim shall be deemed or irrevocably waived.
- (c) Adirondack Environmental Services, Inc. reports are submitted in writing and are for our customers only. Our customers are considered to be only those entities being billed for our services. Acquisition of an Adirondack Environmental Services, Inc. report by other than our customer does not constitute a representation of Adirondack Environmental Services, Inc. as to the accuracy of the contents thereof.
- (d) In no event shall Adirondack Environmental Services, Inc., its employees, agents or sub-contractors be responsible for consequential or special damages of any kind or in any amount.
- (e) No deviation from the terms set forth herein shall bind Adirondack Environmental Services, Inc. unless in writing and signed by a Director of Adirondack Environmental Services, Inc.
- (f) Results pertain only to items analyzed. Information supplied by client is assumed to be correct. This information may be used on reports and in calculations and Adirondack Environmental Services, Inc. is not responsible for the accuracy of this information.
- (g) Payments by Credit Card/Purchase Cards are subject to a 3% additional charge.

Appendix G
Water Level Survey Report (June 2020)

FRONTIER TECHNICAL ASSOCIATES, INC.

8675 Main Street, Williamsville, New York 14221 (716) 634-2293 Environmental Monitoring and Consulting

June 24, 2020

Mr. George Streit NRG Dunkirk Power, LLC Dunkirk Generating Station 106 Point Drive North Dunkirk, NY 14048-1099

Re: Survey of Dunkirk Landfill Impacts on Well BR-20-DG

Dear Mr. Streit:

On June 22, 2020, Frontier Technical surveyed the potential sources that could be influencing the groundwater surface in Well BR-20-DG. The results are graphically presented on the attached plot. The following water surfaces have a downward gradient to towards Well BR-20-DG:

Manhole 1 Leachate Collection
Manhole 1 Leak Detection System
Sedimentation Basin Leak Detection before Pumps replaced
Sedimentation Basin 1 (Typical Level)
Sedimentation Basin 2 (Current Level)
Hydraulic Basin
Beaver Pond (Discharge Creek)

The Sedimentation Basins have recently undergone repairs/replacement of the pump and the current water levels are not hydraulically upgradient of the Well.

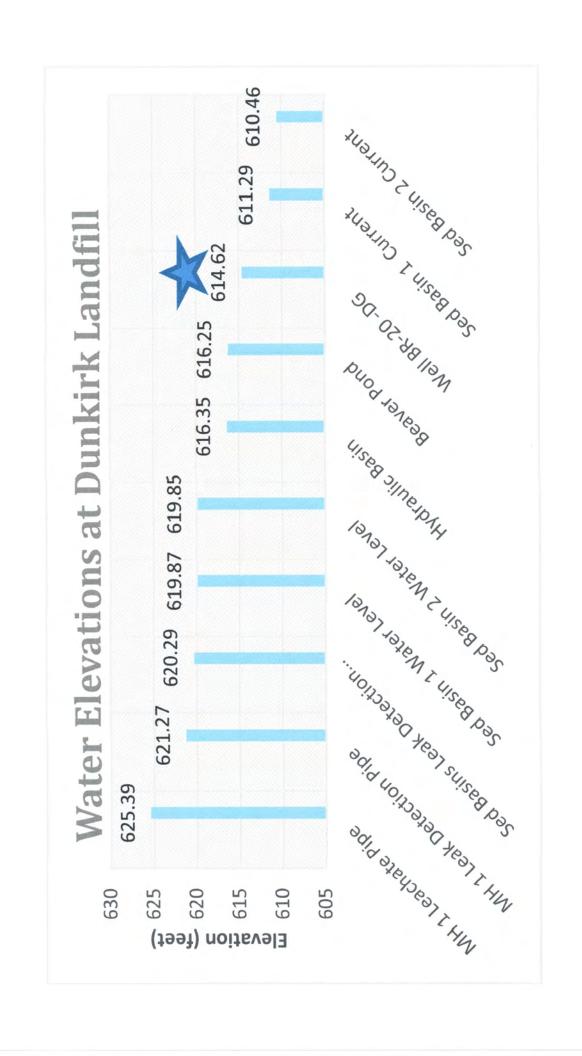
Thank you for the opportunity to be service.

Sincerely,

David M. Harty, P.E.

President

DMH:20-164





Laboratory Results for Beaver Dam Surface Water (July 2020)



FRONTIER TECHNICAL ASSOCIATES, INC.

8675 Main Street, Williamsville, New York 14221 (716) 634-2293 Environmental Monitoring and Consulting

July 24, 2020

Mr. George Streit, P.E. NRG Dunkirk Power, LLC 106 Point Drive North Dunkirk, New York 14048

RE: Beaver Pond REVISED

Dear Mr. Streit:

Please find the analytical results from the SPDES sample that we picked up on July 17, 2020.

Sample: BD071620 Sample Date: 7/16/20

Beaver Dam

Parameter	Concentration, mg/l
Aluminum, Total	<0.100
Arsenic, Total	0.024
Barium, Total	0.101
Chromium, Total	< 0.005
Iron, Total	0.481
Lithium, Total	0.799
Manganese, Total	0.525
Nickel, Total	< 0.020
Zinc, Total	< 0.010

Mr. George Streit, P.E. July 24, 2020 Page 2

If you have any questions, please don't hesitate to contact me. Thank you for this opportunity to be of service.

Sincerely,

Kathy Wager Vice President

KAW: 20-434 Report: 200722023





FRONTIER TECHNICAL ASSOCIATES, INC.

8675 Main Street, Williamsville, New York 14221, (716) 634-2293 Environmental Monitoring and Consulting

> October 19, 2020 ET-544

Mr. George Streit NRG Huntley Operations. 3500 River Road Tonawanda, N.Y. 14150

Re: Soil Sampling at Dunkirk Landfill

Dear Mr. Streit:

Attached are the results of the soil sampling conducted by Frontier at the NRG Dunkirk Landfill. The work was in support of the CCR investigation at the site. Figure 1 shows the locations of the samples. The results of the sampling and analysis are summarized below:

Results of	Soil Sampling	and Analysis	at Dunkirk Landfill	
Sample Location	Latitude	Longitude	Soil Concentration of Lithium (ppm)	Leachate Extraction Concentration of Lithium (mg/l)
Well Pad Area	42.4416	-79.3979	41.4	< 0.5
Lined Ditch	42.4404	-79.3982	125	< 0.5
Discharge Mixing Zone	42.4401	-79.3979	74.3	< 0.5

Photographs of the locations of the sampling are attached. The soil samples were obtained September 30, 2020 from zero to six inches below grade at the specified locations.

If you have any questions, please do not hesitate to call me at (716) 634-2293.

Sincerely,

David M. Harty, P.E.

President

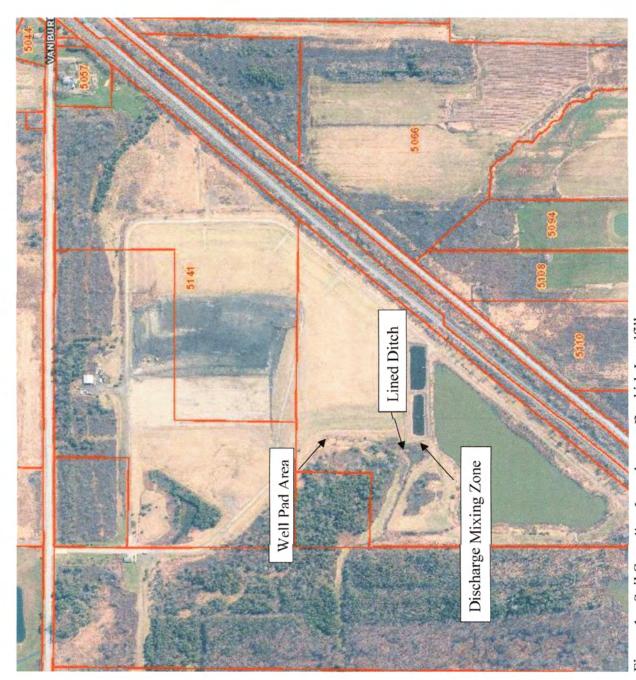


Figure 1. Soil Sampling Locations at Dunkirk Landfill



Discharge to Mixing Zone



Lined Ditch





Experience is the solution

314 North Pearl Street • Albany, New York 12207 (800) 848-4983 • (518) 434-4546 • Fax (518) 434-0891

Work Order No: 201001032

ELAP#: 10709

October 15, 2020

Dave Harty Frontier Technical Associates 8675 Main Street Williamsville, NY 14221

TEL: (716) 634-2293

RE: Plant ND-Plant SPDES

Plant ND

Dear Dave Harty:

Adirondack Environmental Services, Inc received 3 samples on 10/1/2020 for the analyses presented in the following report.

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Christopher Hess

QA Manager

Adirondack Environmental Services, Inc

CASE NARRATIVE

Date: 15-Oct-20

CLIENT:

Frontier Technical Associates

Project:

Plant ND-Plant SPDES

Lab Order:

201001032

Sample containers were supplied by Adirondack Environmental Services.

This is an updated report to include the Total Lithium results.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit

J: Analyte detected below quantitation limit

B: Analyte detected in Blank

X: Exceeds maximum contamination limit

H: Hold time exceeded

N: Matrix Spike below acceptable limits

T: Tentatively Identified Compound-Estimated

N+: Matrix Spike is above acceptable limits

E: Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

Adirondack Environmental Services, Inc

Date: 15-Oct-20

LabWork Order: 201001032

CLIENT:

Frontier Technical Associates

Project:

Plant ND-Plant SPDES

lant ND-Flant SFDES

PO#:

Plant ND

Lab SampleID:	201001032-001			- 0	Collection Date:	9/29/20	020
Client Sample ID:	Lined Ditch				Matrix:	SOIL	
Analyses		Result	RL	Qual	Units	DF	Date Analyzed
ICP METALS-EPA							Analyst: KH
(Prep:	SW3050B - 10/2/2020)					
Lithium		125	51.0		μg/g-dry	1	10/15/2020 10:59:00 AM
SPLP METALS - SV (Prep	N1312/6010C : SW1312 - 10/2/2020						Analyst: KH
Lithium-SPLP		ND	0.500		mg/L	1	10/15/2020 10:29:00 AM
MOISTURE CONTE	NT-ASTM D2216 (NOT	ELAP CER	TIFIED)				Analyst: TSZ
Percent Moisture		75.3	0.1		wt%	i	10/13/2020
Lab SampleID:	201001032-002			1	Collection Date:	9/29/20)20
Client Sample ID:	Discharge Mixing Zone	2			****	POIL	
					Matrix:	SOIL	
Analyses		Result	RL	Qual	Units	DF	Date Analyzed
Analyses ICP METALS-EPA 6 (Prep:			RL	Qual	2 2 11 11 11	100	Date Analyzed Analyst: KH
ICP METALS-EPA	5010C		RL 41.0	Qual	2 2 11 11 11	100	
ICP METALS-EPA ((Prep: Lithium SPLP METALS - SV	5010C SW3050B - 10/2/2020	Result		Qual	Units	DF	Analyst: KH
ICP METALS-EPA (Prep: Lithium SPLP METALS - SV	5010C SW3050B - 10/2/2020 W1312/6010C	Result) 74.3		Qual	Units	DF	Analyst: KH
ICP METALS-EPA (Prep: Lithium SPLP METALS - SV (Prep: Lithium-SPLP	5010C SW3050B - 10/2/2020 W1312/6010C) 74.3) ND	41.0	Qual	Units μg/g-dry	DF	Analyst: KH 10/15/2020 11:13:00 AM Analyst: KH

Adirondack Environmental Services, Inc

Date: 15-Oct-20

CLIENT:

Percent Moisture

Frontier Technical Associates

Project:

Plant ND-Plant SPDES

Plant ND

LabWork Order: 201001032

PO#:

Lab SampleID: Client Sample ID:	201001032-003 Wellpad Area			Collection Date Mat	ate: 9/29/20 rix: SOIL	020
Analyses		Result	RL Q	oual Units	DF	Date Analyzed
ICP METALS-EPA 6	010C SW3050B - 10/2/2020					Analyst: KH
Lithium		41.4	18.0	μg/g-dry	1	10/15/2020 11:17:00 AM
SPLP METALS - SV (Prep:	V1312/6010C SW1312 - 10/2/2020)				Analyst: KH
Lithium-SPLP		ND	0.500	mg/L	1	10/15/2020 10:46:00 AM
MOISTURE CONTE	NT-ASTM D2216 (NOT	ELAP CER	TIFIED)			Analyst: TSZ

0.1

29.1

10/13/2020



314 North Pearl Street Albany, NY 12207

518-434-4546 / FAX: 518-434-0891

EXPERIENCE IS THE SOLUTION

CHAIN (OF (CUS	TODY	REC	ORE
---------	------	-----	------	-----	-----

AES Work Order#:

2

COC Reference:

NESSON CONTRACTOR AND ADVANCED	A full service an	PARKERIANISTALISTASSANASTASSAN	rch labo	rator	y offering s	solutio	ons to	enviror	imental c	concerns			
Client Na	me: Frontier Technical Associates,	Address: Inc.			8675 M	ain S	Stree	et, Wil	liamsv	ille, NY 14	1221		
Send Rep	port to: David Harty	Project Name (Location):						Samplers Name:					
Client Ph	one #: 716-634-2293	Client PO #:						Samplers Signature:					
Client Em	nail: David.harty@frontiertech	nical com						1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1					
AES	I was the same of	inoar.com	Tim	e	10	-		-		(····································			
Sample Number	Client Sample Identification & Location	Date Sampled	A=ai P=pi	m	Sample Matrix	e ly	ype G	# of Cont's	Preser- vative	Analysis			
151	Lived Ditch	9/29/20	120 12		5		×	2	0	Total	Lithic	em	
				A P						SPU	for Les	thoun	
		26-		A P A							1		
505	Discharge Mixing Love	9/29	20 1	220	5		×	2	0	101	of Lith	um	
		**************************************		A P						5.041	10/ 2	•	
003	Wellpad Arm	9/28/2	0 7	A	5		×	2	0	Total	Lithru	in	
				A						SPLI	Lithru L	thous	
				A							Approved States and States States		
		***************************************		A							Time to the table	erenta ese occupações partico	
	CONTRACTOR CONTRACTOR	ACCUSION NAMED IN COLUMN 1	***************************************	A	Anadaliye ku wa a Aria a wa		andrews you	*************	**********	***************************************			
	and the second s			P	~/************					And the second section of the section of the second section of the section of the second section of the section of th			
194003400103H	***************************************	******************		P		-		VIII	/M////				
				P		-				ļ		***	
11.142 (1441 (1444				P	************			A******				***************************************	
			1	A									
Shipme RedEx	Special Instructions/Remarks:												
Turnaro	ound Time Requested:			1									
1 Day NOTE: Sai	I2 Day 3 Day 5 Day mples received after 3:30pm are consider	Standard ed next busine	ess day.										
Relinquished by: (Signature)				Received by: (Signature)							9/30/20	Time	
Relinquished by: (Signature)											Date	Time Time	
Relinquished by: (Signature)					Received for Laboratory by:						Date	Time	
					1 Coto						10/1/20	110200	
											eived Within Holding		
Notes:				2=HNO ₃ pH<2 7=FAS 3=HCl pH<2 8=ZnAc			scorb AS nAc/N	bic Acid Notes NaOH pH>9		Notes:	Times: Y / N		
Custody Seal Intact: (V / N							aOH Other	pH>10					
	Bottles AES: (Y) / N							11111	MILL	HILLIAM I	1111111	-	





ATTORNEY CLIENT PRIVILEGED

SUPPLEMENTAL SAMPLING AND ANALYSIS REPORT FOR CCR INVESTIGATION DUNKIRK FLYASH LANDFILL (September 29, 2020)

FTA Report CCR-D-20-03 DUN LF CCR 3 QTR 2020

October 29, 2020

Prepared for:

Mr. Gregory M. Brown, Esq. BROWN DUKE & FOGEL, P.C. 100 Madison Street, AXA Tower 1, Ste. 1820 Syracuse, New York 13202

Prepared by:

Frontier Technical Associates, Inc. 8675 Main Street
Williamsville, New York 14221

The analytical test results reported herein were performed to professional standards of the NYSDOH ELAP program. The analytical data are for management use only, and except for regulatory compliance reporting, are not intended for any other purpose.



SUPPLEMENTAL SAMPLING AND ANALYSIS REPORT DUNKIRK FLYASH LANDFILL (September 29, 2020)

INTRODUCTION

NRG Dunkirk Power, LLC owns and operates the Dunkirk Solid Waste Management Facility (Dunkirk Flyash Landfill) for their exclusive use in the Town of Pomfret, New York. Wastes received at the landfill were limited to flyash, bottom ash, pyrites and wastewater treatment sludges from NRG Dunkirk fossil fuel combustion facilities.

The landfill is located on a 339.6 acre property (9 parcels) of land at the location shown on Figure 1. Figure 2 is the location of the sample sites. The landfill is on the south side of Van Buren Road and is surrounded by railroads, industrial, farmland and vacant properties. Landfill activities in the southern portion of the site as shown are complete as these cells are closed (Phase 1). The active cells (Phase 2) are in the north side of the site.

Frontier Technical Associates, Inc. has completed groundwater and leachate monitoring program to better understand the water and groundwater quality at the Dunkirk Landfill.

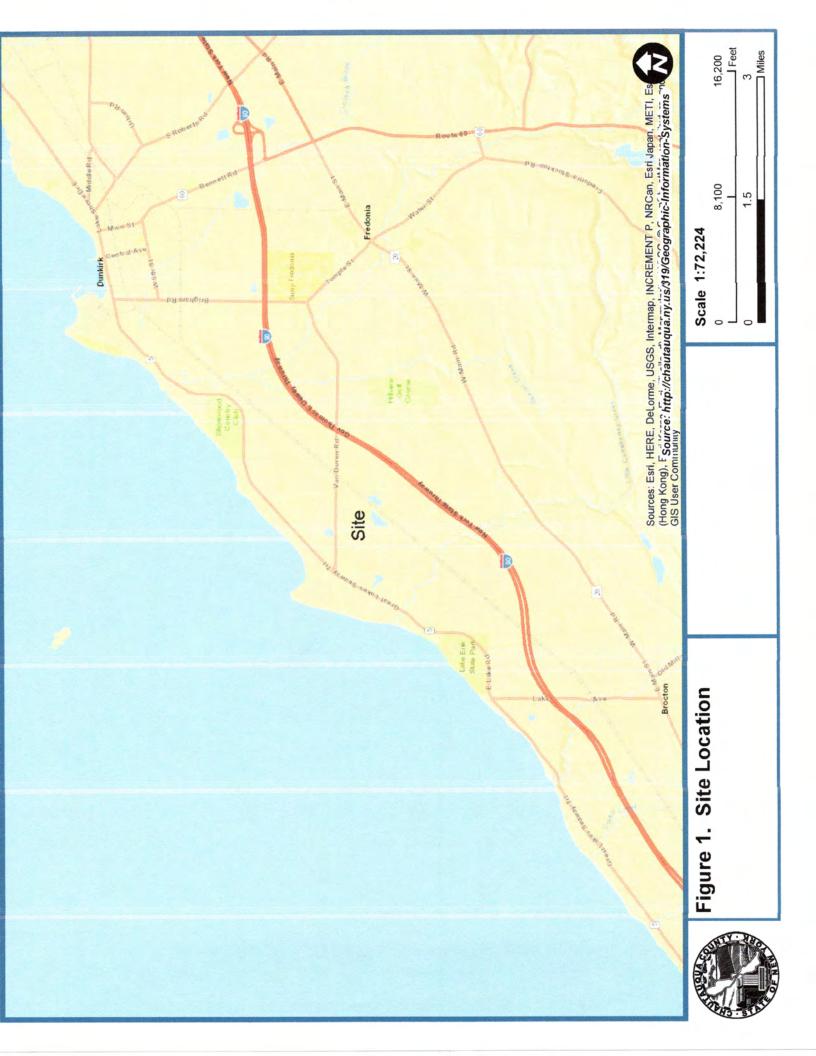
SCOPE

This report presents the sampling and analytical results for the supplemental monitoring event at the NRG Dunkirk Landfill. Groundwater, leak detection water, leachate and surface water sampling and field measurements were performed by Frontier Technical Associates, Inc. Laboratory measurements were performed by Adirondack Environmental Services, Inc. Adirondack Environmental Services is a NYSDOH ELAP certified laboratory (ELAP No. 10709).

The scope of the supplemental monitoring was directed by NRG and was focused on developing a better understanding of the water quality at the site. The sampling and analysis was limited and included groundwater, leak detection water, leachate and surface water.

This report includes the following elements:

- Figure showing the location of the sampling points.
- Field data sheets showing the purging and sampling information and field measurements for pH, specific conductance, temperature and turbidity.



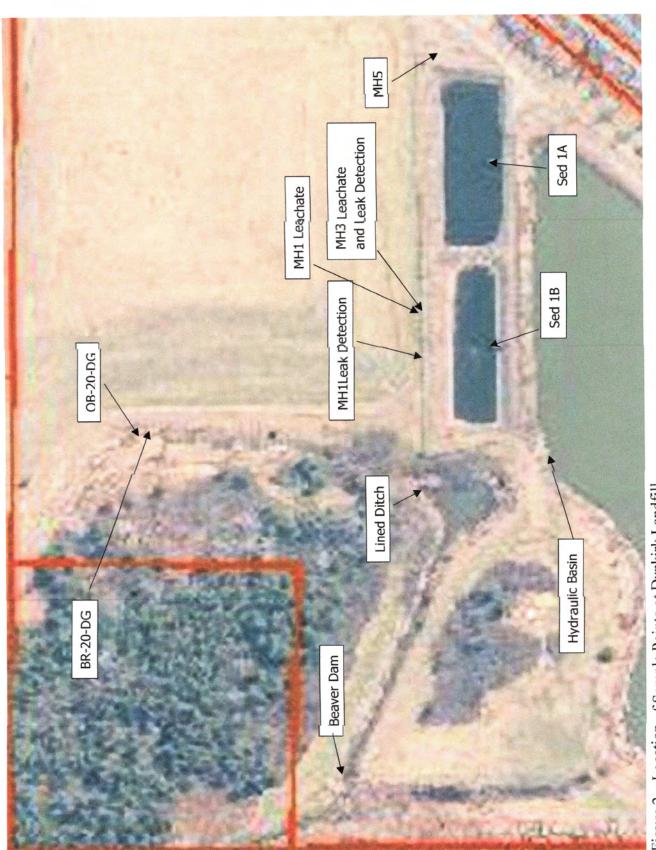


Figure 2. Location of Sample Points at Dunkirk Landfill

Analytical methods and laboratories used.

Data summary tables.

• Quality control and quality assurance data.

• Chain-of-custody records.

DATA QUALITY OBJECTIVES

The primary data quality objectives of the monitoring program are to obtain representative samples and accurate analytical results of the groundwater, leak detection water, leachate and surface water at the Dunkirk Landfill. The results are to be used in the assessment of the site under the provision of the CCR regulations.

MONITORING LOCATIONS

The locations of the monitoring points are shown on Figure 2. The following locations were monitored during this supplemental monitoring:

Groundwater

Well OB-20-DG

Well BR-20-DG

Leak Detection Water

Sedimentation Basin 1 Leak Detection Water

Sedimentation Basin 2 Leak Detection Water

Manhole 1 Leak Detection Water

Manhole 3 Leak Detection Water

Leachate

Manhole 1 Leachate

Manhole 3 Leachate (commingled with Manhole 1)

Manhole 5 Leachate

Surface Water

Lined Ditch (stagnant water from ditch along edge of landfill)

Hydraulic Basin

Beaver Dam (includes leachate and hydraulic basin water)

SAMPLING PERSONNEL

Field Crew – David Harty and Ron Blinston Frontier Technical Associates, Inc.

SAMPLING EQUIPMENT AND CONTAINERS

The sampling equipment is constructed of inert materials. Dedicated tubing is used to obtain the samples. The tubing used is polyethylene food grade tubing. The sample containers are polyethylene or glass as required by the analytical protocols and are prepared by the laboratory performing the analysis. The samples are preserved as required by the analytical methods immediately in the field. The samples collected are placed under chain-of-custody and a chain-of-custody record is shipped with the samples. The sample date, time of collection, analytical parameters to be tested, sampler identification and times of possession are marked on the chain-of-custody record.

WELL PURGING

The wells were purged with a peristaltic or submersible pump prior to sampling. The wells were purged to remove three standing well volumes of water or to dryness. The well purging information is recorded on the Field Observations Forms in the Appendix.

LABORATORIES

In accordance with the requirements of this project and the NYSDEC, Adirondack Environmental Services, Inc., (ELAP No. 10709) a NYSDOH ELAP certified laboratory, was contracted to perform the analyses for the samples collected. The EPA and Standard Methods analytical methods used are present in the laboratory report.

FIELD INFORMATION

Field analyses were completed for pH, specific conductance, Eh, temperature and turbidity for each of the samples. These field data are summarized on Table 1.

ANALYTICAL TESTING

The analytical parameters, results and test methods used are summarized in the Appendix. The appendices provide the following information:

						TARIFI							
				SUMMA	RY OF ANA	LYSIS OF (SUMMARY OF ANALYSIS OF CCR PARAMETERS	ETERS					
					NRG	NRG Dunkirk Landfil	ndfill						
				Supplem	ental Monit	oring on S	Supplemental Monitoring on September 29, 2020	9, 2020					
PARAMETER						CONCENT	CONCENTRATION (mg/l) unless noted	g/ł) unless	noted				
					- 10		MH-1		MH-3				
	OB-20-DG		BR-20-DG	Sed 1A	Sed 1B	MH-1	Leak	MH-3	Leak	MH-5	Lined	Hydraulic	Beaver
		+				Leachate	Detection	Leachate	Detection	Leachate	Ditch	Basin	Dam
Casing Elevation (feet)	625.64	4	625.74	NA	ΑA	Ā	NA	NA	NA	NA	NA	ΑN	NA
Depth to Water (feet)	6.79		14.69	NA	NA	NA	NA	NA	NA	ΑN	NA	NA	ΑA
Water Elevation (feet)	618.85	2	611.05	NA	NA	ΑN	NA	NA	NA	NA	NA	ΑN	ΝΑ
Well Length (feet)	17.61		35.99	NA	NA	ΑN	NA	NA	¥	Ą	ΑN	₹	ΑĀ
Height of Water Column (feet)	10.82		21.3	NA	ΝA	NA	NA	NA	NA	¥	ΑN	¥	ΝΑ
pH (SU)	7.59		7.80	7.88	7.99	7.89	20'2	8.03	7.48	8.24	8.23	8.91	8.14
Specific Conductance	884		1,003	3,290	3,220	3,420	3,000	4,460	4,870	4,750	1,088	452	1,654
Temo (F)	5	\downarrow	57	99	65	85	82	50	g	19	ñ	69	66
Turbidity (NTU)	ğ	\vdash	8.5	89.5	42.4	4.73	21.6	3.82	8.93	8.47	35.3	7.48	40.7
Boron	1.07		1.54	20.3	21.2	38.7	5.12	65.3	44.5	59.8	7.83	0.702	10.1
Calcium	114	_	23.9	378	393	380	532	549	425	496	123	35.7	103
Lithium	< 0.05	V	0.05	1.17	0.949	3.03	0.924	3.98	3.10	3.58	<0.05	<0.05	0.25
Magnesium	38.5		7.70	101	88.8	278	161	264	146	180	36.7	9.76	37.3
Molybdenum	< 0.010	٧	0.010	0.246	0.306	2:32	< 0.010	5.96	1.46	4.70	0.032	0:030	0.232
Potassium	9.95		69.7	83.0	61.4	75.0	4.80	173	108	135	25.4	6.64	51.4
Sodium	103		318	385	467	99.3	118	419	574	723	120	44.1	586
Dissolved Boron	0.976	_	1.4	25.1	19.0	44.1	6.20	65.5	55.9	63.3	7.44	0.632	12.6
Dissolved Lithium	< 0.05	٧	0.05	1.16	1.16	3,28	0.971	4.28	3.70	4.29	<0.050	<0.050	0.27
Dissolved Molybdenum	< 0.01	٧	0.01	0.309	0.363	2.80	< 0.010	5.55	1.62	5.79	0.032	0.029	0.293
Chloride	2.20		10.9	19.5	20.1	3.42	13.4	16.7	32.6	31.9	48.5	48.4	40.9
Sulfate	91.1	V	2.0	1,860	1,820	1,880	1,600	2,670	2,830	2,970	243	53	604
Alkalinity	440	_	900	280	280	520	450	400	420	300	360	84	300

- Laboratory Data Sheets
- QA/QC Documentation
- Field Data Sheets
- Chain-of-Custody Records

The complete data laboratory report for this sampling event is attached.

QA/QC

The elements of the QA/QC program for this round of sampling include the following:

- Case Narrative (See Appendix)
- Blind Duplicate (Well BR-20-DG)
- Method Blanks
- Matrix Spike/Matrix Spike Duplicate (Well BR-14-UG)
 The impact these quality control samples had is discussed in the Case Narrative (See Appendix).

RESULTS

The analytical results are summarized in Table 1. The QA/QC on the data is acceptable. The data is to be evaluated after all the data under this program is gathered.

SUMMARY

The monitoring was completed in accordance with the agreed on scope of work. The data will be summarized further for use under the CCR requirements.



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location. INRG D	unkirk Lan	atili Seai	mentati			–		66
Sample Point I.D.: se	ed-1B			Da	te:	9/29/2	0	
Purge Information		Purge N	Method:	None		·		
Depth to Bottom of We	ell: <u>NA</u>	_ ft						
Depth to Water Surfac	e: NA	ft						
Depth of Water Colum	n: NA	– ft						
Volume of Standing W		_	۷Δ ر	allons				
Start of Purge - Time:	ato: 111 110	<u> </u>	9	alloris				
End of Purge – Time:	-	NA						
Total Volume Purged:		NA	g;	allons W	ell Pur	ged Dry: `	Yes	No
Parameters Meter	Method	Initial Sample	Accumu	lated Volu	ıme Pur	ged (gallons)	Sample
Time								12:46
pH Oakton pH 300	SM 18-20 4500HB							799
Spec. Oakton Conductance CON 5	EPA 120.1							3200
Temperature Oakton CON 5	SM 18-20 2550B							65
Eh ORP tester	ASTM D1498							
Turbidity HACH 2100P	EPA 180.1							42.4
Appearance								42.4 TURBIO
NYSDOH ELAP No. 10475 Depth to Water: NA Meters Calibrated: Yes Notes/Weather:	<u>S</u> Dedicat	_ ft. S ed Samp	Sample I ole Equi _l	Method:	<u>Grab</u>			עופאטן
Sampling Personnel: Sampling Personnel Si	パラン gnature:	Brin	15 TO A) - <u></u>	è e			

Site Location	n: <u>NRG Di</u>	<u>unkirk Lan</u>	dfill Sedi	<u>mentat</u>	<u>ion Basin</u>	<u>1A</u> Pro	oject No∴ <u>E</u>	<u>T-10</u>	<u> 166</u>
Sample Poin	t I.D.: <u>se</u>	d-1A			Dat	e: <u> 9</u>	129/20		
Purge Inform	mation		Purge N	/lethod	: None				
Depth to Bot	tom of We	ell: NA	_ ft						
Depth to Wa	ter Surface	e: <u>NA</u>	_ ft						
Depth of Wa	ter Columi	n: <u>NA</u>	_ ft						
Volume of St	tanding W	ater in We	ll: <u> </u>	NA	gallons				
Start of Purg	e – Time:		NA						
End of Purge	e – Time:		NA						
Total Volume	e Purged:		NA		gallons W	ell Pur	ged Dry: <u>Y</u>	es_	<u>No</u>
Parameters	Meter	Method	Initial	Accum	ulated Volu	me Pur	ged (gallons))	Sample
			Sample						
Time									12-31
рН	Oakton pH 300	SM 18-20 4500HB							12-31
Spec. Conductance	Oakton CON 5	EPA 120.1			:				3290
Temperature	Oakton CON 5	SM 18-20 2550B							66
Eh	ORP tester	ASTM D1498							
Turbidity	HACH 2100P	EPA 180.1							89.5
Appearance									TUKOLO
NYSDOH ELAI Depth to Wa Meters Calib Notes/Weath	ter: <u>N/</u> rated: <u>Ye</u>	<u> </u>	_ ft \$	Sample	Method:	<u>Grab</u>			
Sampling Pe		For	1 300	N570	5N5				
Sampling Pe	rsonnel Si	ignature:			1				-



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	1: <u>NRG D</u>	<u>unkirk Lan</u>	dfill Phas	<u>se i Wel</u>		_				
Sample Poir	nt I.D.:	BR-20	D-DG		Da	te:_ <i>9/</i>	29 /20			
Purge Infor	mation		Purge I	Method:	Bailer, F	Peristal	tic Pump			
Depth to Bot	tom of We	ell: <u>35.99</u>	_ ft	2	" well = (0.17 ga	llons per fe	oot		
Depth to Wa	ter Surfac	e: 14,69	ft_							
Depth of Wa				Е	levation	of Cas	ing: <u>'625.43</u>	3		
Volume of S					allons		ŭ <u> </u>	-		
Start of Purg			11231		,					
End of Purge			11:41							
Total Volume			4.7	g	allons W	ell Pur	ged Dry: <u>ک</u>	(es)	No	
Parameters	Meter	Method	Initial	Accumu	lated Volu	ıme Purç	ged (gallons))	Sample	
			Sample	3.7	24					
Time			11231	11:38					11:55	_
рН	Oakton pH 300	SM 18-20 4500HB	7,61	7.65					7.80	7.8
Spec. Conductance	Oakton CON 6+	EPA 120.1	1024	1631					1003	
Temperature	emi 550	SM 18-20 2550B	59	56	15-3-1-4-1				57	
Eh	ORP tester	ASTM D1498		-						
Turbidity	Hach 2100P	EPA 180.1	16.6	3,86					8.51	
Appearance			CLEAR					***	LEAR	
NYSDOH ELAF Depth to Wa	No. 10475 ter:	Values in p	parenthesi _ ft. S	s are dup Sample	licate valu Method:	es Bailer	Peristalt	ic Pum	<u></u>	1
Meters Calib	rated: <u>Ye</u> :	s_Dedicat	ed Sam	ole Equi	pment: <u>\</u>	<u>′es</u>				
Notes/Weath	ier:				···	и	· · · · · · · · · · · · · · · · · · ·			
Sampling Pe Sampling Pe					w = 2.					
		g., G.G., C.		•						



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	i: <u>NRG Di</u>	unkirk Lan	dfill Phas	se I Wel					
Sample Poin	t I.D.:	OB-20	D-DG		Da	te:_ <i>9[</i>	29/20		
Purge Inforr	nation		Purge N	/lethod:	<u>Bailer, F</u>	Peristalt	ic Pump	<u>)</u>	
Depth to Bot	tom of We	II: <u>17.61</u>	_ ft	2'	' well = ().17 ga	lons per	foot	
Depth to Wat	ter Surface	e: 6.79	_ ft						
Depth of War	ter Columi	n: 10.8Z	_ ft	_ E	levation	of Casi	ng: <u>'625.</u>	<u>35</u>	
Volume of St	anding Wa	ater in We	II: <u>1.9</u>	, 9	allons				
Start of Purg			11:00						
End of Purge	e – Time:		11:25						
Total Volume	Purged:	<u> </u>	4/2	g	allons W	ell Purç	ged Dry	Yes	No
Parameters	Meter	Method	Initial	Accumu	lated Volu	me Purg	jed (galloi	ns)	Sample
			Sample	Zgal	4gal				
Time			11:16	11:19	11:22				11:50
рН	Oakton pH 300	SM 18-20 4500HB	6.95	7.07	7.17	759			7.59
Spec.	Oakton	EPA				1 7			884
Conductance	COM 6=	120.1	1156	1129	1102				887
Temperature	emi 550	SM 18-20 2550B	60	59	58				59
Eh	ORP	ASTM							
Turbidity .	tester Hach	D1498 EPA							
Turblatty	2100P	180.1	194	389	OR	of			OR
Appearance			TURBID	TURHIS	TUBO	TURBU			TURIS
NYSDOH ELAF	No. 10475,	Values in p	parenthesis	s are dup	licate valu	es			
Depth to Wat	ter:/	3.69	_ ft. S	Sample	Method:	Bailer	Perista	altic Pur	<u>mp</u>
Meters Calib	rated: <u>Ye</u> s	s_Dedicat	ed Samp	ole Equi	pment: <u>\</u>	<u>′es</u>			
Notes/Weath	er:								
									
Sampling Pe	rsonnel: _	FON	BEI	NST	5~1				
Sampling Pe	rsonnel Si	gnature:			3	2			

.....

Site Location	i: <u>NRG Di</u>	unkirk Lan	dfill Phas	se I Ce	<u>ell B</u> F	roject	No.: <u>E</u>	T-106	<u> 36</u>	
Sample Poin	t I.D.: <u>M</u> I	H-5 Leach	nate			oate:_	9/2	9/2	0	
Purge Inforr	nation		Purge N	detho	d: None		,			
Depth to Bot	tom of We	ell: NA	_ ft							
Depth to Wa	ter Surface	e: <u>NA</u>	_ ft							
Depth of Wa	ter Columi	n: <u>NA</u>	_ ft							
Volume of St	anding W	ater in We	II: <u>1</u>	NA	gallons					
Start of Purg	e – Time:		NA		_					
End of Purge	e – Time:		NA		_					
Total Volume	e Purged:		NA		gallons '	Well F	Purged	Dry:	<u>Yes</u>	No
Parameters	Meter	Method	Initial Sample	Accui	mulated V	olume I	Purged (gallons	s)	Sample
Time										12:57
рН	Oakton pH 300	SM 18-20 4500HB								12-57
Spec. Conductance	Oakton CON 5	EPA 120.1								4750
Temperature	Oakton CON 5	SM 18-20 2550B		:						61
Eh	ORP tester	ASTM D1498								
Turbidity	HACH 2100	EPA 180.1								8.47 CLEAR
Appearance										CLEAR
NYSDOH ELAF Depth to Wa Meters Calib	ter: <u>N/</u>	4	_ ft \$	Sampl	e Metho	d: <u>Gra</u>	ı <u>b</u>		<u> </u>	
Notes/Weath	er:									
Sampling Pe	rsonnel:	Kon	180	رلسرا	578n		· · · · · ·			
Sampling Per	rsonnel Sig	gnature:				3	1	<		and a second

8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	I: NRG DI	<u>unkirk Lan</u>	atili Phas	se i Ce	ell A Pro	oject N	0.: <u>E1-1(</u>	<u> 166</u>	
Sample Poin	t I.D.: <u>M</u> I	H-1 Leach	nate	_	Da	ite:	9/29/	120	
Purge Inform	mation		Purge N	/letho	d: None		' ,		
Depth to Bot	tom of We	ell: NA	ft						
Depth to Wa									
Depth of War			_						
Volume of St				dΔ	gallone				
		ater in vve		V A	ganons				
Start of Purg			NA		-				
End of Purge	e – Time:		NA	· · ·					
Total Volume	Purged:		NA		gallons W	/ell Pur	ged Dry:	Yes	<u>No</u>
Parameters	Meter	Method	Initial	Accur	nulated Vol	ume Pur	ged (gallo	ns)	Sample
			Sample						
Time									12:17
pН	Oakton	SM 18-20							•
	pH 300	4500HB							7.89
Spec.	Oakton	EPA							
Conductance	CON 5	120.1					-		3420
Temperature	Oakton CON 5	SM 18-20 2550B							57.8
Eh	ORP	ASTM					-		7170
	tester	D1498						i	
Turbidity	HACH	EPA				<u> </u>			11-72
	2100P	180.1							4,65
Appearance									Y.B Clean
NYSDOH ELAF	No. 10475	, Values in p	parenthesi	s are di	uplicate valu	ies			,
Depth to Wat	er:NA	<u> </u>	_ ft. S	Sample	e Method:	<u>Grab</u>			
Meters Calibi	rated: Yes	s_Dedicat	ed Samp	ole Eq	uipment:_`	<u>Yes</u>	,		,
Notes/Weath	er: <u>Sал</u> р	le tarn	ed fire	10	reen i	in de	truc	acco	<u>/, </u>
<u> </u>		$\overline{\mathcal{D}}$. ,)/						
Sampling Per	rsonnel:	Vavi	d HE	1014	49				
Sampling Per	sonnel Sig	gnature:	11/1	VI S					

8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	: NRG Du	ınkirk Land	ifill Phas	e I Cell	AProje	ct No.: 1	ET-106	<u> 36</u>	
Sample Point	t I.D.: <u>M</u> F	⊣-1 Leak l	Detection	1	Date	: 9/2	9/2	0	
Purge Inforn	nation		Purge N	/lethod:	None	•			
Depth to Bott	om of We	ll: <u>NA</u>	_ ft						
Depth to Wat	ter Surface	e: <u>NA</u>	_ft						
Depth of Wat	ter Columr	n: <u>NA</u>	_ ft						
Volume of St	anding Wa	ater in We	II: <u> </u>	<u>VA</u> g	allons				
Start of Purge	e – Time:		NA						
End of Purge	e – Time:	•	NA						
Total Volume	Purged:		NA	ga	ıllons We	ll Purged	d Dry:	Yes	No
Parameters	Meter	Method	Initial Sample	Accumu	lated Volum	ne Purged	(gallon	s)	Sample
Time									
									11:55
pH	Oakton pH 300	SM 18-20 4500HB							207
Spec.	Oakton	EPA 120.1							3000
Conductance Temperature	CON 5 Oakton	SM 18-20							
 1	CON 5	2550B							58
Eh	ORP tester	ASTM D1498							
Turbidity	HACH 2100P	EPA 180.1						•	21.6
Appearance									Slightly
NYSDOH ELAF	P No. 10475	, Values in i	oarenthesi	s are dup	icate value	 S			Clody
				·					
Depth to Wat	ter: <u> N</u>	Α	_ ft.	Sample I	Method: C	<u> Grab</u>			
Meters Calib	rated: <u>Ye</u>	s_Dedicat	ted Sam _l	ple Equi	pment: <u>Ye</u>	<u>es</u>			
Notes/Weath	ner:								
			1 1/						
Sampling Pe	rsonnel:_	Davi	detto	y h			_		
Sampling Per	rsonnel Si	gnature:	TH	MA					

Site Location	: NRG Du	ınkirk Land	dfill Phas	e I Cell A	<u>A</u> Projec	t No.: <u>ET-1066</u>	<u>3</u>
Sample Point	t I.D.: <u>M</u> F	1-3 Leach	ate		Date:_	9/29/20	
Purge Inforn	nation		Purge N	/lethod: N	None		
Depth to Bott	tom of We	II: <u>NA</u>	_ ft				
Depth to Wat	ter Surface	e: <u>NA</u>	_ ft				
Depth of Wat	ter Columi	n: <u>NA</u>	_ ft				
Volume of St	anding Wa	ater in We	II: <u> </u>	NA ga	allons		
Start of Purg	e – Time:		NA				
End of Purge	e – Time:		NA				
Total Volume			NA	ga	llons Well	Purged Dry: \(\)	<u>Yes No</u>
Parameters	Meter	Method	Initial Sample	Accumul	ated Volume	Purged (gallons)) Sample
Time							1:15
рН	Oakton pH 300	SM 18-20 4500HB					8:05 4460
Spec.	Oakton	EPA 120.1					4461
Temperature	CON 5 Oakton CON 5	SM 18-20 2550B					59
Eh	ORP tester	ASTM D1498					
Turbidity	HACH 2100P	EPA 180.1					3.82
Appearance							3.82 Clen 1
NYSDOH ELAI	P No. 10475	, Values in p	parenthesi	s are dupli	cate values		
Depth to Wa	ter: N	4	_ ft. \$	Sample N	/lethod: <u>Gr</u>	<u>ab</u>	
Meters Calib	rated: <u>Ye</u>	s_Dedica	ted Sam	ple Equip	oment: <u>Yes</u>	<u>}</u>	
Notes/Weath	ner: <u></u>	nmingles	1 w	M/f	1 + M	H2	decrease with the
Sampling Pe	ersonnel:_	David	Hart	y A			
Sampling Pe	rsonnel Si	gnature: 4	MI	MA			_

8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	i: <u>NRG Di</u>	<u>ınkirk Lan</u> d	dfill Phas	e I Cell					
Sample Poin	t I.D.: <u>M</u> ł	H-3 Leak	<u>Detection</u>	<u>1</u>	Da	te:	9/29/	<u>20</u>	
Purge Inform	nation		Purge N	/lethod:	None		,		
Depth to Bot	tom of We	ll: NA	_ ft						
Depth to Wa	ter Surface	e: <u>NA</u>	_ ft						
Depth of Wa	ter Columi	n: <u>NA</u>	_ ft						
Volume of St	tanding Wa	ater in We	ll: <u> </u>	<u>NA</u> (gallons				
Start of Purg	e – Time:		NA						
End of Purge	e – Time:		NA						
Total Volume	e Purged:		NA	g	allons W	/ell Pu	rged Dry:	Yes	No
Parameters	Meter	Method	Initial Sample	Accumi	ulated Vol	ume Pu	rged (gallon	s)	Sample
Time									1:080
рН	Oakton pH 300	SM 18-20 4500HB							1:08p. 7.48 4870
Spec. Conductance	Oakton CON 5	EPA 120.1							4870
Temperature	Oakton CON 5	SM 18-20 2550B							59
Eh	ORP tester	ASTM D1498							
Turbidity	HACH 2100P	EPA 180.1							8.93
Appearance									8.93 Ckar
NYSDOH ELAI Depth to Wa					Method:				
Meters Calib	rated: <u>Ye</u>	s_Dedica	ted Sam	ple Equ	ipment:_	<u>Yes</u>			
Notes/Weath	ner:								
Sampling Pe	ersonnel:	Davig	d-Hag	900	0				
Sampling Pe	rsonnel Si	gnature:		INCA	P				

Site Location	n: <u>NRG D</u>	<u>unkirk Lan</u>	dfill Sedi	mentat		Project No.: <u>ET</u>	<u>-1066</u>
Sample Poir	nt I.D.: <u>Li</u>	ned Ditch			Date:_	9/29/20	
Purge Infor	mation		Purge N	Method	: None		
Depth to Bot	tom of We	ell: NA	_ ft				
Depth to Wa	ter Surfac	e: <u>NA</u>	_ ft				
Depth of Wa	ter Colum	n: <u>NA</u>	ft				
Volume of S	tanding W	ater in We	ll: <u> </u>	NA	gallons		
Start of Purg	e – Time:		NA				
End of Purge	e – Time:		NA				
Total Volume	e Purged:		NA		jallons Well i	Purged Dry: Yes	s No
Parameters	Meter	Method	Initial Sample	Accum	ulated Volume	Purged (gallons)	Sample
Time							1:36
pН	Oakton pH 300	SM 18-20 4500HB					8.23
Spec. Conductance	Oakton CON 5	EPA 120.1					1088
Temperature	Oakton CON 5	SM 18-20 2550B					65
Eh	ORP tester	ASTM D1498					-
Turbidity	HACH 2100P	EPA 180.1					35-3
Appearance							SUGHTU
NYSDOH ELAF Depth to Wat Meters Calib Notes/Weath	ter: <u>NA</u> rated: <u>Yes</u>	N S_Dedicat	_ ft. S ed Samp	Sample ble Equ	Method: <u>Gra</u> ipment: <u>Yes</u>	ab LA 2:00	PM
Sampling Pe		Dav _e g	d Har	MA	,		



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Sile Location	I. NKG D	unklik Lan	ann Sear	mentat	on Basir	1 18 Pro	oject ivo.:	<u> </u>	<u>100</u>
Sample Poir	nt I.D.: <u>H</u> y	ydraulic Ba	sin		·····	Da	te: <i>9</i> /	29/2	0
Purge Infor	mation		Purge I	Method :	None				
Depth to Bot	ttom of We	ell: NA	ft						
Depth to Wa									
Depth of Wa			_						
•			_						
Volume of S		ater in vve	ll: <u> </u>	NA (gallons				
Start of Purg	je – Time:		NA						
End of Purge	e – Time:	·	NA						
Total Volume	e Purged:		NA	g	allons W	/ell Pur	ged Dry:	Yes	No
Parameters	Meter	Method	Initial Sample	Accum	ulated Vol	ume Pur	ged (gallon	s)	Sample
Time									1223
pH	Oakton pH 300	SM 18-20 4500HB							8.91
Spec. Conductance	Oakton CON 5	EPA 120.1							452
Temperature	Oakton CON 5	SM 18-20 2550B							69
Eh	ORP tester	ASTM D1498							_
Turbidity	HACH 2100P	EPA 180.1							7.48
Appearance									7.48 Cuxah
NYSDOH ELAF Depth to Wa Meters Calib	ter: <u>N/</u>	4	_ ft. S	Sample	Method:	Grab			
Notes/Weath			_	-					
Sampling Pe Sampling Pe		<i>-</i>	d Har	1/2 /J)				
								-	



8675 Main Street, Williamsville, N.Y. 14221 (716) 634-2293, Fax (716) 634-2344

Site Location	n: <u>NRG D</u>	<u>unkirk Lan</u>	dfill Sedi	mentat	<u>on Basin</u>	1BProjec	t No.: ET-	<u> 1066</u>
Sample Poir	nt I.D.: <u> </u>	eaver Dam				Date:	9/29/	20
Purge Infor	mation		Purge I	Method:	None		. ,	
Depth to Bot	tom of We	ell: <u>NA</u>	_ ft					
Depth to Wa	ter Surfac	e: <u>NA</u>	_ ft					
Depth of Wa	ter Colum	n: <u>NA</u>	_ ft					
Volume of S	tanding W	ater in We	ll: <u>r</u>	NA g	gallons			
Start of Purg			NA					
End of Purge	e – Time:		NA					
Total Volume	e Purged:		NA	g	allons W	ell Purgeo	Dry: Yes	s No
Parameters	Meter	Method	Initial Sample	Accumi	ılated Volu	ime Purged	(gallons)	Sample
Time								12-31
pН	Oakton pH 300	SM 18-20 4500HB						8.14
Spec. Conductance	Oakton CON 5	EPA 120.1						12-3) 8,14 1654 66
Temperature	Oakton CON 5	SM 18-20 2550B						66
Eh	ORP tester	ASTM D1498						
Turbidity	HACH 2100P	EPA 180.1						40,2
Appearance								40,2 Greensh
NYSDOH ELAF Depth to Wat Meters Calib Notes/Weath	ter: <u>NA</u> rated: <u>Yes</u> er: <u>Lou</u>	Dedicate water	_ ft. S ed Samp	Sample ble Equi	Method:_	<u>Grab</u>		
Sampling Pe Sampling Pe			In	152			-	
Sampling Pe	isonnei Si	لے:gnature	1911	/vv				



8675 Main Street, Williamsville, NY 14221

NRG Dunkirk Landfill Calibration Record

Date: 9/29/20	
	Standard Expires
pH Calibration: Temp: 21.2 oc Buffers: 7.0 7.02	6/2021
Instrument ID: #2 10.0 10.05	6/2021
Check 4.0 4.01	6/2021
Turbidity: Cal. Check Std: 20 NTU Reading: 21 Instrument ID: 4 must be +/- 10% of true value	4/2021
Specific Conductivity Cal. Check Std: 1413 umhos/cm Instrument ID: Cos or(c) Reading: 1413	2/12/21
Field Analyst:	

Page 1 of 1



Experience is the solution

314 North Pearl Street ◆ Albany, New York 12207 (800) 848-4983 ◆ (518) 434-4546 ◆ Fax (518) 434-0891

October 21, 2020

Dave Harty Frontier Technical Associates 8675 Main Street Williamsville, NY 14221

TEL: (716) 634-2293

Work Order No: 201001034

ELAP#: 10709

RE: Plant ND GW

Plant ND

Dear Dave Harty:

Adirondack Environmental Services, Inc received 12 samples on 10/1/2020 for the analyses presented in the following report.

These samples were received outside the acceptable temperature range of 2-6 °C

Please see case narrative for specifics on analysis.

If you have any questions regarding these tests results, please feel free to call.

Sincerely,

Christopher Hess

QA Manager

CC:

MS/MSD Report

CASE NARRATIVE

CLIENT:

Frontier Technical Associates

Date: 21-Oct-20

Project:

Plant ND GW

Lab Order:

201001034

Sample containers were supplied by Adirondack Environmental Services.

Definitions - RL: Reporting Limit DF: Dilution factor

Qualifiers: ND: Not Detected at reporting limit

C: CCV below acceptable Limits

J: Analyte detected below quantitation limit

C+: CCV above acceptable Limits

B: Analyte detected in Blank

S: LCS Spike recovery is below acceptable limits

X: Exceeds maximum contamination limit

S+: LCS Spike recovery is above acceptable limits

T: Tentatively Identified Compound-Estimated

H: Hold time exceeded

Z: Duplication outside acceptable limits

N: Matrix Spike below acceptable limits

2. Dupineation outside acceptable mints

N+: Matrix Spike is above acceptable limits

E :Above quantitation range-Estimated

Note: All Results are reported as wet weight unless noted

The results relate only to the items tested. Information supplied by the client is assumed to be correct.

CLIENT:

Frontier Technical Associates

Work Order:

201001034

Reference:

Plant ND GW / Plant ND

PO#:

Client Sample ID: MH3 Leachate

Collection Date: 9/29/2020

Lab Sample ID: 201001034-001

Matrix: WATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 1	0/2/2020)				
Boron	65.3	0.500	mg/L	10	10/14/2020 4:18:00 PM
Calcium	549	0.500	mg/L	10	10/14/2020 4:18:00 PM
Lithium	3.98	0.050	mg/L	1	10/14/2020 4:13:00 PM
Magnesium	264	0.500	mg/L	10	10/14/2020 4:18:00 PM
Molybdenum	5.96	0.010	mg/L	1	10/14/2020 4:13:00 PM
Potassium	173	0.500	mg/L	10	10/14/2020 4:18:00 PM
Sodium	419	0.500	mg/L	10	10/14/2020 4:18:00 PM
ICP DISSOLVED META L- EPA 20	0.7 REV 4.4				Analyst: KH
(Prep: - 1	0/2/2020)				
Boron, Dissolved	65.5	0.500	mg/L	10	10/15/2020 12:47:00 PM
Lithium, Dissolved	4.28	0.050	mg/L	1	10/15/2020 12:40:00 PM
Molybdenum, Dissolved	5.55	0.010	mg/L	1	10/15/2020 12:40:00 PM
ANIONS BY ION CHROMATOGRA	NPHY - EPA 300.0 R	EV 2.1			Analyst: CC
Chloride	16.7	2.00	mg/L	2	10/19/2020 7:05:43 PM
Sulfate	2670	50.0	mg/L	50	10/19/2020 7:24:44 PM
ALKALINITY TO PH 4.5 -SM 23201	B-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	400	10	mgCaCO3/L	1	10/13/2020

CLIENT: Frontier Technical Associates

Work Order: 201001034

201001034

Reference: Plant ND GW / Plant ND

PO#:

Date: 21-Oct-20

Client Sample ID: MH3 LD

Collection Date: 9/29/2020

Lab Sample ID: 201001034-002

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.4					Analyst: KH
(Prep: - 1	0/2/2020)				•
Boron	44.5	0.500	mg/L	10	10/14/2020 4:58:00 PM
Calcium	425	0.500	mg/L	10	10/14/2020 4:58:00 PM
Lithium	3.10	0.050	mg/L	1	10/14/2020 4:55:00 PM
Magnesium	146	0.050	mg/L	1	10/14/2020 4:55:00 PM
Molybdenum	1.46	0.010	mg/L	1	10/14/2020 4:55:00 PM
Potassium	108	0.500	mg/L	10	10/14/2020 4:58:00 PM
Sodium	574	5.00	mg/L	100	10/14/2020 5:02:00 PM
CP DISSOLVED META L- EPA 20	0.7 REV 4.4				Analyst: KH
(Prep: - 1	0/2/2020)				
Boron, Dissolved	55.9	5.00	mg/L	100	10/15/2020 1:14:00 PM
Lithium, Dissolved	3.70	0.050	mg/L	1	10/15/2020 4:05:00 PM
Molybdenum, Dissolved	1.62	0.010	mg/L	1	10/15/2020 4:05:00 PM
ANIONS BY ION CHROMATOGRA	PHY - EPA 300.0 R	EV 2.1			Analyst: CC
Chloride	32.6	2.00	mg/L	2	10/19/2020 7:43:46 PM
Sulfate	2830	50.0	mg/L	50	10/19/2020 8:02:48 PM
ALKALINITY TO PH 4.5 -SM 23201	B-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	420	10	mgCaCO3/L	1	10/13/2020

Date: 21-Oct-20

CLIENT:

Frontier Technical Associates

Work Order:

201001034

Reference:

Plant ND GW / Plant ND

PO#:

Client Sample ID: Beaver Dam
Collection Date: 9/29/2020
Lab Sample ID: 201001024 00

Lab Sample ID: 201001034-003

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
CP METALS - EPA 200.7 REV 4.4	1			•	Analyst: KH
(Prep: - 1	10/2/2020)				·
Boron	10.1	0.050	mg/L	1	10/14/2020 5:28:00 PM
Calcium	103	0.050	mg/L	1	10/14/2020 5:28:00 PM
Lithium	0.250	0.050	mg/L	1	10/14/2020 5:28:00 PM
Magnesium	37.3	0.050	mg/L	1	10/14/2020 5:28:00 PM
Molybdenum	0.232	0.010	mg/L	1	10/14/2020 5:28:00 PM
Potassium	51.4	0.050	mg/L	1	10/14/2020 5:28:00 PM
Sodium	289	0.500	mg/L	10	10/14/2020 5:32:00 PM
CP DISSOLVED META L- EPA 20					Analyst: KH
(Prep: - 1	10/2/2020)				
Boron, Dissolved	12.6	0.050	mg/L	1	10/15/2020 1:19:00 PM
Lithium, Dissolved	0.270	0.050	mg/L	1	10/15/2020 1:19:00 PM
Molybdenum, Dissolved	0.293	0.010	mg/L	1	10/15/2020 1:19:00 PM
NIONS BY ION CHROMATOGRA	APHY - EPA 300.0 R	EV 2.1			Analyst: CC
Chloride	40.9	2.00	mg/L	2	10/19/2020 8:21:50 PM
Sulfate	604	50.0	mg/L	50	10/19/2020 8:40:53 PM
LKALINITY TO PH 4.5 -SM 2320	B-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	300	10	mgCaCO3/L	1	10/13/2020

CLIENT:

Frontier Technical Associates

Work Order:

201001034

Reference:

Plant ND GW / Plant ND

PO#:

Date: 21-Oct-20

Client Sample ID: MH-1 Leachate

Collection Date: 9/29/2020

Lab Sample ID: 201001034-004

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.4	ļ:		-		Analyst: KH
(Prep: - 1	0/2/2020)				·
Boron	38.7	0.500	mg/L	10	10/14/2020 5:40:00 PM
Calcium	380	0.500	mg/L	10	10/14/2020 5:40:00 PM
Lithium	3.03	0.050	mg/L	1	10/14/2020 5:35:00 PM
Magnesium	278	0.500	mg/L	10	10/14/2020 5:40:00 PM
Molybdenum	2.32	0.010	mg/L	1	10/14/2020 5:35:00 PM
Potassium	75.0	0.500	mg/L	10	10/14/2020 5:40:00 PM
Sodium	99.3	0.500	mg/L	10	10/14/2020 5:40:00 PM
ICP DISSOLVED META L- EPA 20	0.7 REV 4.4				Analyst: KH
(Prep: - 1	0/2/2020)				
Boron, Dissolved	44.1	0.500	mg/L	10	10/15/2020 1:33:00 PM
Lithium, Dissolved	3.28	0.050	mg/L	1	10/15/2020 1:29:00 PM
Molybdenum, Dissolved	2.80	0.010	mg/L	1	10/15/2020 1:29:00 PM
ANIONS BY ION CHROMATOGRA	NPHY - EPA 300.0 R	EV 2.1			Analyst: CC
Chloride	3.42	2.00	mg/L	2	10/19/2020 8:59:55 PM
Sulfate	1880	50.0	mg/L	50	10/19/2020 10:37:10 PM
ALKALINITY TO PH 4.5 -SM 2320	B-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	520	10	mgCaCO3/L	1	10/13/2020

CLIENT:

Frontier Technical Associates

Work Order:

201001034

Reference:

Plant ND GW / Plant ND

PO#:

Client Sample ID: MH1 LD

Collection Date: 9/29/2020

Lab Sample ID: 201001034-005

Matrix: WATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.4	1				Analyst: KH
(Prep: - 1	0/2/2020)				•
Boron	5.12	0.050	mg/L	1	10/14/2020 5:44:00 PM
Calcium	532	0.500	mg/L	10	10/14/2020 5:47:00 PM
Lithium	0.924	0.050	mg/L	1	10/14/2020 5:44:00 PM
Magnesium	161	0.050	mg/L	1	10/14/2020 5:44:00 PM
Molybdenum	NĐ	0.010	mg/L	1	10/14/2020 5:44:00 PM
Potassium	4.80	0.050	mg/L	1	10/14/2020 5:44:00 PM
Sodium	118	0.500	mg/L	10	10/14/2020 5:47:00 PM
ICP DISSOLVED META L- EPA 20	0.7 REV 4.4				Analyst: KH
(Prep: - 1	0/2/2020)				·
Boron, Dissolved	6.20	0.050	mg/L	1	10/15/2020 1:36:00 PM
Lithium, Dissolved	0.971	0.050	mg/L	1	10/15/2020 1:36:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	10/15/2020 1:36:00 PM
ANIONS BY ION CHROMATOGRA	NPHY - EPA 300.0 RI	EV 2.1			Analyst: CC
Chloride	13.4	2.00	mg/L	2	10/19/2020 11:15:31 PM
Sulfate	1600	50.0	mg/L	50	10/19/2020 11:15:31 PM 10/19/2020 11:34:33 PM
ALKALINITY TO PH 4.5 -SM 2320	B-2011		g , _	00	Analyst: JH
Alkalinity, Total (As CaCO3)	450	10	mgCaCO3/L	1	10/13/2020

CLIENT:

Frontier Technical Associates

Work Order:

201001034

Reference:

Plant ND GW / Plant ND

PO#:

Date: 21-Oct-20

Client Sample ID: MH5 Leachate

Collection Date: 9/29/2020

Lab Sample ID: 201001034-006

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.4	1				Analyst: KH
(Prep: - 1	10/2/2020)				·
Boron	59.8	5.00	mg/L	100	10/14/2020 5:54:00 PM
Calcium	496	5.00	mg/L	100	10/14/2020 5:54:00 PM
Lithium	3.58	0.050	mg/L	1	10/14/2020 5:51:00 PM
Magnesium	180	0.050	mg/L	1	10/14/2020 5:51:00 PM
Molybdenum	4.70	0.010	mg/L	1	10/14/2020 5:51:00 PM
Potassium	135	5.00	mg/L	100	10/14/2020 5:54:00 PM
Sodium	723	5.00	mg/L	100	10/14/2020 5:54:00 PM
ICP DISSOLVED META L- EPA 20	00.7 REV 4.4				Analyst: KH
(Prep: - 1	10/2/2020)				•
Boron, Dissolved	63.3	0.500	mg/L	10	10/15/2020 1:50:00 PM
Lithium, Dissolved	4.29	0.050	mg/L	1	10/15/2020 1:44:00 PM
Molybdenum, Dissolved	5.79	0.010	mg/L	1	10/15/2020 1:44:00 PM
ANIONS BY ION CHROMATOGRA	APHY - EPA 300.0 R	EV 2.1			Analyst: CC
Chloride	31.9	2.00	mg/L	2	10/19/2020 11:53:35 PM
Sulfate	2970	50.0	mg/L	50	10/20/2020 12:31:38 AM
ALKALINITY TO PH 4.5 -SM 2320	B-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	300	10	mgCaCO3/L	1	10/13/2020

CLIENT:

Frontier Technical Associates

Work Order:

201001034

Reference:

Plant ND GW / Plant ND

PO#:

Client Sample ID: Sed-1B

Collection Date: 9/29/2020

Lab Sample ID: 201001034-007

Matrix: WATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.4	•				Analyst: KH
(Prep: - 1	0/2/2020)				•
Boron	21.2	0.500	mg/L	10	10/14/2020 6:03:00 PM
Calcium	393	0.500	mg/L	10	10/14/2020 6:03:00 PM
Lithium	0.949	0.050	mg/L	1	10/14/2020 5:58:00 PM
Magnesium	88.8	0.050	mg/L	1	10/14/2020 5:58:00 PM
Molybdenum	0.306	0.010	mg/L	1	10/14/2020 5:58:00 PM
Potassium	61.4	0.500	mg/L	10	10/14/2020 6:03:00 PM
Sodium	467	0.500	mg/L	10	10/14/2020 6:03:00 PM
CP DISSOLVED META L- EPA 20 (Prep: - 1	0.7 REV 4.4 0/2/2020)				Analyst: KH
Boron, Dissolved	19.0	0.050	mg/L	1	10/15/0000 0:00:00 DM
Lithium, Dissolved	1,16	0.050	mg/L	1	10/15/2020 2:32:00 PM
Molybdenum, Dissolved	0.363	0.030	mg/L	1	10/15/2020 2:32:00 PM 10/15/2020 2:32:00 PM
ANIONS BY ION CHROMATOGRA	PHY - EPA 300.0 R	EV 2.1	J		Analyst: CC
Chloride	20.1	2.00	m a/l	0	10/00/0000 10/50/10 11/
Sulfate	1820	50.0	mg/L mg/L	2 50	10/20/2020 12:50:40 AM
		30.0	IIIg/L	50	10/20/2020 1:09:42 AM
ALKALINITY TO PH 4.5 -SM 23201	3-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	280	10	mgCaCO3/L	1	10/13/2020

CLIENT:

Frontier Technical Associates

Work Order:

201001034

Reference:

Plant ND GW / Plant ND

PO#:

Client Sample ID: Sed-1A

Collection Date: 9/29/2020

Lab Sample ID: 201001034-008

Matrix: WATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.4	4				Analyst: KH
(Prep: - ⁻	10/2/2020)				•
Boron	20.3	0.500	mg/L	10	10/15/2020 11:40:00 AM
Calcium	378	0.500	mg/L	10	10/15/2020 11:40:00 AM
Lithium	1.17	0.050	mg/L	1	10/15/2020 11:36:00 AM
Magnesium	101	0.050	mg/L	1	10/15/2020 11:36:00 AM
Molybdenum	0.246	0.010	mg/L	1	10/15/2020 11:36:00 AM
Potassium	83.0	0.050	mg/L	1	10/15/2020 11:36:00 AM
Sodium	385	0.500	mg/L	10	10/15/2020 11:40:00 AM
ICP DISSOLVED META L- EPA 20	00.7 REV 4.4				Analyst: KH
(Prep: - 1	10/2/2020)				
Boron, Dissolved	25.1	0.500	mg/L	10	10/15/2020 2:59:00 PM
Lithium, Dissolved	1.16	0.050	mg/L	1	10/15/2020 2:55:00 PM
Molybdenum, Dissolved	0.309	0.010	mg/L	1	10/15/2020 2:55:00 PM
ANIONS BY ION CHROMATOGRA	APHY - EPA 300.0 R	EV 2.1			Analyst: CC
Chloride	19.5	2.00	mg/L	2	10/20/2020 3:07:08 AM
Sulfate	1860	50.0	mg/L	50	10/20/2020 3:26:19 AM
ALKALINITY TO PH 4.5 -SM 2320	B-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	280	10	mgCaCO3/L	1	10/13/2020

CLIENT: Work Order: Frontier Technical Associates

Reference:

201001034

Plant ND GW / Plant ND

PO#:

Client Sample ID: BR-20-DG

Collection Date: 9/29/2020

Lab Sample ID: 201001034-009

Matrix: WATER

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.4	•				Analyst: KH
(Prep: - 1	0/2/2020)				•
Boron	1.54	0.050	mg/L	1	10/15/2020 11:44:00 AM
Calcium	23.9	0.050	mg/L	1	10/15/2020 11:44:00 AM
Lithium	ND	0.050	mg/L	1	10/15/2020 11:44:00 AM
Magnesium	7.70	0.050	mg/L	1	10/15/2020 11:44:00 AM
Molybdenum	ND	0.010	mg/L	1	10/15/2020 11:44:00 AM
Potassium	7.69	0.050	mg/L	1	10/15/2020 11:44:00 AM
Sodium	318	0.500	mg/L	10	10/15/2020 11:47:00 AM
ICP DISSOLVED META L- EPA 20	0.7 REV 4.4				Analyst: KH
(Prep: - 1	0/2/2020)				
Boron, Dissolved	1.40	0.050	mg/L	1	10/15/2020 3:04:00 PM
Lithium, Dissolved	ND	0.050	mg/L	1	10/15/2020 3:04:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	10/15/2020 3:04:00 PM
ANIONS BY ION CHROMATOGRA	PHY - EPA 300.0 R	EV 2.1			Analyst: CC
Chloride	10.9	2.00	mg/L	2	10/20/2020 3:45:21 AM
Sulfate	ND	2.00	mg/L	2	10/20/2020 3:45:21 AM
ALKALINITY TO PH 4.5 -SM 23201	3-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	600	10	mgCaCO3/L	1	10/13/2020

CLIENT:

Frontier Technical Associates

Work Order: Reference:

201001034

Plant ND GW / Plant ND

PO#:

Date: 21-Oct-20

Client Sample ID: OB-20-DG

Collection Date: 9/29/2020

Lab Sample ID: 201001034-010

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.	4				Analyst: KH
(Prep: -	10/2/2020)				•
Boron	1.07	0.050	mg/L	1	10/15/2020 12:11:00 PM
Calcium	114	0.050	mg/L	1	10/15/2020 12:11:00 PM
Lithium	ND	0.050	mg/L	1	10/15/2020 12:11:00 PM
Magnesium	38.5	0.050	mg/L	1	10/15/2020 12:11:00 PM
Molybdenum	ND	0.010	mg/L	1	10/15/2020 12:11:00 PM
Potassium	9.95	0.050	mg/L	1	10/15/2020 12:11:00 PM
Sodium	103	0.500	mg/L	10	10/15/2020 12:14:00 PM
ICP DISSOLVED META L- EPA 20	00.7 REV 4.4				Analyst: KH
(Prep: -	10/2/2020)				,, ,
Boron, Dissolved	0.976	0.050	mg/L	1	10/15/2020 3:09:00 PM
Lithium, Dissolved	ND	0.050	mg/L	1	10/15/2020 3:09:00 PM
Molybdenum, Dissolved	ND	0.010	mg/L	1	10/15/2020 3:09:00 PM
ANIONS BY ION CHROMATOGRA	APHY - EPA 300.0 RI	EV 2.1			Analyst: CC
Chloride	2.20	2.00	mg/L	2	10/20/2020 4:04:23 AM
Sulfate	91.1	2.00	mg/L	2	10/20/2020 4:04:23 AM
ALKALINITY TO PH 4.5 -SM 2320	B-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	440	10	mgCaCO3/L	1	10/13/2020

Date: 21-Oct-20

CLIENT:

Frontier Technical Associates

Work Order:

201001034

Reference:

Plant ND GW / Plant ND

PO#:

Client Sample ID: Hydraulic Basin

Collection Date: 9/29/2020

Lab Sample ID: 201001034-011

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.	4			**	Analyst: KH
(Prep: -	10/2/2020)				,
Boron	0.702	0.050	mg/L	1	10/15/2020 12:18:00 PM
Calcium	35.7	0.050	mg/L	1	10/15/2020 12:18:00 PM
Lithium	ND	0.050	mg/L	1	10/15/2020 12:18:00 PM
Magnesium	9.26	0.050	mg/L	1	10/15/2020 12:18:00 PM
Molybdenum	0.030	0.010	mg/L	1	10/15/2020 12:18:00 PM
Potassium	6.64	0.050	mg/L	1	10/15/2020 12:18:00 PM
Sodium	44.1	0.050	mg/L	1	10/15/2020 12:18:00 PM
ICP DISSOLVED META L- EPA 2	00.7 REV 4.4				Analyst: KH
(Prep: -	10/2/2020)				7 mayou 141
Boron, Dissolved	0.632	0.050	mg/L	1	10/15/2020 3:13:00 PM
Lithium, Dissolved	ND	0.050	mg/L	1	10/15/2020 3:13:00 PM
Molybdenum, Dissolved	0.029	0.010	mg/L	1	10/15/2020 3:13:00 PM
ANIONS BY ION CHROMATOGR.	APHY - EPA 300.0 RI	EV 2.1			Analyst: CC
Chloride	48.4	2.00	mg/L	2	10/20/2020 4:42:27 AM
Sulfate	53.4	2.00	mg/L	2	10/20/2020 4:42:27 AM
ALKALINITY TO PH 4.5 -SM 2320	B-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	84	4	mgCaCO3/L	1	10/13/2020

Date: 21-Oct-20

CLIENT:

Frontier Technical Associates

Work Order:

201001034

Reference:

Plant ND GW / Plant ND

PO#:

Client Sample ID: Lined Ditch Collection Date: 9/29/2020

Lab Sample ID: 201001034-012

Analyses	Result	RL Q	ual Units	DF	Date Analyzed
ICP METALS - EPA 200.7 REV 4.4			. •		Analyst: KH
(Prep: - 1	0/2/2020)				·
Boron	7.83	0.050	mg/L	1	10/15/2020 12:21:00 PM
Calcium	123	0.050	mg/L	1	10/15/2020 12:21:00 PM
Lithium	ND	0.050	mg/L	1	10/15/2020 12:21:00 PM
Magnesium	36.7	0.050	mg/L	1	10/15/2020 12:21:00 PM
Molybdenum	0.032	0.010	mg/L	1	10/15/2020 12:21:00 PM
Potassium	25.4	0.050	mg/L	1	10/15/2020 12:21:00 PM
Sodium	120	0.500	mg/L	10	10/15/2020 12:25:00 PM
ICP DISSOLVED META L- EPA 20 (Prep: - 1	0.7 REV 4.4 0/2/2020)				Analyst: KH
Boron, Dissolved	7,44	0.050	mg/L	1	10/15/2020 3:18:00 PM
Lithium, Dissolved	ND	0.050	mg/L	1	10/15/2020 3:18:00 PM
Molybdenum, Dissolved	0.032	0.010	mg/L	1	10/15/2020 3:18:00 PM
ANIONS BY ION CHROMATOGRA	PHY - EPA 300.0 R	EV 2.1			Analyst: CC
Chloride	48.5	2.00	mg/L	2	10/20/2020 9:44:40 PM
Sulfate	243	50.0	mg/L	50	10/20/2020 5:20:31 AM
ALKALINITY TO PH 4.5 -SM 23201	3-2011				Analyst: JH
Alkalinity, Total (As CaCO3)	360	10	mgCaCO3/L	1	10/13/2020

Frontier Technical Associates 201001034 CLIENT:

Work Order:

Plant ND GW Project:

ANALYTICAL QC SUMMARY REPORT

Date: 21-Oct-20

BatchID: 81818

PrepRef: Units: mg/L Analysis Date: 10/15/2 PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPI 0.0500 0 0 0 0 7.445 0.0953 0.0500 0 0 0 0 0 0 0.0100 0 0 0 0 0 0	DUP	SeqNo: 2930982			PrepC	PrepDate:10/2/2020		TestN	TestNo: E200.7F		BunNo: 187699	87699	
Dissolved 7.452 0.0500 0		Samp ID: 201001034-012			PrepF	lef:		Units	: mg/L		sis Date: 1	0/15/2020	
	Analyte Boron, D Lithium, I Molybder	issolved Dissolved rum, Dissolved	Result 7.452 ND 0.03155	Pol. 0.0500 0.0500 0.0100	SPK value 0 0	SPK Ref Val	%REC 0 0	LowLimit E 0	lighLimit 0 0	RPD Ref Val 7.445 0 003455	%RPD 0.0953 0	RPDLimit 18.9 18.8	Qual

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

ANALYTICAL QC SUMMARY REPORT

BatchID: 81819

201001034 Work Order:

Frontier Technical Associates

CLIENT:

Plant ND GW Project:

SeqNo: 2930023	PrepDate:10/2/2020	TestNo: E200.7	RunNo:	RunNo: 187658
Samp ID: 201001034-001	PrepRef:	Units: mg/L	Analysis Date: 10/14/2020	10/14/2020

DUP	SeqNo: 2930023			PrepL	PrepDate:10/2/2020		Test	TestNo: E200.7		RunNo: 187658	7658	
	Samp ID: 201001034-001			PrepRef:	lef:		U	Units: mg/L	Analy	Analysis Date: 10/14/2020	114/2020	
Analyte Lithium Molybdenum	E D L	Result 3.969 6.178	PQL 0.0500 0.0100	SPK value 0 0	SPK value SPK Ref Val 0 0	%REC 0 0	%REC LowLimit HighLimit 0 0 0 0 0	HighLimit 0 0	RPD Ref Val 3.977 5.957	%RPD 0.201 3.64	RPDLimit 18.8 15.3	Qual
DUP	SeqNo: 2930024			DrepD	PrepDate:10/2/2020		Test	TestNo: E200.7		RunNo: 187658	7658	
	Samp ID: 201001034-001			PrepRef:	ef:		Unit	Units: mg/L	Analy	Analysis Date: 10/14/2020	/14/2020	
<u>Analyte</u>		Result	Po	SPK value	SPK value SPK Ref Val	%REC	%REC LowLimit HighLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Boron		65.92	0.500	0	0	0	0	0	65.28	0.979	20	
Calcium		566.9	0.500	0	0	0	0	0	548.5	3.30	13.9	
Magnesium	u r	265.2	0.500	0	0	0	0	0	264.1	0.427	15.6	
Potassium	E	174.4	0.500	0	0	0	0	0	172.5	1.08	15.2	
Sodium		425.7	0.500	0	0	0	0	0	419.2	1,53	15.7	

Qualifiers:

B - Analyte detected in the associated Method Blank

Frontier Technical Associates CLIENT:

201001034 Work Order: Plant ND GW Project:

ANALYTICAL QC SUMMARY REPORT

BatchID: R187611

RunNo: 187611 Units: mgCaCO3/L TestNo: SM2320B 10.0 Result 400 Samp ID: 201001034-001 SeqNo: 2928485 DUP Analyte

LowLimit HighLimit

%REC

SPK value SPK Ref Val

Alkalinity, Total (As CaCO3)

0

RPD Ref Val

Analysis Date: 10/13/2020

RPDLimit %RPD

Qua

6.6

400

Qualifiers:

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Page 3 of 6

CLIENT: Frontier Technical Associates

Work Order: 201001034

Project: Plant ND GW

ANALYTICAL QC SUMMARY REPORT

BatchID: R187842

:											
SE	SeqNo: 2933598						TestNo: E300		BunNo: 187842		
	Samp ID: 201009032-003						Units: mg/L	Ana		020	
<u>Analyte</u> Chloride		Result 303.9	PQL 5.00	SPK value 50	SPK Ref Val 257.3	<u>%REC</u> 93.3	LowLimit HighLimit 90 110	RPD Ref Val	<u>%RPD</u> RPD	RPDLimit G	Qual
MS MS	SeqNo: 2933607 Samp ID: 201009047-001						TestNo: E300 Units: mg/L	Ana	RunNo: 187842 Analysis Date: 10/19/2020	020	
<u>Analyte</u> Sulfate		Result 58.85	POL 4.00	SPK value 20	SPK Ref Val 39.97	%REC 94.4	LowLimit HighLimit 90 110	RPD Ref Val	%RPD RPDLimit 0		Qual
MS	SeqNo: 2933626 Samp ID: 201001034-004	(MH-1 Leachate)					TestNo: E300 Units: mg/L	Ana	RunNo: 187842 Analysis Date: 10/19/2020	020	
Analyte Sulfate		Result 2413	PQL 50.0	SPK value 500	SPK Ref Val 1885	%REC 106	LowLimit HighLimit 90 110	RPD Ref Val	%RPD RPDLimit		Qual
SE SE	SeqNo: 2933634 Samp ID: 201001034-007	(Sed-1B)					TestNo: E300 Units: mg/L	Ana	RunNo: 187842 Analysis Date: 10/20/2020	020	
Analyte Sulfate		Result 2301	POL 50.0	SPK value 500	SPK Ref Val 1819	%REC 96.5	LowLimit HighLimit 90 110	RPD Ref Val	%RPD RPDLimit		Qual
DUP	SeqNo: 2933595 Samp ID: 201009032-001						TestNo: E300 Units: mg/L	Ana	RunNo: 187842 Analysis Date: 10/19/2020	020	
<u>Analyte</u> Chloride		Result 263.5	<u>POL</u> 5.00	SPK value 9	SPK Ref Val 0	%REC 0	LowLimit HighLimit 0 0	RPD Ref Val 267.9	%RPD RPDLimit 1.64 19.6		Qual
DUP	SeqNo: 2933605 Samp ID: 201009080-002						TestNo: E300 Units: mg/L	Anal	RunNo: 187842 Analysis Date: 10/19/2020	020	
<u>Analyte</u> Chloride		Result 88.11	<u>POL</u> 2:00	SPK value 9	SPK Ref Val	%REC 0	LowLimit HighLimit 0 0	RPD Ref Val 88.13	%RPD RPDLimit 0.0250 19.6		Qual

Qualifiers: ND-

ND - Not Detected at the Reporting Limit

J - Analyte detected below quantitation limits

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

B - Analyte detected in the associated Method Blank

Page 4 of 6

CLIENT: Frontier Technical Associates

Work Order: 201001034

BatchID: R187842

ANALYTICAL QC SUMMARY REPORT

Project: Plant ND GW

DUP	SeqNo: 2933622					TestNo: E300		RunNo: 187842	
	Samp ID: 201001034-004					Units: mg/L	Analı	Analysis Date: 10/19/2020	Q.
Analyte Chloride		Result 3.446	POL 2.00	SPK value SPK Ref Val 0	%REC 0	%REC LowLimit HighLimit RPD Ref Val 0 0 3.416	RPD Ref Val 3.416	%RPD RPDLimit Qual 0.874 19.6	Limit Qu
DUP	SeqNo: 2933630								
	Samp ID: 201001034-006					Units: mg/L	Anal	Hunno: 187842 Analysis Date: 10/20/2020	Ω.
Analyte		Result	<u>POL</u>	SPK value SPK Ref Val	%REC	%REC LowLimit HighLimit RPD Ref Val	RPD Ref Val	%RPD RPDLimit Qual	mit
901010		37.75	5.00	0 0	0	0	31.86	1.91 19.6	9.6

Qualifiers:

Page 6 of 6

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

J - Analyte detected below quantitation limits ND - Not Detected at the Reporting Limit

Qualifiers:

Frontier Technical Associates CLIENT:

201001034 Plant ND GW Work Order: Project:

BatchID: R187894

ANALYTICAL QC SUMMARY REPORT

DO	SeqNo: 2934621						TestNo: E300		RunNo: 187894	7894	
	Samp ID: 201020010-001			:			Units: mg/L	Ana	Analysis Date: 10/20/2020	/20/2020	
Analyte Chloride		Result ND	POL 1.00	SPK value	SPK value SPK Ref Val	<u>%REC</u>	%REC LowLimit HighLimit 0 0 0	RPD Ref Val 0.551	%RPD 0	%RPD RPDLimit 0 19.6	Qual
DUP	SeqNo: 2934647						TestNo: F300		BinNo: 187894	7894	
	Samp ID: 201020031-001						Units: mg/L	Ana	Analysis Date: 10/21/2020	/21/2020	
Analyte		Result	PO	SPK value	SPK value SPK Ref Val	%REC	%REC LowLimit HighLimit RPD Ref Val	RPD Ref Val	%RPD	%RPD RPDLimit	Qual
Chloride		QN	1.00	0	0	0	0 0	0.983	0	19.6	
Sulfate		5.258	1.00	0	0	0	0	5.303	0.842	10.9	
MS	SeqNo: 2934631						TestNo: E300		BinNo: 187894	7894	
	Samp ID: 201007041-001						Units: mg/L	Anaı	Analysis Date: 10/20/2020	,20/2020	
Analyte Sulfate		Result 2453	PQL 50.0	SPK value 500	SPK value SPK Ref Val 500 1891	%REC 112	%REC LowLimit HighLimit 110	RPD Ref Val	%RPD 0	%RPD RPDLimit 0	Qual S
											ı



314 North Pearl Street Albany, NY 12207

518-434-4546 / FAX: 518-434-0891

CHAIN OF CUSTODY RECORD

AES Work Order#:	
201001034	
COC Reference:	

EXPERIENCE IS	THE SOLUTION	

***************************************	A full service a	nalytical resea	arch labor	ratoı	ry offering solu	itions to	enviror	ımental c	oncerns		
Client Na	me: Frontier Technical Associates,	Address:				00.000.000.000.000	MARKET CONTRACTOR	nesemble menter at con	lle, NY 14221	-MARINERA-PAPATAMENTA-COCCERC	THE PERSON NAMED IN COLUMN
	David Harty	Project Na	t n			en seer en een een een een een een een een e	Sampl Dau	ers Nam wd H	ne: anty/Ren	Blins	kn
Client Pho	one #:716-634-2293	Client PO	#:		le la la company de la company de la company de la company de la company de la company de la company de la comp	en en en en en en en en en en en en en e	Sampl	ers\Sjøj	ature:	- 	
	ail: David.harty@frontiertech	nical.com				-	1	ر کاک	MA		
AES Sample Number	Client Sample Identification & Location	Date Sampled	Time A=an P=pn	n	Sample Matrix (Type	# of Cont's	Preser- vative	Ar	nalysis	
COL	MH3 Leachate	4/29/2	12	P	W	X	4	7	Metals		TARATAR TANGAR MARANAS T
002	MH3 LD		120	January	w	X	11	2	17,350/00	Meto	k
	Beaver Dam		12:3		W	X		٥	Alkal.		and decrease on the
004	MH-1 Lordrate		12:1		W	×	Ti	O	504	(1	PROPERTY OF THE PROPERTY OF TH
005	MHI LD		1125	A P	W	×	1	Armed the mentance of a view	en en en en en en en en en en en en en e	aranga panananan na na na na na na na na na na n	**************************************
000	MH5 Leachate		1235	À P	W	X	1				THE PORT OF THE PARTY OF THE STREET
TOOL	Sed -13		12.4	G ^A	W	X			A MANAGEMENT OF THE PROPERTY OF A STATE OF THE STATE OF T	OLEGO PROPERTIES AND ARTICLES A	ter and er or designed was
008	Sed - 1A		12:3	A P	W	×			THE PROPERTY OF THE PROPERTY O	50 集制 电线电影 5 年 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	talika intersetende p
CC9	BR-20-DG		11:5		W	X	3,533 (1,75)(1,00)(2,5)			THE CONTRACT OF STATE	AND SOLD ASSESSMENT OF THE PROPERTY OF THE PRO
OIO.	OB-20-D6		11:50	A P	W	5			AND A SERVICE OF THE PROPERTY	redirection of the telephone and the telephone and the telephone and tel	
Cil	Hydraulic Basin Lined Ditch		1223	3 A P	W	×			***************************************	het et diet et die eeu van ze verze zogen zogen zogen zoen verween werden verze	
012	Lived Ditch	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1:35	A P	ω	X			CONTRACTOR OF THE PROPERTY OF	**************************************	THE PAPACON OF THE SECOND
و در در در در در در در در در در در در در	PPOCO - 1838 Bakananangahiya (-1950-195) (1958) 1858 (1858-195) (1858-195) (1858-195)			A P					THE PARTY OF THE SECTION AND AND THE PARTY OF THE PARTY O	A CONTRACTOR OF THE PROPERTY AND A	TOTAL DE BURNESSE ACTUA
				A P			*************		CONTRACTOR CONTRACTOR OF THE PROPERTY OF THE P	iki di disabatan salam salam na janggapan pengangan salam salam salam salam salam salam salam salam salam salam	CONTRACTOR AND AND AND AND AND AND AND AND AND AND
				A P	20000		Ministration of the continues of		TOTAL TO BETT OF THE CONTRACT OF THE STATE O		**************************************
	nt Arrived Via:			Spe	ecial Instruc	tions/	Rema	rks:	· 医克尔特氏试验检试验 · 化二甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基甲基	AND THE PROPERTY OF THE PROPER	TO A MARKET BY BY SOUTH PROTECTION
	UPS Client AES Other:_ und Time Requested:			M	letals = 0	Ta, M	ng Ne	zK,	Li, Bo, Mo		A 1
1 Day		Standard		Di	issolved	Me	FALS	= 4	B. Mo	(field t	Hered
•	nples received after 3:30pm are consider	ed next busin	ess day.						, ,		
	d by/(Signature)	***************************************	j	Rec	eived by: (Sig	nature)	of discourse and the second se	TOTAL SECTION OF THE	Dat	e Tim	######################################
	Lem Jac	DCKARIACIII (NANONINI MARININI RINI MARINI MARINI MARINI MARINI MARININI MARINI CONTRACTOR AND ADDRESS OF THE PERSON OF THE	£	12) B	X	en en en en en en en en en en en en en e	Minimum and Sandan	9/.	80/20 H	1000	
ielinq uis ne	ed by: (Signature)] [Rece	eived by: (Sigi	nature)			Dat		е
lelinquishe	d by: (Signature)	PRE ACTION CONTRACTOR AND AND AND AND AND AND AND AND AND AND		Rece	eived for Labo	ratory k	oy:		Dat	e Tim	Α
***************************************		and the second s		~~~~~~	4 Ca	Ć			10,	1/201	1:020
а .	Sample Temperature			rop	erly Prese		V)/1	1	Received \	0	A CONTRACTOR OF THE PARTY OF TH
_	oient Chilled ~ Chilling Be		0=None 1=H ₂ SO ₄	рH.		NH₄CI Ascorbi	io Acid			: (Y) / N	
lotes:	- mg 0 /	,	2=HNO ₃			ASCOID FAS	ic Acid		Notes:		
	1		3=HCl ph	1<2	8=		IaOH p⊦	>9			
teristetimis dal y primpi propini manana	Custody Seal Intact: Y / N		4=Na ₂ S ₂ (O_3		NaOH ; =Other					
WOOD PROPERTY OF THE PERSON OF	Bottles AES: \hat{N} / N	***************************************	CZZOCOWOWOCZOWNOCZ		O-	-011101	PO1000	··	E	1 1 20 5:	
	DOLLIGS AEG: /1/ / N	1									