



TECHNICAL MEMORANDUM

To	Samantha Kretz, Michael Dickson, Tom Bird	Ref #	123.22087.01-TM4
CC	Chris Dorenkamp, Jordan McCourt	Date	1/2/2025
From	Landon Beck		
Subject	King II Mine MW-5, MW-7, MW-8 2024Q4 Hydrologic Monitoring Data		

The GCC Energy King II Mine hydrologic monitoring program includes monitoring wells installed in 2017 and 2018 on Ute Mountain Ute Tribe (UMUT) owned lands. As detailed in the Preliminary Hydrologic Monitoring Plan – Ute Mountain Ute Tribe MW-5 Cluster Monitoring Wells at King II Coal Mine, dated November 18, 2016, and agreed to in a letter by UMUT dated February 3, 2017, GCC is required to present the hydrologic monitoring data for the MW-5 wells (3) on a quarterly basis. Additionally, GCC installed monitoring wells in late 2018 at two additional locations, MW-7 and MW-8 (5 wells total), on UMUT owned lands. These latter wells were installed per the 1st Addendum to Surface Use Agreement entered into October 26, 2016, between the UMUT and GCC.

Figure 1 shows the location of the subject monitoring wells, as named and described in the table below. In relation to the mined coal interval at the King II Mine, these two-inch PVC environmental bedrock monitoring wells are completed in the overlying Cliff House sandstone formation (“C” name extension), the mined “A” coal seam (“A” name extension), and the underlying Menefee Interburden (“MI” name extension). At the MW-8 location monitoring wells were also installed in the next two underlying water-bearing intervals. In order of increasing depth, those have been designated the Lower Menefee (“LM” name extension) and the Point Lookout sandstone formation (“PL” name extension).

Additionally, two-inch PVC monitoring wells are constructed in the unconsolidated sediments of the East Alkali Alluvium (“EAA” name extension) at two locations. The well construction data for all of these wells is as follows:

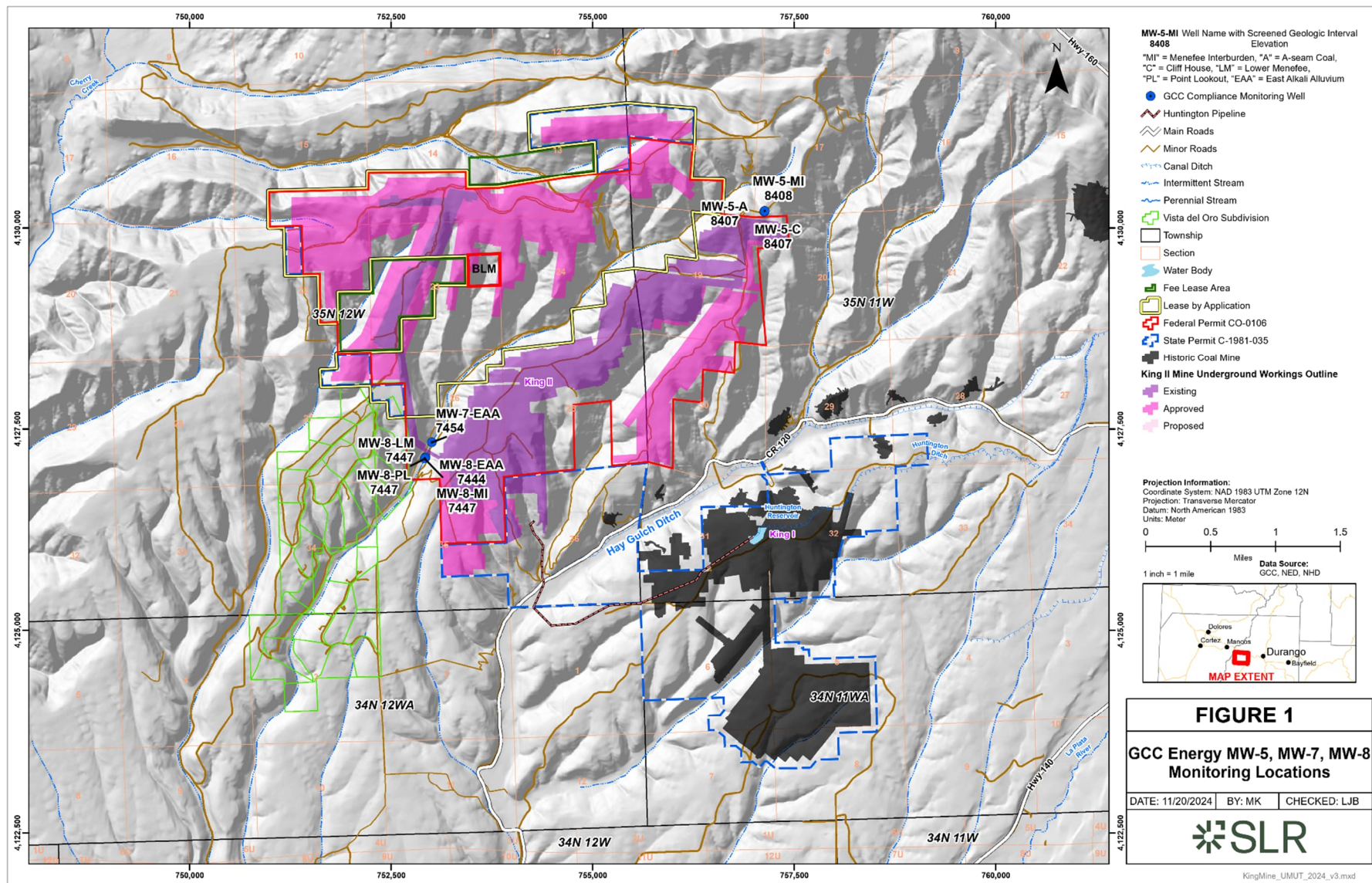
Location ID	Year Installed	Total Depth (ftbgs)	Well Diameter (inches)	Well Casing Material	Screened Interval (ftbgs)	Screened/ Open Interval Name
MW-5-MI	2017	282.8	2	SCH 80 PVC	262.5-282.5	Menefee Interburden
MW-5-A	2017	254.3	2	SCH 80 PVC	249.0-254.0	“A” Seam Coal

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Location ID	Year Installed	Total Depth (ftbgs)	Well Diameter (inches)	Well Casing Material	Screened Interval (ftbgs)	Screened/ Open Interval Name
MW-5-C	2017	249.6	7	Open hole below carbon steel 8-5/8" surface casing	39.0-249.3	Cliff House Formation
MW-7-EAA	2018	67.0	2	SCH 80 PVC	17.0-66.7	East Alkali Alluvium
MW-8-EAA	2018	68.5	2	SCH 80 PVC	18.0-68.2	East Alkali Alluvium
MW-8-MI	2018	100.0	2	SCH 80 PVC	89.7-99.7	Menefee Interburden
MW-8-LM	2018	250.3	2	SCH 80 PVC	210.0-250.0	Lower Menefee
MW-8-PL	2018	310.3	2	SCH 80 PVC	290.0-310.0	Point Lookout Formation

SLR has reviewed the 2024Q4 data, which includes field parameters and laboratory analyses for water samples collected at each MW-5, MW-7, and MW-8 well in November 2024. The samples were analyzed for the established laboratory suite (GCC GW Baseline). All of these monitoring wells are on a quarterly schedule to collect field parameters and water samples for submittal for laboratory analysis. SLR finds the MW-5-MI data unremarkable with no significant changes to measured water levels outside of seasonal variability, and relatively stable field parameters and lab-analyzed constituent concentrations. MW-5-C remained in a wet condition again for a third consecutive quarter, so a water quality sample was collected and results showed that parameters were in line with the historical range of values. MW-5-A was dry when installed and has remained dry through November 2024 monitoring which is why no water chemistry data is given for that well. The East Alkali Gulch alluvial monitoring wells MW-7-EAA and MW-8-EAA again each showed elevated water levels, remaining about twelve feet above the historical average at MW-7-EAA and about seven feet above the historical average at MW-8-EAA. However, no remarkable changes to field water quality parameters or laboratory-reported constituent concentrations were observed. The bedrock monitoring wells, MW-8-MI, MW-8-LM and MW-8-PL generally demonstrated seasonal variability to water levels and relatively stable water quality parameters/concentrations, although the level at MW-8-MI remains elevated by approximately five feet from the historical average. This is not surprising as MW-8-MI is sited at a point of East Alkali Gulch alluvial groundwater recharge to the Menefee formation below the mined "A" coal seam. Data summary tables have been prepared for each well and are presented below as **Tables**. The full Green Analytical Laboratory reports are presented as **Attachment 1**.

FIGURE 1



TABLES

MW-5, MW-7, MW-8 Hydrologic Monitoring Data Summaries

GCC Energy Hydrologic Monitoring Data

[illegible]

Notes & Definitions:

Historical data prior to 2018 can be found in earlier posted versions of this table

*** *La Plata County stage 3 fire restrictions prevented sampling activity*

- ^ one-time analysis

Y/N yes or no

gpm gallons per minute

deg C degrees Celsius

SU **standard pH units**

$\mu\text{S}/\text{cm}$ microsiemens per centimeter

mV millivolts

mg/L milligram per liter

pCi/L picocuries per liter

NM not measured (field)

NA not analyzed (lab)

ng/L nanogram per liter

1. " $<$ " values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO_3 .
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-5-MI																																			
Year	2018									2019				2020				2021				2022				2023				2024					
Quarter	Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Month	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9	12	3	6	8	11	3	6	8	11		
Sample Date	1/2	2/9	3/22	4/11	5/10	--	7/23	8/7	11/5-6	2/20	5/30	8/14	11/5	2/12	5/28	9/1	11/16	2/15	5/20	8/23	11/17	3/17	6/16	9/12	12/4	3/18	6/14	8/16	11/14	3/17	6/19	8/6	11/18		
Lab Analysis (Y/N)	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y			
Field Parameters:																																			
Purge Flow Rate	gpm	NM	0.10	NM	0.10	0.10	***	0.10	0.10	0.10	0.12	0.12	0.06	0.12	0.13	0.13	0.13	0.13	0.13	0.13	0.20	0.20	0.25	0.13	0.15	0.20	0.05	0.04	0.10	0.04	0.08	0.06	0.05	0.07	
Total Purged	gal	1.0	1.5	1.5	1.0	1.3		1.3	1.0	1.1	1.3	1.3	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.3	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9		
Depth to Water	ft bgs	263.77	263.67	263.65	263.69	263.74		263.90	263.92	264.68	263.45	263.70	263.92	263.93	263.82	262.72	264.31	264.39	265.57	265.87	265.22	265.48	265.12	265.17	265.18	265.02	264.77	264.92	265.15	265.27	264.82	264.92	265.22	264.67	
Temperature	deg C	9.3	9.9	9.5	9.5	10.1		12.5	11.7	9.6	6.7	10.2	11.1	10.6	9.2	10.6	11.8	10.5	8.3	12.3	11.7	10.3	9.0	12.7	12.7	9.1	8.8	11.9	13.0	10.0	6.9	13.0	10.8	9.3	
pH	SU	8.84	8.83	8.87	8.59	8.55		8.56	8.61	8.54	8.62	8.36	8.45	8.42	8.30	8.55	8.62	8.65	8.58	8.51	8.61	8.58	8.43	8.15	8.51	8.11	8.53	8.51	8.38	8.50	8.55	8.18	8.23	7.78	
Specific Conductance	µS/cm	1664	1622	1610	1592	1596		1553	1558	1570	1607	1527	1572	1572	1546	1592	1518	1561	1425	~	1527	1589	1601	1552	1574	1615	1650	1619	1563	1606	1683	1590	1633	1629	
Oxygen Reduction Potential	mV	12.6	12.0	-33.8	5.7	-21.3		-44.7	14.5	-38.2	-39.7	-12.1	-16.0	10.5	39.0	-90.5	-25.4	21.0	-27.1	-0.8	-26.7	-12.8	-95.3	44.8	-36.1	-29.0	9.1	-17.3	35.2	-38.6	-103.8	-86.5	-77.2	-67.6	
Lab Analytical Results:																																			
Hardness as CaCO3	mg/L		10.5			9.11			9.34	9.48	8.79	8.47	8.74	7.97	8.89	8.72	9.18	9.1	9.45	8.96	7.88	9.30	9.16	9.33	8.38	8.38	8.73	9.10	8.29	9.05	8.53	8.85	11.3	9.01	
pH (Lab)	SU		8.62			8.67			8.60	8.50	8.54	8.14	8.37	8.35	8.28	8.17	8.34	8.38	8.37	8.28	8.31	8.20	8.37	8.23	8.41	8.29	8.17	8.21	7.38	8.30	8.19	8.28	8.13	8.20	
Total Dissolved Solids (Lab)	mg/L		1030			1010			990	975	1050	975	1010	945	980	950	980	900	955	945	1010	945	1010	1000	1040	980	995	990	1030	990	1070	1010	965	1010	
Calcium	mg/L		2.74			2.36			2.37	2.39	2.25	2.16	2.20	2.00	2.17	2.24	2.3	2.36	2.42	2.28	2.13	2.30	2.34	2.41	2.13	2.19	2.25	2.30	2.03	2.29	2.25	2.29	2.95	2.32	
Magnesium	mg/L		0.880			0.78			0.829	0.854	0.769	0.748	0.787	0.724	0.842	0.758	0.837	0.779	0.826	0.791	0.623	0.863	0.806	0.808	0.743	0.705	0.757	0.813	0.779	0.808	0.708	0.762	0.966	0.781	
Sodium	mg/L		416			398			404	417	416	384	392	392	405	407	405	413	435	380	402	391	389	379	386	408	421	412	393	386	396	411	400	391	
Potassium	mg/L		1.68			1.25			<2.00	<2.00	1.9	1.29	1.35	1.05	<2.00	<5.00	1.21	<3.00	<3.00	1.16	<5.00	<2.00	1.19	1.01	<2.00	<2.00	<5.00	0.795	< 5.00	< 2.00	< 2.00	< 2.00	< 2.00	1.26	1.22
Alkalinity, Total	mg/L		1000			900			940	900	860	945	905	935	885	865	760	935	935	935	930	1000	965	935	980	935	925	960	904	920	925	965	975	1000	
Alkalinity, Bicarbonate	mg/L		820			780			760	810	720	805	775	825	805	775	680	845	825	825	820	920	875	845	980	935	895	960	858	900	905	895	975	1000	
Alkalinity, Carbonate	mg/L		180			120			180	90.0	140	140	130	110	80	90.0	80	90	110	110	110	80.0	90.0	90.0	<10.0	<10.0	30.0	<10.0	46.0	20.0	20.0	70	< 10.0	< 10.0	
Alkalinity, Hydroxide	mg/L		<10.0			<10			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0		
Chloride	mg/L		5.93			7.48			5.23	4.98	5.17	5.3	5.11	5.43	5.47	5.30	5.4	5.23	5.27	4.93	4.78	6.80	5.19	5.32	5.66	5.32	5.42	5.47	5.23	5.40	5.50	5.43	5.69	6.19	
Fluoride	mg/L		0.535			0.565			0.536	0.340	0.367	0.404	0.327	0.440	0.34	0.308	0.278	0.274	0.25	0.272	0.304	<0.500	0.248	0.262	<0.500	0.340	0.318	0.286	0.256	< 0.200	0.310	0.284	< 0.500	< 0.500	
Sulfate as SO4	mg/L		21.6			17.3			13.3	9.01	7.39	7.62	6.48	6.36	6.47	5.99	5.86	5.71	6.8	6.37	6.31	6.94	7.30	7.51	7.69	7.40	7.98	7.52	6.53	5.71	7.17	7.16	7.25	6.82	
Total Organic Carbon (TOC)	mg/L		3.65			3.82			3.78	3.68	3.46	3.46	3.24	2.78	2.73	2.72	2.78	2.57	2.64	2.50	2.66	2.40	2.49	2.42	2.51	1.33	2.15	2.15	2.70	2.40	3.49	2.65	2.71	2.58	
Nitrate/Nitrite as N	mg/L		<0.020			<0.02			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.042	0.039	0.104	0.085	0.093	<0.020	<0.020	0.056	0.020	0.052	0.141	< 0.020	< 0.020	0.030	< 0.020	
Ammonia as N ^	mg/L		NA			NA			NA	NA	NA	NA	NA	<0.100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ortho-Phosphate as P ^	mg/L		NA			NA			NA	NA	NA	NA	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Aluminum	mg/L		<0.050			<0.050			<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.150	<0.150	<0.050	<0.250	<0.100	<0.050	<0.050	<0.100	<0.100	<0.250	<0.250	< 0.250	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050	
Arsenic	mg/L		0.0192			0.0232			0.0234	0.0165	0.0177	0.0176	0.0194	0.0147	0.0133	0.0126	0.0139	0.0145	0.0143	0.0142	0.0117	0.0076	0.0104	0.0103	0.0101	0.0100	0.0108	0.0085	0.0080	0.0108	0.0087	0.0109	0.0087	0.0108	
Cadmium	mg/L		<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0005	<0.0005	<0.0003	<0.0003	<0.0005	<0.0025	<0.0025	<0.0005	<0.0005	<0.0010	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005	
Copper	mg/L		0.0076			0.0049			0.0072	0.0074	0.0103	0.0148	0.0054	0.0056	0.0041	<0.0025	0.0048	0.0028	0.003	0.0088	0.0083	0.0095	0.0105	0.0173	0.0138	0.0135	0.0113	0.0174	0.0041	0.009	0.0171	0.0181	0.0178	0.0337	
Iron	mg/L		<0.050			<0.050			<0.100	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.150	<0.150	<0.050	<0.250	<0.100	<0.050	<0.050	<0.100	<0.100	<0.250.								

GCC Energy Hydrologic Monitoring Data

MW-5-C																																		
Year	2018										2019				2020				2021				2022				2023				2024			
Quarter	Q1			Q2			Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9	12	3	6	8	11	3	6	8	11	
Sample Date	1/2	2/9	3/22	4/11	5/10	--	7/23	8/7	11/1	2/20	5/30	8/14	11/5	2/12	5/28	9/1	11/16	2/15	5/20	8/23	11/17	3/17	6/16	9/12	12/4	3/18	6/14	8/16	11/14	3/17	6/19	8/6	11/18	
Lab Analysis (Y/N)	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																																		
Purge Flow Rate	gpm	NM	0.10	NM	0.10	0.10	***	0.10	0.10	0.10	0.12	0.12	0.06	0.25	0.13	0.25	0.13	0.13	0.25	0.15	0.25	0.28	0.25	0.25	0.15	0.20	0.09	dry	dry	dry	dry	0.16	0.09	0.11
Total Purged	gal	1.5	2.0	1.5	1.0	1.3		1.3	1.5	1.6	1.3	1.5	1.3	1.1	1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5	1.0	1.0	1.0	0.9	0.8					0.8	0.8	
Depth to Water	ft bgs	225.40	222.46	219.31	218.22	216.04		210.87	210.50	205.10	198.44	193.20	191.11	189.20	187.50	187.70	189.72	192.15	195.08	197.82	200.27	202.00	204.14	205.57	206.15	207.75	208.90					210.40	211.40	212.25
Temperature	deg C	9.3	9.4	9.6	9.7	10.1		10.7	10.7	9.4	8.6	10.1	10.9	10.3	8.8	10.9	10.9	10.0	9.1	10.5	10.8	9.6	9.6	NM	10.8	9.2	9.1					10.9	9.8	9.2
pH	SU	7.65	7.68	7.77	7.56	7.60		7.52	7.61	7.55	7.72	7.72	7.74	7.77	7.87	7.83	7.93	7.91	7.93	8.01	8.05	8.03	7.86	7.84	7.85	7.81	7.84					7.53	7.57	7.44
Specific Conductance	µS/cm	4974	4958	4285	4787	4772		4674	4687	4768	4623	4418	4355	4359	4230	4152	3677	4013	3625	3206	3685	3835	3695	3540	3565	3723	3782	3731	3866	3927				
Oxygen Reduction Potential	mV	-99.8	-90.5	-84.6	-49.6	-51.3		-59.5	-66.4	-138.0	-56.2	-29.9	-88.2	-58.7	-45.5	-128.2	-88.6	-52.8	-49.8	-116.6	-104.5	-101.3	-187.4	-84.5	-180.7	-39.2	8.3	-103.2	-80.0	-158.9				
Lab Analytical Results:																																		
Hardness as CaCO3	mg/L		61.3			50.3			51.2	51.4	43	41.1	38.8	34.9	34.8	33.2	30.8	31.7	29.4	28.0	23.9	26.0	26.8	28.1	32.6	29.1	31.5					34.8	36.1	36.8
pH (Lab)	SU		7.74			7.79			7.64	7.69	7.72	7.46	7.75	7.66	7.74	7.73	7.8	7.92	8.03	7.82	7.87	7.81	7.88	7.65	7.85	7.98	7.67					7.67	7.70	7.74
Total Dissolved Solids (Lab)	mg/L		3480			3430			3290	3260	3160	3090	3130	3010	2970	2800	2750	2640	2710	2590	2670	2520	2530	2400	2400	2160	4910					2550	2580	2600
Calcium	mg/L		13.7			11.1			11.4	11.5	9.78	9.34	8.69	7.70	7.73	7.50	6.78	7.02	6.7	6.28	5.54	5.78	6.45	7.10	8.22	7.38	8.15					8.72	9.28	9.14
Magnesium	mg/L		6.57			5.46			5.52	5.50	4.51	4.32	4.14	3.81	3.78	3.51	3.37	3.43	3.08	2.98	2.43	2.82	2.59	2.51	2.93	2.59	2.70					3.16	3.14	3.39
Sodium	mg/L		1250			1200			1230	1250	1220	1070	1120	1050	1050	1060	1010	1030	1070	999	942	922	875	857	1020	916	939					971	953	996
Potassium	mg/L		<5.00			3.6			<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	2.75	<10.0	<10.0	2.63	<10.0	<5.00	2.59	<4.00	<5.00	<5.00	<10.0					< 5.00	2.90	3.22
Alkalinity, Total	mg/L		1590			1490			1520	1540	1560	1630	1620	1580	1550	1520	1590	1570	1610	1580	1540	1690	1630	1670	1680	1600	1790					1790	1840	1840
Alkalinity, Bicarbonate	mg/L		1590			1490			1520	1540	1560	1630	1620	1520	1550	1470	1480	1510	1550	1580	1540	1450	1590	1670	1680	1600	1690					1790	1840	1840
Alkalinity, Carbonate	mg/L		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	50.0	110	60	60	<10.0	<10.0	240	40.0	<10.0	<10.0	<10.0	100					< 10.0	< 10.0	< 10.0
Alkalinity, Hydroxide	mg/L		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0					< 10.0	< 10.0	< 10.0	
Chloride	mg/L		10.1			<10.0			7.15	7.08	7.1	7.02	6.62	6.32	6.58	6.12	6.02	6.04	5.84	4.05	5.95	5.93	5.78	<4.00	3.75	<5.00	<5.00					< 5.00	< 5.00	< 10.0
Fluoride	mg/L		1.89			1.79			1.74	1.80	1.95	2.01	1.95	1.98	1.96	2.01	2.01	2.03	1.99	2.09	2.09	1.96	2.00	2.32	2.42	2.28	2.44					2.46	2.34	2.19
Sulfate as SO4	mg/L		1190			1220			1130	1070	1040	975	948	836	799	721	679	686	693	700	607	560	553	479	466	475	493					503	485	450
Total Organic Carbon (TOC)	mg/L		3.24			3.06			3.28	3.64	3.05	3.00	3.03	2.62	2.7	2.73	2.87	2.69	2.7	2.46	2.8	2.54	2.38	2.16	2.39	1.56	2.35					2.46	1.88	2.49
Nitrate/Nitrite as N	mg/L		<0.020			<0.02			0.026	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020					< 0.020	< 0.020	< 0.020
Ammonia as N ^	mg/L		NA			NA			NA	NA	NA	NA	NA	0.369	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA
Ortho-Phosphate as P ^	mg/L		NA			NA			NA	NA	NA	NA	NA	<0.250	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA					NA	NA	NA
Aluminum	mg/L		<0.250			<0.050			<0.250	<0.250	<0.250	<0.25	<0.250	<0.250	<0.250	<0.500	<0.050	<0.050	<0.500	<0.500	<0.500	<0.250	<0.100	<0.200	<0.250	<0.250	<0.050					< 0.250	< 0.050	< 0.050
Arsenic	mg/L		<0.0025			0.0044			0.0046	0.0036	0.004	0.0013	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.005	<0.0050	<0.0005	<0.0050	<0.0025	<0.0015	<0.0020	<0.0025	<0.0025	<0.0050					< 0.0050	0.0014	< 0.0020
Cadmium	mg/L		<0.0005			<0.0005			<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0005	<0.0050	<0.0025	<0.0015	<0.0020	<0.0025	<0.0025	<0.0050					< 0.0025	< 0.0005	< 0.0010
Copper	mg/L		0.0342			0.0171			0.0226	0.0178	0.0294	0.0100	0.0138	0.0303	0.0165	0.0040	0.0101	0.0078	0.0066	0.0296	0.0202	0.0242	0.0313	0.0823	0.0355	0.0250	0.0130					0.0411	0.0407	0.0594
Iron	mg/L		0.399			0.237			<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.500	0.113	<0.500	<0.500	0.223	<0.500	0.273	0.130	<0.200	<0.250	<0.250	<0.500					< 0.250	0.420	< 0.050
Lead	mg/L		<0.0025			<0.0025			<0.0025	<0.0025	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.005	<0.0050	<0.0005	<0.0050	<0.0025	<0.0015	<0.0020	<0.0025	<0.0025	<0.0050					< 0.0025	< 0.0005	0.0015
Manganese	mg/L		0.0138			0.0128			0.0131	0.0117	0.0115	0.0079	0.0078	0.0076	0.0081	0.0059	<0.0050	0.0053	<0.0050	0.0035	<0.0050	0.0029	0.0049	0.0139	0.0099	0.0074	0.0078					0.012	0.0087	0.0078
Mercury (total)	mg/L		<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.000																	

GCC Energy Hydrologic Monitoring Data

MW-7-EAA																																	
Year	2018	2019											2020				2021				2022				2023				2024				
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9	11	3	6	8	11	3	6	8	11	
Sample Date	12/23	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	3/23	6/7	9/8	11/28	3/18	6/14	8/8	11/13	3/17	6/19	8/6	11/18	
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																																	
Purge Flow Rate	gpm	1.10	1.10	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.25	0.13	0.25	0.25	0.13	0.25	0.25	0.25	0.25	0.25	0.25	0.20	0.11	0.16	0.17	0.10	0.07	0.06	0.01	
Total Purged	gal	15.0	18.0	15.0	3.0	15.0	16.0	15.3	15.3	17.0	15.0	15.0	36.5	15.0	16.0	17.0	15.0	17.0	17.0	18.0	18.0	17.0	17.0	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	
Depth to Water	ft bgs	36.13	36.27	36.45	36.52	36.70	36.25	36.22	36.48	36.49	36.88	36.85	36.72	35.40	36.35	37.10	36.20	35.33	36.91	35.92	35.90	35.70	36.71	36.40	35.85	29.10	28.40	25.60	27.45	25.40	26.30	25.00	
Temperature	deg C	10.0	10.0	10.0	9.9	10.1	10.4	10.4	10.6	10.5	10.3	10.4	10.6	10.4	12.1	10.3	10.1	10.5	10.9	10.6	10.5	10.7	10.8	11.1	13.1	11.7	11.8	11.4	10.1	12.9	11.6	9.0	
pH	SU	6.99	7.01	7.04	6.93	7.00	7.06	7.07	6.28	6.95	7.06	7.03	7.06	6.91	7.17	7.09	7.12	7.14	7.19	7.24	7.23	7.12	7.15	7.14	6.28	7.28	7.16	7.11	7.16	7.24	6.90	6.89	6.94
Specific Conductance	µS/cm	2001	1910	1910	1926	1912	1767	1836	1885	1890	1913	1936	1922	1993	1890	1772	1628	1672	1805	1814	1878	1882	1896	1880	1808	1754	1785	1831	1966	2082	1905	1932	2069
Oxygen Reduction Potential	mV	-68.0	-36.7	-41.4	-38.1	-48.8	14.1	-13.8	-33.9	-37.8	-29.5	-25.6	-21.3	0.9	-49.2	17.6	-8.6	2.2	-55.8	-41.9	-20.4	-133.6	-73.8	-196.7	-86.9	-10.9	-32.4	-60.3	-117.9	-133.9	-102.0	-59.0	-160.4
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	936		1030			982			997			1020	963	1020	1080	939	1090	958	986	957	1040	958	916	962	1020	952	902	1010	1080	1080	1030	997
pH (Lab)	SU	7.2		7.37			7.17			7.09			6.99	6.92	6.89	7.23	7.06	6.99	6.92	7.03	7.01	7.11	7.12	7.24	7.18	6.95	6.95	7.25	7.16	6.84	7.07	7.1	7.13
Total Dissolved Solids (Lab)	mg/L	1460		1480			1490			1480			1530	1520	1430	1480	1450	1590	1460	1510	1580	1500	1500	1490	1420	1500	1400	1450	1560	1570	1550	1550	1650
Calcium	mg/L	170		179			171			173			162	165	175	183	157	186	167	167	164	173	166	154	165	174	161	151	173	184	186	177	170
Magnesium	mg/L	124		142			135			137			144	134	142	150	133	152	131	138	133	149	132	129	134	143	134	127	141	150	149	141	139
Sodium	mg/L	75.3		81.3			75.0			75.2			74.9	73.7	76.0	80.9	73.4	81.4	75	74.6	72.0	77.8	71.9	71.6	72.3	76.3	75.6	69.2	77.1	80.6	80.5	77.1	78.1
Potassium	mg/L	3.87		3.9			<5.00			3.74			3.74	3.82	<5.00	<5.00	<5.00	4.25	<5.00	<5.00	3.69	3.88	3.59	3.71	3.66	<5.00	3.63	< 5.00	3.46	3.62	3.84	3.78	3.65
Alkalinity, Total	mg/L	380		367			405			392			350	357	355	268	430	420	395	340	440	425	425	400	310	378	410	437	425	440	455	437	460
Alkalinity, Bicarbonate	mg/L	380		367			405			392			425	357	355	268	430	420	395	340	440	425	425	400	310	378	410	437	425	440	455	437	460
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	
Chloride	mg/L	11.9		10.7			10.8			10.9			11.6	10.3	10.7	10.2	10.1	10.4	10.1	10.5	10.3	10.1	10.3	11.2	11.0	11.1	10.8	11.8	11.9	11.5	11.4	11.6	11.2
Fluoride	mg/L	<0.500		0.332			0.322			0.322			<0.500	0.354	0.330	0.322	0.322	0.300	0.304	0.312	0.260	0.292	<0.200	0.310	0.306	0.340	0.262	< 0.200	0.238	0.282	0.298	< 0.500	0.314
Sulfate as SO4	mg/L	732		736			733			844			746	774	803	767	742	757	746	796	751	755	743	759	761	827	709	719	828	842	821	790	747
Total Organic Carbon (TOC)	mg/L	3.72		3.57			3.73			3.70			3.45	3.42	3.63	4.01	3.39	3.00	3.42	3.63	3.38	3.50	3.42	3.38	2.12	3.68	3.31	5.57	4.24	5.38	5.12	4.40	4.99
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.178	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.100			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.250	<0.250	<0.100	<0.050	<0.050	<0.100	<0.100	<0.250	<0.250	< 0.250	< 0.100	< 0.150	< 0.100	< 0.050	0.197
Arsenic	mg/L	0.0014		0.0015			0.0013			0.0016			0.0013	0.0013	0.0011	<0.0015	<0.0025	0.0016	<0.0025	<0.0025	0.0011	0.0009	0.0014	<0.0025	0.0013	<0.0025	<0.0025	< 0.0025	0.0010	< 0.0020	< 0.0020	< 0.0010	< 0.0010
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0002	<0.0002	<0.0002	<0.0003	<0.0005	<0.0001	<0.0025	<0.0025	<0.0010	<0.0005	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0005	< 0.0005	
Copper	mg/L	0.0003		0.0018			0.0011			0.0008			0.0006	<0.0010	<0.0010	<0.0015	<0.0025	0.0007	<0.0025	<0.0025	0.0018	0.0021	0.0036	<0.0025	0.0030	<0.0025	0.0028	0.0032	0.0018	0.0048	0.0044	0.0045	0.0186
Iron	mg/L	1.82		1.95			1.81			2.12			2.00	1.84	1.71	2.16	2.15	2.08	1.92	1.75	1.63	2.05	1.69	1.75	1.57	1.99	0.265	< 0.250	0.251	0.259	0.421	0.379	0.404
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.001	<0.0010	<0.0015	<0.0025	<0.0005	<0.0025	<0.0025	<0.0010	<0.0025	<0.0005	<0.0025	<0.0								

GCC Energy Hydrologic Monitoring Data

MW-8-EAA																																	
Year	2018	2019										2020				2021				2022				2023				2024					
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9	11	3	6	8	11	3	6	8	11	
Sample Date	12/23	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	3/23	6/7	9/8	11/28	3/18	6/14	8/8	11/13	3/17	6/19	8/6	11/21	
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																																	
Purge Flow Rate	gpm	0.85	1.10	0.50	3.00	0.50	0.75	1.00	1.00	0.75	0.50	1.00	0.25	1.00	0.25	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.33	0.11	0.09	0.38	0.15	0.60	0.06	0.09		
Total Purged	gal	18.0	14.0	15.0	3.0	15.0	17.0	15.3	15.3	18.0	15.3	15.5	15.0	15.2	15.0	16.0	15.0	15.0	16.0	15.0	14.0	15.0	15.0	16.0	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	
Depth to Water	ft bgs	40.00	39.95	40.10	43.45	40.44	40.05	39.94	40.10	40.08	40.25	40.31	40.22	40.40	40.45	34.50	40.83	41.22	41.00	40.98	48.04	40.95	41.00	41.30	41.30	41.50	37.19	37.40	34.90	36.45	31.78	32.91	33.00
Temperature	deg C	10.3	10.2	10.0	9.9	10.3	10.5	10.6	10.5	10.6	10.3	10.2	11.2	10.5	11.0	11.1	11.0	10.9	11.0	11.2	10.7	10.7	10.8	10.7	9.7	11.0	11.6	12.2	12.3	9.8	11.7	12.2	10.9
pH	SU	7.12	7.09	7.13	7.17	7.09	7.02	7.17	7.09	7.05	7.03	6.99	6.99	6.99	7.14	7.19	7.19	7.20	7.27	7.31	7.30	7.18	7.23	7.23	6.59	7.20	7.27	7.23	7.07	7.35	6.97	7.02	7.06
Specific Conductance	µS/cm	1781	1696	1720	1725	1729	1628	1676	1699	172	1739	1774	1739	1758	1760	1675	1716	1570	1642	1671	1746	1750	1763	1763	1793	1665	1766	1742	1761	1955	1849	1851	1848
Oxygen Reduction Potential	mV	-65.0	-52.8	-51.8	-53.0	-59.7	11.0	-29.5	-46.6	-44.8	-33.5	-38.8	-39.2	-18.2	-72.4	1.4	-14.7	-20.2	-63.3	-57.4	-37.2	-156.9	-111.7	-230.9	-23.9	182.6	-81.5	-86.6	-103.6	-175.8	-96.2	-99.4	-147.0
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	870		861			864			883			867	861	907	937	810	914	838	859	859	937	867	831	871	940	932	887	901	962	975	957	936
pH (Lab)	SU	7.28		7.36			7.13			7.05			7.01	7.11	6.96	7.18	7.1	7.03	6.97	7.06	6.81	7.19	7.16	7.27	7.25	7.05	7.03	7.33	7.43	7.02	7.2	7.17	7.30
Total Dissolved Solids (Lab)	mg/L	1220		1290			1240			1280			1380	1290	1260	1280	1310	1400	1320	1320	1340	1380	1330	1360	1300	1320	1350	1400	1430	1480	1420	1460	1470
Calcium	mg/L	152		151			148			154			143	149	153	160	134	156	146	146	149	158	150	143	149	163	159	152	156	168	169	167	162
Magnesium	mg/L	119		118			120			121			124	119	127	130	115	127	115	120	118	131	119	115	121	130	130	123	125	132	134	131	129
Sodium	mg/L	81.7		82.6			77.2			78.6			77.1	77.2	77.7	82.9	74.3	80.9	76.1	75.8	74.9	81.2	75.0	75.0	75.3	80.5	79.8	75.5	77.4	79.4	80.3	78.8	81.2
Potassium	mg/L	3.80		3.27			3.55			3.18			3.52	3.8	<5.00	<5.00	<5.00	3.63	3.49	<5.00	3.36	3.65	3.35	3.45	3.42	<5.00	3.73	< 5.00	3.24	3.58	3.61	3.69	3.70
Alkalinity, Total	mg/L	400		435			450			431			445	404	385	288	480	450	445	385	490	460	465	480	430	417	448	417	415	435	475	480	470
Alkalinity, Bicarbonate	mg/L	400		435			450			431			445	404	385	288	480	450	445	385	490	460	465	480	430	417	448	417	415	435	475	480	470
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	
Chloride	mg/L	9.83		10.5			10.3			11.1			11.0	10.2	10.3	10.1	11.3	10.4	10.2	10.3	10.5	10.5	10.6	11.7	11.4	11.6	11.8	12.2	12.2	12.3	11.8	12.2	12.5
Fluoride	mg/L	0.380		0.370			0.338			0.342			<0.500	0.33	0.346	0.336	0.334	0.292	0.306	0.35	0.272	0.304	0.204	0.332	0.316	0.358	0.284	< 0.200	0.266	0.330	0.312	< 0.500	< 0.500
Sulfate as SO4	mg/L	533		559			606			643			577	602	625	605	582	609	595	615	599	608	597	627	619	686	675	685	748	768	731	713	697
Total Organic Carbon (TOC)	mg/L	3.77		3.59			3.77			3.68			3.52	3.49	3.56	3.82	3.54	3.04	3.65	3.71	3.48	3.49	3.56	3.64	1.82	3.63	3.25	5.64	3.64	4.76	4.00	4.20	5.82
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.493	<0.020	< 0.020	<0.020	< 0.020	< 0.020	< 0.020	< 0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.100		<0.100			<0.050			<0.100			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100	<0.050	<0.050	<0.100	<0.100	<0.250	<0.250	< 0.250	< 0.100	< 0.100	< 0.100	< 0.050	< 0.050
Arsenic	mg/L	0.0020		0.0018			0.0018			0.0021			0.0018	0.0017	0.0017	0.0018	<0.0025	0.0018	0.0018	<0.0025	0.0017	0.0015	0.0019	<0.0025	0.0020	0.0027	<0.0025	< 0.0025	0.0020	< 0.0020	< 0.0020	0.0015	0.0016
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0003	<0.0005	<0.0003	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005
Copper	mg/L	0.0004		0.0024			0.0023			0.0008			0.0010	0.001	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	0.0017	0.0021	0.0031	<0.0025	0.0021	<0.0025	0.0084	< 0.0025	0.0020	0.0048	0.003	0.0033	0.0160
Iron	mg/L	2.12		2.13			2.42			2.46			2.30	2.28	2.29	2.31	0.762	2.33	2.25	2.2	2.22	2.52	2.22	2.28	2.27	2.43	2.43	2.19	2.24	2.34	2.37	2.32	2.23
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.001	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.001	<0.0025	<0.0025	<0.0025	<0.0025	<							

GCC Energy Hydrologic Monitoring Data

MW-8-MI																																	
Year	2018	2019											2020				2021				2022				2023				2024				
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9	11	3	6	8	11	3	6	8	11	
Sample Date	12/23	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	3/23	6/7	9/8	11/28	3/18	6/14	8/8	11/13	3/17	6/19	8/6	11/21	
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																																	
Purge Flow Rate	gpm	1.10	1.00	0.50	3.00	0.50	0.25	0.50	0.75	0.50	1.00	0.25	0.25	0.13	0.10	0.25	0.25	0.13	0.25	0.25	0.25	0.13	0.15	0.50	0.12	0.13	0.23	0.19	0.11	0.18	0.17	0.19	
Total Purged	gal	27.5	18.0	1.0	3.0	1.5	2.5	2.5	2.3	3.0	2.0	2.5	1.0	1.0	2.0	1.0	2.0	3.0	1.0	1.0	1.0	0.8	0.5	0.5	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
Depth to Water	ft bgs	45.75	43.48	43.50	44.30	44.47	44.10	44.24	44.45	44.59	44.90	45.12	45.10	45.20	45.42	45.84	46.24	46.38	46.54	47.27	46.84	47.69	48.00	48.00	48.25	47.75	44.65	44.52	42.85	43.51	39.90	40.52	40.62
Temperature	deg C	10.8	10.8	10.6	11.2	10.4	11.1	11.4	11.0	11.4	10.9	10.3	11.4	10.2	11.3	13.1	11.3	10.0	11.6	11.9	11.1	10.9	12.5	14.3	9.9	11.7	11.5	11.9	12.1	10.3	12.3	12.6	11.2
pH	SU	7.57	7.50	7.48	7.47	7.34	7.31	7.48	7.42	7.38	7.30	7.23	7.15	7.08	7.44	7.44	7.43	7.47	7.59	7.55	7.56	7.41	7.54	7.59	6.92	7.52	7.54	7.51	7.52	7.66	7.33	7.28	7.35
Specific Conductance	µS/cm	1786	1667	1651	1658	1643	1595	1639	1645	1658	1637	1689	1642	1651	1659	1598	1628	1468	1616	1554	1629	1596	1575	1505	1631	1632	1607	1538	1544	1642	1526	1580	1578
Oxygen Reduction Potential	mV	-84.4	-177.1	-122.1	-113.3	-87.2	-54.4	-97.1	-116.4	-119.4	-88.4	-82.0	-59.3	-136.6	-184.9	-107.0	-112.2	-72.0	-131.9	-123.1	-115.9	-195.3	-150.6	-262.2	-172.4	-79.7	-134.6	-148.3	-178.2	-22.8	-160.5	-118.0	-249.6
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	167		249			273			253			267	254	309	355	339	376	288	377	317	406	378	374	390	405	388	363	361	366	388	389	386
pH (Lab)	SU	7.73		7.54			7.24			7.46			7.44	7.53	7.25	7.34	7.27	7.33	7.36	7.31	7.06	7.36	7.38	7.70	7.45	7.30	7.36	7.67	7.66	7.11	7.47	7.44	7.48
Total Dissolved Solids (Lab)	mg/L	1050		1030			1100			1110			1050	1060	1040	1010	1040	1060	1040	1000	1100	1050	1040	1050	990	1050	995	1060	1050	995	985	1030	995
Calcium	mg/L	34.0		48.5			52.4			49.7			51.3	48.7	58.5	65.9	62.6	69.7	54	70.3	59.8	75.5	71.2	69.2	72.3	76.0	72.1	67.4	66.3	68.4	72.9	73.5	71.3
Magnesium	mg/L	19.9		31.0			34.5			31.4			33.8	32.1	39.6	46.2	44.4	49.1	37.2	48.9	40.8	52.7	48.7	48.8	50.8	52.3	50.4	47.1	47.5	47.4	50.1	50.0	
Sodium	mg/L	344		312			289			289			275	269	272	260	232	237	256	229	238	226	220	213	210	230	236	216	215	219	221	228	217
Potassium	mg/L	4.47		5.25			<5.00			4.55			5.07	4.71	5.00	5.56	5.22	5.88	5.05	5.69	5.14	5.98	5.47	5.59	5.63	5.44	6.18	5.09	5.12	5.38	5.65	5.73	5.73
Alkalinity, Total	mg/L	500		565			560			573			585	543	545	448	590	590	575	570	605	590	590	500	540	550	568	553	560	555	595	580	610
Alkalinity, Bicarbonate	mg/L	500		565			560			573			585	543	545	448	590	590	575	570	605	590	590	500	540	550	568	553	560	555	595	580	610
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	12.7		10.0			9.33			9.06			9.66	8.19	8.23	8.12	7.91	7.96	8.07	7.85	7.91	7.70	8.36	8.88	8.60	8.56	8.39	8.80	8.35	8.67	8.73	9.13	8.77
Fluoride	mg/L	<0.500		<0.200			<0.200			<0.200			<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.112	<0.200	<0.200	<0.200	<0.200	<0.500	<0.500
Sulfate as SO4	mg/L	347		353			343			366			317	314	316	335	319	326	314	324	312	325	322	352	351	335	327	323	320	329	329	356	319
Total Organic Carbon (TOC)	mg/L	2.73		2.83			2.81			2.74			2.65	2.6	2.94	2.87	2.76	2.6	2.74	2.97	2.66	2.77	2.77	2.96	1.66	2.75	2.62	4.25	2.76	3.44	2.70	2.80	2.93
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Ammonia as N ^	mg/L	NA		NA			NA			NA			1.31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.100			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100	<0.050	<0.050	<0.100	<0.100	<0.250	<0.250	<0.250	<0.100	<0.100	<0.050	<0.050	
Arsenic	mg/L	0.0008		<0.0010			0.0006			0.0005			0.0005	<0.0010	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	0.0006	<0.0025	0.0010	<0.0025	<0.0025	<0.0025	<0.0010	<0.0020	<0.0020	<0.0010	<0.0010
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0003	<0.0005	<0.0003	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	<0.0005	<0.0005
Copper	mg/L	0.0031		0.0066			0.0036			0.0035			0.0037	0.0027	<0.0010	<0.0015	<0.0025	0.0015	0.0046	0.0047	0.0054	0.0055	0.0087	0.0038	0.0044	0.0025	0.0104	0.0031	0.0044	0.0088	0.0083	0.0081	0.0086
Iron	mg/L	0.137		0.162			<0.250			0.129			0.130	0.108	<0.250	<0.250	<0.250	<0.150	0.113	<0.250	0.168	0.113	0.090	<0.100	<0.100	<0.250	0.082	<0.250	<0.100	0.135	0.127	0.078	0.051
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.0010	<0.0025	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	&											

GCC Energy Hydrologic Monitoring Data

MW-8-LM																																	
Year	2018	2019										2020				2021				2022				2023				2024					
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9	11	3	6	8	11	3	6	8	11	
Sample Date	12/28	1/29	2/19	3/21	4/16	5/29	6/18	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	3/23	6/7	9/8	11/28	3/18	6/14	8/8	11/13	3/17	6/19	8/6	11/21	
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																																	
Purge Flow Rate	gpm	NM	1.00	0.25	1.00	0.50	0.10	0.25	0.25	0.50	0.25	0.12	0.25	0.25	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.15	NM	0.14	0.03	0.16	0.20	0.15	0.20	0.18	0.14		
Total Purged	gal	30	4.0	1.5	1.0	2.0	1.3	6.8	2.0	2.0	1.0	1.5	1.0	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.0	1.0	NM	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7		
Depth to Water	ft bgs	136.39	130.52	134.30	144.03	140.03	137.48	142.23	144.15	138.06	137.50	137.60	137.34	139.15	129.70	127.90	125.75	126.72	126.13	125.25	123.55	124.10	123.75	126.81	NM	126.10	125.80	126.12	125.92	124.95	125.05	125.12	125.05
Temperature	deg C	4.1	13.9	13.2	8.7	13.6	13.9	12.8	13.7	13.4	13.0	11.7	13.3	11.4	13.4	13.6	8.8	12.1	12.8	13.5	12.5	12.3	14.1	13.4	11.9	12.7	13.0	13.1	13.2	11.5	12.8	13.8	12.3
pH	SU	8.37	8.70	8.71	8.41	8.70	8.50	8.66	8.64	8.58	8.44	8.47	7.98	8.76	8.83	8.81	8.82	8.90	8.90	8.91	8.79	8.84	8.82	8.29	8.88	8.88	8.83	8.84	8.94	8.66	8.67	8.44	
Specific Conductance	µS/cm	2306	1274	1265	1310	1262	1234	1264	1226	1269	1252	1299	1255	1294	1282	1055	1117	1132	1121	1196	1262	1260	1232	1255	1276	1233	1252	1241	1224	1305	1229	1227	1261
Oxygen Reduction Potential	mV	37.5	-114.3	112.8	77.0	-36.2	33.2	-63.9	-93.5	-103.0	-115.9	-94.4	-47.4	-106.6	-204.5	-106.9	-93.6	-87.8	-164.1	-106.1	-99.3	-241.3	-149.4	-247.4	-66.9	-58.6	-137.0	-147.9	-210.0	-26.4	-149.5	-106.3	-179.2
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	45.0		7.29			16.9			6.67			6.38	6.79	7.76	7.53	6.35	6.93	7.23	4.65	7.11	7.29	6.61	6.43	6.29	4.01	6.22	4.01	7.08	6.62	6.92	7.96	6.78
pH (Lab)	SU	8.57		8.63			8.02			8.56			8.52	8.55	8.41	8.45	8.48	8.54	8.57	8.48	8.31	8.61	8.63	8.99	8.59	8.47	8.51	8.71	8.84	8.42	8.66	8.70	8.73
Total Dissolved Solids (Lab)	mg/L	1420		770			780			785			780	840	730	740	700	795	720	740	760	740	795	755	685	765	745	805	755	755	760	760	750
Calcium	mg/L	10.8		1.93			3.84			1.78			1.68	1.77	2.09	2.05	1.71	1.87	1.92	1.86	1.88	1.96	1.77	1.70	1.65	1.61	1.71	1.61	1.87	1.77	1.84	2.11	1.84
Magnesium	mg/L	4.39		0.600			1.77			0.541			0.528	0.574	0.620	0.587	0.502	0.550	0.592	<0.500	0.587	0.580	0.530	0.532	0.524	<0.500	0.473	< 0.500	0.583	0.534	0.563	0.655	0.532
Sodium	mg/L	382		341			317			306			305	309	315	337	304	319	315	308	291	316	298	298	301	287	315	289	299	304	311	304	310
Potassium	mg/L	45.7		3.49			<5.00			2.27			2.18	2.06	<5.00	<5.00	<5.00	<3.00	2.24	<5.00	2.12	2.31	2.06	<2.00	2.12	<5.00	1.85	< 5.00	2.07	2.00	2.13	2.22	2.07
Alkalinity, Total	mg/L	615		720			745			731			745	685	630	675	780	730	755	750	770	780	765	760	750	714	732	714	700	690	760	745	765
Alkalinity, Bicarbonate	mg/L	535		610			645			645			685	595	530	585	680	630	645	650	620	640	655	580	510	666	732	646	620	640	640	665	665
Alkalinity, Carbonate	mg/L	80.0		110			100			86.0			60.0	90	100	90	100	100	110	100	150	140	110	180	240	48.0	<10.0	68.0	80.0	50.0	120	80.0	100
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	
Chloride	mg/L	175		5.11			6.80			2.63			2.48	3.04	3.01	2.98	2.47	2.5	2.48	2.55	2.47	2.47	2.49	2.64	2.65	2.66	2.76	2.67	2.75	2.66	2.64	2.57	< 5.00
Fluoride	mg/L	2.06		3.91			3.95			3.97			3.88	3.61	3.63	3.53	3.66	3.58	3.48	3.67	3.40	3.44	3.25	3.79	3.73	3.84	3.65	3.15	3.42	3.93	3.94	3.86	3.92
Sulfate as SO4	mg/L	190		3.79			9.58			1.02			<1.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<2.00	<2.00	0.886	< 2.00	< 2.00	< 2.00	< 2.00	< 2.00	< 5.00
Total Organic Carbon (TOC)	mg/L	2.80		1.80			3.33			1.94			1.69	1.69	1.92	1.82	1.66	1.2	1.71	1.79	1.60	1.70	1.72	1.77	1.13	1.73	1.43	1.89	1.70	2.43	1.70	1.72	1.61
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.282	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100	<0.050	<0.050	<0.100	<0.050	<0.250	<0.250	< 0.250	< 0.050	< 0.100	< 0.100	< 0.050	< 0.050
Arsenic	mg/L	0.0106		<0.0010			0.0006			0.0007			0.0006	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	0.0008	0.0008	<0.0025	<0.0005	<0.0025	<0.0015	< 0.0025	< 0.0010	< 0.0020	< 0.0020	< 0.0010	< 0.0010
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0001	<0.0002	<0.0003	<0.0005	<0.0003	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.0025	<0.0005	<0.0025	<0.0015	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005
Copper	mg/L	0.0337		0.0077			0.0047			0.0041			0.0051	0.0033	0.0012	0.0017	<0.0025	0.0025	0.0057	0.0068	0.0065	0.0075	0.0167	0.0052	0.0079	0.0043	0.0155	0.0040	0.0068	0.0128	0.0132	0.0130	0.0143
Iron	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.100	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100	<0.050	<0.050	<0.100	<0.050	<0.100	<0.250	<0.250	< 0.250	< 0.050	< 0.100	< 0.100	< 0.050	< 0.050
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0025	0.0002	< 0.0025	< 0.0010	< 0.0010	< 0.0010	< 0.0005	< 0.0005
Manganese	mg/L	0.0258		0.0038			0.0150			0.0020			0.0026	0.0025	0.0029	0.0026	0.0028	0.0024	0.0021	0.0025	0.0023	0.0022	0.0027	<0.0025	0.0027	0.0028	0.0027	0.0028	0.0027	0.0034	0.0031	0.0029	0.0027
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002											
Mercury (dissolved low-level)	ng/L																						<5.00	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L	0.0142		<0.0010			0.0009			<0.0005			<0.0005	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005										

GCC Energy Hydrologic Monitoring Data

MW-8-PL																																	
Year	2018	2019											2020				2021				2022				2023				2024				
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9	11	3	6	8	11	3	6	8	11	
Sample Date	12/27	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	3/23	6/7	9/8	11/28	3/18	6/14	8/8	11/13	3/17	6/19	8/6	11/21	
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																																	
Purge Flow Rate	gpm	0.25	1.00	0.50	3.00	0.50	0.25	0.50	1.00	0.50	0.50	0.75	0.25	0.25	0.25	0.25	0.75	0.25	0.25	0.25	0.25	0.25	0.13	1.00	0.22	0.18	0.13	0.16	0.22	0.13	0.13	0.13	
Total Purged	gal	20.0	5.0	2.0	3.0	2.0	3.0	2.5	2.3	2.5	2.0	2.5	1.3	2.0	2.0	2.3	2.0	2.0	2.0	2.0	2.0	2.0	1.8	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Depth to Water	ft bgs	125.97	126.29	126.40	127.10	126.98	126.70	126.82	127.25	127.38	127.42	127.48	127.59	127.32	127.34	128.00	127.31	127.50	127.83	127.89	127.90	128.30	128.40	128.53	128.75	128.10	128.05	128.48	128.50	128.25	128.19	128.36	128.10
Temperature	deg C	10.3	14.2	13.4	12.9	13.2	14.2	14.8	14.7	14.9	14.0	13.2	14.9	13.8	14.8	14.9	14.1	12.9	14.6	14.8	13.4	14.1	14.1	14.3	12.8	13.2	14.2	13.4	13.3	12.2	13.1	13.5	12.6
pH	SU	7.50	7.30	7.49	7.30	7.29	7.31	7.57	7.56	7.52	7.45	7.47	7.52	7.55	7.47	7.52	7.52	7.53	7.58	7.55	7.57	7.43	7.49	7.44	7.67	7.61	7.56	7.53	7.57	7.69	7.33	7.34	7.38
Specific Conductance	µS/cm	1690	1531	1571	1558	1554	1411	1326	1165	1083	947	940	900	862	844	792	827	760	813	816	836	817	826	822	848	853	825	814	815	854	813	824	830
Oxygen Reduction Potential	mV	30.2	-116.5	97.9	-108.7	-110.6	34.2	-57.6	-74.0	-79.5	-51.3	-52.5	-30.8	-59.9	-101.9	-38.0	-37.3	-11.5	-76.6	-64.4	-53.5	-161.9	-94.6	-215.9	-104.0	-36.3	-87.6	-113.8	-140.3	-210.9	-141.2	-101.5	-189.8
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	617		644			596			411			294	278	298	292	268	281	283	280	272	292	276	275	274	303	282	274	269	279	282	296	281
pH (Lab)	SU	7.28		7.40			7.26			7.22			7.39	7.47	7.19	7.16	7.41	7.36	7.41	7.29	7.16	7.42	7.47	7.88	7.39	7.33	7.36	7.51	7.70	7.26	7.52	7.56	7.55
Total Dissolved Solids (Lab)	mg/L	1150		1090			995			705			620	500	490	525	465	525	505	475	465	485	505	500	430	500	465	540	505	460	490	480	490
Calcium	mg/L	112		120			105			73.1			52.1	49.3	53.8	53.3	49.1	52.2	53.3	53	51.1	55.7	53.1	52.4	52.0	57.9	53.3	52.4	51.4	53.5	55.1	57.7	53.4
Magnesium	mg/L	82.1		83.8			81.4			55.4			39.7	37.6	39.7	38.5	35.4	36.6	36.5	35.9	35.0	37.1	34.9	35.1	34.9	38.4	36.1	34.8	34.1	35.4	35.2	36.9	35.9
Sodium	mg/L	106		124			102			91.7			83.3	78.5	80.4	81.6	77.2	78.6	79.7	77.8	73.7	80.8	75.4	76.3	75.0	81.7	77.4	75.3	75.1	76.0	78.2	77.5	78.1
Potassium	mg/L	5.14		5.62			<5.00			2.80			2.35	2.32	2.11	<2.00	<2.00	1.78	1.73	<2.00	1.54	1.71	1.48	1.53	1.55	<2.00	1.59	< 2.00	1.46	1.54	< 2.00	1.67	1.61
Alkalinity, Total	mg/L	370		415			435			393			390	339	340	315	410	370	385	360	385	362	380	356	410	350	388	350	335	370	375	375	405
Alkalinity, Bicarbonate	mg/L	370		415			435			393			390	339	340	315	410	370	385	360	385	362	380	340	410	338	388	350	335	370	375	375	405
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	16.0	<10.0	12.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	
Chloride	mg/L	18.8		18.5			9.03			5.61			5.66	3.51	3.38	3.33	3.32	3.39	3.30	3.33	3.38	3.33	3.34	3.66	3.51	3.70	3.61	3.67	3.58	3.56	3.56	3.48	3.37
Fluoride	mg/L	0.505		0.474			0.290			0.291			<0.500	0.258	0.240	0.233	0.224	0.219	0.200	0.222	0.196	0.195	0.159	0.198	0.187	0.218	0.175	0.126	0.159	0.206	0.201	0.211	0.233
Sulfate as SO4	mg/L	478		471			390			232			127	109	103	99.2	99	101	96.3	102	98.4	100	94.7	106	107	107	106	104	104	106	107	106	102
Total Organic Carbon (TOC)	mg/L	4.17		4.02			2.92			2.21			1.75	1.63	1.63	1.61	1.44	0.928	1.42	1.54	1.40	1.54	1.36	1.60	0.774	1.44	1.15	1.59	< 1.00	1.45	1.46	1.40	1.47
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.052	<0.020	<0.020	<0.020	<0.020	<0.020	< 0.020	< 0.020	< 0.020	< 0.020	< 0.020	
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.199	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.100	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	< 0.100	< 0.050	< 0.050	< 0.100	< 0.050	< 0.050	< 0.050
Arsenic	mg/L	0.0074		0.0124			0.0190			0.0156			0.0104	0.0073	0.0075	0.0064	0.0058	0.0074	0.0055	0.0017	0.0051	0.0046	0.0047	0.0042	0.0037	0.0033	0.0036	0.0029	0.0030	0.0029	0.0029	0.0030	0.0026
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0010	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0010	< 0.0005	< 0.0005
Copper	mg/L	0.0016		0.0025			0.0017			0.0011			0.0004	0.001	<0.0025	<0.001	0.0014	0.0005	0.0013	<0.0010	0.0015	0.0023	0.0040	0.0014	0.0015	0.0028	0.0027	0.0020	0.0026	0.0030	0.0038	0.0039	0.0052
Iron	mg/L	<0.050		0.352			<0.250			0.129			0.075	0.054	<0.100	<0.100	<0.100	<0.050	<0.050	<0.100	0.070	0.079	<0.050	0.063	0.057	<0.100	0.062	< 0.100	0.051	0.066	< 0.100	0.064	0.051
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	<0.0005	< 0.0010	< 0.0005	< 0.0005	< 0.0010	< 0.0005
Manganese	mg/L	1.31		1.22			0.697			0.505			0.313	0.303	0.307	0.259	0.219	0.196	0.175	0.0772	0.161	0.163	0.150	0.145	0.134	0.122	0.111	0.120	0.105	0.0976	0.111	0.0906	0.0880
Mercury (dissolved)	mg/L	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Mercury (dissolved low-level)	ng/L																						<5.00	<100	<100	<100	<100	< 100	< 100	< 100	< 100	< 100	< 100
Molybdenum	mg/L	0.0090		0.0068			0.0020			0.0021			0.0017	0.0008	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	<0.0005										

ATTACHMENT 1

Green Analytical Laboratories MW-5, MW-7, MW-8 Groundwater Sample Results



75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
jeremy.allen@greenanalytical.com

05 December 2024

Michael Dickson
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 11/19/24 08:11. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells
Project Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water. TNI Certificate Number: TX-C24-00019

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: TX-C24-00112

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 17:06

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-5-MI	2411169-01	Water	11/18/24 13:55	11/19/24 08:11	
MW-5-C	2411169-02	Water	11/18/24 14:22	11/19/24 08:11	

Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells, Project Manager

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. In no event shall Green Analytical Laboratories be liable for incidental or consequential damages. GALs liability, and clients exclusive remedy for any claim arising, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever, shall be deemed waived unless made in writing and received within thirty days after completion of the applicable service.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 17:06

MW-5-MI

2411169-01 (Ground Water)

Sampled Date: 11/18/24 13:55

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

General Chemistry

Alkalinity, Total as CaCO ₃ *	1000	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Alkalinity, Bicarbonate as CaCO ₃ *	1000	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Cation/Anion Balance	-6.80	-100	-100	%	1	11/25/24 11:16	Calculation		VJW
Chloride*	6.19	5.00	0.278	mg/L	5	11/27/24 11:52	EPA 300.0		AWG
Fluoride*	<0.500	0.500	0.0486	mg/L	5	11/27/24 11:52	EPA 300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.013	mg/L as N	1	11/21/24 12:42	EPA 353.2		CAI
pH*	8.20			pH Units	1	11/20/24 12:25	EPA 150.1		HIC
pH Temperature, degrees C	19.1			pH Units	1	11/20/24 12:25	EPA 150.1		HIC
Sulfate*	6.82	5.00	0.620	mg/L	5	11/27/24 11:52	EPA 300.0		AWG
Total Dissolved Solids*	1010	10.0		mg/L	1	11/22/24 16:55	EPA 160.1/SM 2540C		HIC
Total Organic Carbon*	2.58	0.500	0.290	mg/L	1	12/04/24 17:01	5310C		CAI

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.022	mg/L	1	11/25/24 14:45	EPA 200.7		AWG
Calcium*	2.32	0.100	0.018	mg/L	1	11/25/24 14:45	EPA 200.7		AWG
Hardness as CaCO ₃	9.01	0.662	0.170	mg/L	1	11/25/24 14:45	2340 B		AWG
Iron*	<0.050	0.050	0.020	mg/L	1	11/25/24 14:45	EPA 200.7		AWG
Magnesium*	0.781	0.100	0.030	mg/L	1	11/25/24 14:45	EPA 200.7		AWG
Potassium*	1.22	1.00	0.075	mg/L	1	11/25/24 14:45	EPA 200.7		AWG
Silica (SiO ₂)	7.86	1.07	0.0997	mg/L	1	11/25/24 14:45	Calculation		AWG
Silicon	3.67	0.500	0.047	mg/L	1	11/25/24 14:45	EPA 200.7		AWG
Sodium*	391	1.00	0.230	mg/L	1	11/25/24 14:45	EPA 200.7		AWG

Dissolved Metals by ICPMS

Arsenic*	0.0108	0.0010	0.0006	mg/L	1	11/26/24 14:32	EPA 200.8		AES
Cadmium*	<0.0005	0.0005	0.00006	mg/L	1	11/26/24 14:32	EPA 200.8		AES
Copper*	0.0337	0.0010	0.0003	mg/L	1	11/26/24 14:32	EPA 200.8		AES
Lead*	0.0015	0.0005	0.0001	mg/L	1	11/26/24 14:32	EPA 200.8		AES
Manganese*	0.0222	0.0005	0.0002	mg/L	1	11/26/24 14:32	EPA 200.8		AES
Molybdenum*	0.0019	0.0005	0.00005	mg/L	1	11/26/24 14:32	EPA 200.8		AES

Green Analytical Laboratories

Veronica J. Wells

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 17:06

MW-5-MI

2411169-01 (Ground Water)

Sampled Date: 11/18/24 13:55

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Metals by ICPMS

Selenium*	<0.0010	0.0010	0.0003	mg/L	1	11/26/24 14:32	EPA 200.8		AES
Uranium	0.0058	0.0005	0.00004	mg/L	1	11/26/24 14:32	EPA 200.8		AES
Zinc*	0.0806	0.0020	0.0006	mg/L	1	11/26/24 14:32	EPA 200.8		AES

Dissolved Mercury by CVAFS

Mercury	<100	100	19.6	ng/L	1	12/04/24 09:39	EPA 245.7		CAI
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Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 17:06

MW-5-C

2411169-02 (Ground Water)

Sampled Date: 11/18/24 14:22

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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General Chemistry

Alkalinity, Total as CaCO ₃ *	1840	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Alkalinity, Bicarbonate as CaCO ₃ *	1840	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Cation/Anion Balance	-1.91	-100	-100	%	1	11/25/24 11:16	Calculation		VJW
Chloride*	<10.0	10.0	0.555	mg/L	10	11/27/24 12:12	EPA 300.0		AWG
Fluoride*	2.19	1.00	0.0971	mg/L	10	11/27/24 12:12	EPA 300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.013	mg/L as N	1	11/21/24 12:43	EPA 353.2		CAI
pH*	7.74			pH Units	1	11/20/24 12:25	EPA 150.1		HIC
pH Temperature, degrees C	19.6			pH Units	1	11/20/24 12:25	EPA 150.1		HIC
Sulfate*	450	10.0	1.24	mg/L	10	11/27/24 12:12	EPA 300.0		AWG
Total Dissolved Solids*	2600	10.0		mg/L	1	11/22/24 16:57	EPA 160.1/SM 2540C		HIC
Total Organic Carbon*	2.49	0.500	0.290	mg/L	1	12/04/24 17:20	5310C		CAI

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.022	mg/L	1	11/25/24 14:49	EPA 200.7		AWG
Calcium*	9.14	0.100	0.018	mg/L	1	11/25/24 14:49	EPA 200.7		AWG
Hardness as CaCO ₃	36.8	0.662	0.170	mg/L	1	11/25/24 14:49	2340 B		AWG
Iron*	<0.050	0.050	0.020	mg/L	1	11/25/24 14:49	EPA 200.7		AWG
Magnesium*	3.39	0.100	0.030	mg/L	1	11/25/24 14:49	EPA 200.7		AWG
Potassium*	3.22	1.00	0.075	mg/L	1	11/25/24 14:49	EPA 200.7		AWG
Silica (SiO ₂)	7.96	1.07	0.0997	mg/L	1	11/25/24 14:49	Calculation		AWG
Silicon	3.72	0.500	0.047	mg/L	1	11/25/24 14:49	EPA 200.7		AWG
Sodium*	996	10.0	2.30	mg/L	10	12/05/24 14:47	EPA 200.7		AWG

Dissolved Metals by ICPMS

Arsenic*	<0.0020	0.0020	0.0012	mg/L	2	11/26/24 14:33	EPA 200.8		AES
Cadmium*	<0.0010	0.0010	0.0001	mg/L	2	11/26/24 14:33	EPA 200.8		AES
Copper*	0.0594	0.0020	0.0006	mg/L	2	11/26/24 14:33	EPA 200.8		AES
Lead*	0.0015	0.0010	0.0002	mg/L	2	11/26/24 14:33	EPA 200.8		AES
Manganese*	0.0078	0.0010	0.0004	mg/L	2	11/26/24 14:33	EPA 200.8		AES
Molybdenum*	0.0012	0.0010	0.0001	mg/L	2	11/26/24 14:33	EPA 200.8		AES

Green Analytical Laboratories

Veronica J. Wells

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 17:06

MW-5-C

2411169-02 (Ground Water)

Sampled Date: 11/18/24 14:22

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Metals by ICPMS

Selenium*	<0.0020	0.0020	0.0005	mg/L	2	11/26/24 14:33	EPA 200.8		AES
Uranium	<0.0010	0.0010	0.00008	mg/L	2	11/26/24 14:33	EPA 200.8		AES
Zinc*	0.0191	0.0040	0.0012	mg/L	2	11/26/24 14:33	EPA 200.8		AES

Dissolved Mercury by CVAFS

Mercury	<100	100	19.6	ng/L	1	12/04/24 09:42	EPA 245.7		CAI
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Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 17:06

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243413 - General Prep - Wet Chem

Blank (B243413-BLK1)

Prepared: 11/20/24 Analyzed: 11/25/24

Alkalinity, Bicarbonate as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Total as CaCO ₃	ND	10.0	mg/L							

LCS (B243413-BS1)

Prepared: 11/20/24 Analyzed: 11/25/24

Alkalinity, Total as CaCO ₃	108	10.0	mg/L	100		108	85-115			
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LCS Dup (B243413-BSD1)

Prepared: 11/20/24 Analyzed: 11/25/24

Alkalinity, Total as CaCO ₃	102	10.0	mg/L	100		102	85-115	5.71	20	
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Reference (B243413-SRM1)

Prepared: 11/20/24 Analyzed: 11/25/24

Alkalinity, Total as CaCO ₃	103	10.0	mg/L	100		103	85-115			
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Batch B243416 - Lachat

Blank (B243416-BLK1)

Prepared: 11/20/24 Analyzed: 11/21/24

Nitrate/Nitrite as N	ND	0.020	mg/L as N							
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LCS (B243416-BS1)

Prepared: 11/20/24 Analyzed: 11/21/24

Nitrate/Nitrite as N	0.960	0.020	mg/L as N	1.00		96.0	90-110			
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LCS Dup (B243416-BSD1)

Prepared: 11/20/24 Analyzed: 11/21/24

Nitrate/Nitrite as N	0.932	0.020	mg/L as N	1.00		93.2	90-110	2.96	20	
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Batch B243443 - General Prep - Wet Chem

Blank (B243443-BLK1)

Prepared & Analyzed: 11/22/24

Total Dissolved Solids	ND	10.0	mg/L							
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Reference (B243443-SRM1)

Prepared & Analyzed: 11/22/24

Total Dissolved Solids	405	10.0	mg/L	400		101	85-115			
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Batch B243462 - General Prep - Wet Chem

Blank (B243462-BLK1)

Prepared & Analyzed: 12/04/24

Total Organic Carbon	ND	0.500	mg/L							
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LCS (B243462-BS1)

Prepared & Analyzed: 12/04/24

Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115			
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Green Analytical Laboratories

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 17:06

General Chemistry - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243462 - General Prep - Wet Chem (Continued)

LCS Dup (B243462-BSD1)

Prepared & Analyzed: 12/04/24

Total Organic Carbon	9.95	0.500	mg/L	10.0	99.5	85-115	1.28	20
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Batch B243466 - General Prep - Wet Chem

Reference (B243466-SRM1)

Prepared & Analyzed: 11/20/24

pH	7.03		pH Units	7.00	100	98.57-101.42
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Batch B243497 - IC- Ion Chromatograph

Blank (B243497-BLK1)

Prepared & Analyzed: 11/27/24

Chloride	ND	1.00	mg/L
Fluoride	ND	0.100	mg/L
Sulfate	ND	1.00	mg/L

LCS (B243497-BS1)

Prepared & Analyzed: 11/27/24

Chloride	23.2	1.00	mg/L	25.0	92.8	90-110
Fluoride	2.38	0.100	mg/L	2.50	95.4	90-110
Sulfate	23.3	1.00	mg/L	25.0	93.1	90-110

LCS Dup (B243497-BSD1)

Prepared & Analyzed: 11/27/24

Chloride	24.0	1.00	mg/L	25.0	96.1	90-110	3.57	20
Fluoride	2.47	0.100	mg/L	2.50	98.7	90-110	3.42	20
Sulfate	24.1	1.00	mg/L	25.0	96.5	90-110	3.55	20

Green Analytical Laboratories

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 17:06

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243454 - Dissolved ICP

Blank (B243454-BLK1)

Prepared & Analyzed: 11/25/24

Aluminum	ND	0.050	mg/L
Calcium	ND	0.100	mg/L
Iron	ND	0.050	mg/L
Magnesium	ND	0.100	mg/L
Potassium	ND	1.00	mg/L
Silicon	ND	0.500	mg/L
Sodium	ND	1.00	mg/L

LCS (B243454-BS1)

Prepared & Analyzed: 11/25/24

Aluminum	3.92	0.050	mg/L	4.00	98.1	85-115
Calcium	3.92	0.100	mg/L	4.00	98.0	85-115
Iron	3.96	0.050	mg/L	4.00	99.0	85-115
Magnesium	20.0	0.100	mg/L	20.0	100	85-115
Potassium	7.71	1.00	mg/L	8.00	96.4	85-115
Silicon	3.94	0.500	mg/L	4.00	98.6	85-115
Sodium	3.08	1.00	mg/L	3.24	95.2	85-115

LCS Dup (B243454-BSD1)

Prepared & Analyzed: 11/25/24

Aluminum	3.82	0.050	mg/L	4.00	95.5	85-115	2.69	20
Calcium	3.81	0.100	mg/L	4.00	95.3	85-115	2.77	20
Iron	3.84	0.050	mg/L	4.00	95.9	85-115	3.21	20
Magnesium	19.4	0.100	mg/L	20.0	96.8	85-115	3.22	20
Potassium	7.66	1.00	mg/L	8.00	95.7	85-115	0.643	20
Silicon	3.83	0.500	mg/L	4.00	95.7	85-115	3.01	20
Sodium	2.95	1.00	mg/L	3.24	91.0	85-115	4.47	20

Green Analytical Laboratories

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 17:06

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243474 - Dissolved ICPMS

Blank (B243474-BLK1)

Prepared & Analyzed: 11/26/24

Arsenic	ND	0.0010	mg/L
Cadmium	ND	0.0005	mg/L
Copper	ND	0.0010	mg/L
Lead	ND	0.0005	mg/L
Manganese	ND	0.0005	mg/L
Molybdenum	ND	0.0005	mg/L
Selenium	ND	0.0010	mg/L
Uranium	ND	0.0005	mg/L
Zinc	ND	0.0020	mg/L

LCS (B243474-BS1)

Prepared & Analyzed: 11/26/24

Arsenic	0.0493	0.0010	mg/L	0.0500	98.7	85-115
Cadmium	0.0497	0.0005	mg/L	0.0500	99.4	85-115
Copper	0.0498	0.0010	mg/L	0.0500	99.5	85-115
Lead	0.0492	0.0005	mg/L	0.0500	98.4	85-115
Manganese	0.0497	0.0005	mg/L	0.0500	99.4	85-115
Molybdenum	0.0484	0.0005	mg/L	0.0500	96.7	85-115
Selenium	0.246	0.0010	mg/L	0.250	98.5	85-115
Uranium	0.0499	0.0005	mg/L	0.0500	99.9	85-115
Zinc	0.0501	0.0020	mg/L	0.0500	100	85-115

LCS Dup (B243474-BSD1)

Prepared & Analyzed: 11/26/24

Arsenic	0.0491	0.0010	mg/L	0.0500	98.1	85-115	0.568	20
Cadmium	0.0495	0.0005	mg/L	0.0500	99.0	85-115	0.459	20
Copper	0.0497	0.0010	mg/L	0.0500	99.4	85-115	0.160	20
Lead	0.0489	0.0005	mg/L	0.0500	97.7	85-115	0.741	20
Manganese	0.0498	0.0005	mg/L	0.0500	99.7	85-115	0.291	20
Molybdenum	0.0484	0.0005	mg/L	0.0500	96.8	85-115	0.109	20
Selenium	0.246	0.0010	mg/L	0.250	98.3	85-115	0.161	20
Uranium	0.0490	0.0005	mg/L	0.0500	98.1	85-115	1.83	20
Zinc	0.0503	0.0020	mg/L	0.0500	101	85-115	0.390	20

Green Analytical Laboratories

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 17:06

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243518 - EPA 245.7

Blank (B243518-BLK1)

Prepared: 12/02/24 Analyzed: 12/04/24

Mercury	ND	100	ng/L
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LCS (B243518-BS1)

Prepared: 12/02/24 Analyzed: 12/04/24

Mercury	917	100	ng/L	1000	91.7	76-113
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LCS Dup (B243518-BSD1)

Prepared: 12/02/24 Analyzed: 12/04/24

Mercury	886	100	ng/L	1000	88.6	76-113	3.40	20
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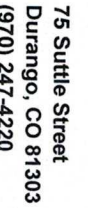
Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis *Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Veronica Wells, Project Manager

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

EOBM-006 B 8 0

Note: Wite-Out™ or similar products cannot be used on the Chain of Custody

Company or Client: GCC Energy		ANALYSIS REQUEST				
Address: 6473 CR 120						
City: Hesperus						
State: CO Zip: 81326						
Phone #: 970.385.4528						
Contact Person: Michael Dickson for billing; Landon Beck for logistical or technical						
Email Report to: mdickson@gcc.com; lbeck@strconsulting.com; tom@haygulchservices.com						
Project Name(optional):		P.O. #:				

[illegible]

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Relinquished By:	Date:	11/19/24	Received By:	Date:	11/19/24	ADDITIONAL REMARKS:
	Time:	8:05		Time:	8:11	
Relinquished By:	Date:		Received By:	Date:		
	Time:			Time:		
Relinquished By:	Date:		Received By:	Date:		
	Time:			Time:		
Temperature at receipt:			0.2 °C			
Checked by:			Kofar			
On Ice?			☒ Y ☐ N			
Therm. used:			Wesc 2			

Page 13 of 15 2411169 GAL FINAL 12 05 24 1706 12/05/24 17:07:10

Project Information

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Pri.....

GCC Energy, LLC

6473 CR 120

Hesperus, CO 81326

Laboratory PM: Veronica Wells

GCC Energy

Phone: (970) 385-4528

Fax: (970) 385-4638

Project Name: GCC GW Baseline

Project Number:

Client PM: Michael Dickson

Comments:

Analysis	Comment
Alkalinity, Total	
Aluminum Dissolved by ICP	
Arsenic Dissolved by ICPMS	
CAB	
Cadmium Dissolved by ICPMS	
Chloride [IC]	
Copper Dissolved by ICPMS	
Fluoride [IC]	
Hardness [DISSOLVED]	
Iron Dissolved by ICP	
Lead Dissolved by ICPMS	
Manganese Dissolved by ICPMS	
Mercury Dissolved by CVAFS	
Molybdenum Dissolved by ICPMS	
Nitrate/Nitrite [LACHAT]	
pH	
Potassium Dissolved by ICP	
Selenium Dissolved by ICPMS	
Silica Dissolved by ICP	
Sodium Dissolved by ICP	
Sulfate [IC]	
Total Dissolved Solids [TDS]	
Total Organic Carbon [TOC]	
Uranium Dissolved by ICPMS	
Zinc Dissolved by ICPMS	
Hardness [DISSOLVED] subanalyses:	
Calcium Dissolved by ICP	
Magnesium Dissolved by ICP	
Silica Dissolved by ICP subanalyses:	
Silicon Dissolved by ICP	

All metals are field filtered. Send out preserved bottles

Date/Initials of person examining contents: 11.19.24
CDWLabeled by initials: _____
(if different than above)

SAMPLE CONDITION RECEIPT FORM

Client Name: GCL EnergyWork Order # 2411-169Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Kangaroo ☐ Third Party ☐ OtherCustody Seals on Box/Cooler Present: ☐ Yes ☒ No Seals Intact: ☐ Yes ☐ No GAL Cooler #: _____Thermometer Used: #2 Samples on ice, cooling process has begun: ☒ Yes ☐ NoType of Ice: ☒ Wet ☐ Blue ☐ None Cooler Temp: Observed Temp: 0.2 °C Correction Factor: 0 °C Final Temp: 0.2 °C

*Temp should be above freezing 6°C

Compliance: ☐ Yes ☐ No

Chain of Custody Filled Out:	☒ Yes ☐ No	1.
COC Signed when Relinquished and Received:	☒ Yes ☐ No	2.
Sampler Name and Signature on COC: *Required for compliance	☒ Yes ☐ No	3.
Samples arrived within hold time:	☒ Yes ☐ No	4.
Correct Containers Used & Intact:	☒ Yes ☐ No	5.
Short Hold Time Analysis (<72hr):	☒ Yes ☐ No	6. <u>PH</u>
Rush Turn Around Time Requested: *3 day TAT or less requires supervisor approval	☐ Yes ☒ No	7. Approved By:
Sufficient Volume:	☒ Yes ☐ No	8.
pH's acceptable upon receipt, where applicable: *Not including metals bottles	☒ Yes ☐ No ☐ N/A	9.
Dissolved Testing Needed:	☒ Yes ☐ No	10.
Field Filtered: ☒ Yes ☐ No		
Sample Labels match COC: -Includes Date/Time/ID	☒ Yes ☐ No	11.
Matrix:	☒ SL ☐ OT	
Trip Blank Present:	☐ Yes ☐ No ☐ N/A	12.
Trip Blank Custody Seals Present:	☐ Yes ☐ No ☐ N/A	
VOA's meet headspace requirement (<6mm bubbles)	☐ Yes ☐ No ☐ N/A	
Non-Conformance(s):	☐ Yes ☒ No	13.

Client Notification/Resolution:

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____



75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
jeremy.allen@greenanalytical.com

05 December 2024

Michael Dickson
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 11/19/24 08:11. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells
Project Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water. TNI Certificate Number: TX-C24-00019

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: TX-C24-00112

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GCC Energy, LLC
 6473 CR 120
 Hesperus CO, 81326

Project: GCC GW Baseline
 Project Name / Number: [none]
 Project Manager: Michael Dickson

Reported:
 12/05/24 13:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-7-EAA	2411167-01	Water	11/18/24 15:42	11/19/24 08:11	

Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 13:31

MW-7-EAA

2411167-01 (Ground Water)

Sampled Date: 11/18/24 15:42

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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General Chemistry

Alkalinity, Total as CaCO ₃ *	460	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Alkalinity, Bicarbonate as CaCO ₃ *	460	10.0	8.00	mg/L	5	11/25/24 15:00	2320 B		HIC
Cation/Anion Balance	-0.410	-100	-100	%	1	11/25/24 11:16	Calculation		VJW
Chloride*	11.2	2.00	0.111	mg/L	2	11/22/24 19:04	EPA 300.0		AWG
Fluoride*	0.314	0.200	0.0194	mg/L	2	11/22/24 19:04	EPA 300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.013	mg/L as N	1	11/21/24 12:40	EPA 353.2		CAI
pH*	7.13			pH Units	1	11/20/24 12:25	EPA 150.1		HIC
pH Temperature, degrees C	18.7			pH Units	1	11/20/24 12:25	EPA 150.1		HIC
Sulfate*	747	10.0	1.24	mg/L	10	11/25/24 16:51	EPA 300.0		AWG
Total Dissolved Solids*	1650	10.0		mg/L	1	11/22/24 16:51	EPA 160.1/SM 2540C		HIC
Total Organic Carbon*	4.99	0.500	0.290	mg/L	1	12/04/24 16:29	5310C		CAI

Dissolved Metals by ICP

Aluminum*	0.197	0.050	0.022	mg/L	1	11/25/24 14:37	EPA 200.7		AWG
Calcium*	170	0.100	0.018	mg/L	1	11/25/24 14:37	EPA 200.7		AWG
Hardness as CaCO ₃	997	0.662	0.170	mg/L	1	11/25/24 14:37	2340 B		AWG
Iron*	0.404	0.050	0.020	mg/L	1	11/25/24 14:37	EPA 200.7		AWG
Magnesium*	139	0.100	0.030	mg/L	1	11/25/24 14:37	EPA 200.7		AWG
Potassium*	3.65	1.00	0.075	mg/L	1	11/25/24 14:37	EPA 200.7		AWG
Silica (SiO ₂)	16.7	1.07	0.0997	mg/L	1	11/25/24 14:37	Calculation		AWG
Silicon	7.80	0.500	0.047	mg/L	1	11/25/24 14:37	EPA 200.7		AWG
Sodium*	78.1	1.00	0.230	mg/L	1	11/25/24 14:37	EPA 200.7		AWG

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0006	mg/L	1	11/26/24 14:28	EPA 200.8		AES
Cadmium*	<0.0005	0.0005	0.00006	mg/L	1	11/26/24 14:28	EPA 200.8		AES
Copper*	0.0186	0.0010	0.0003	mg/L	1	11/26/24 14:28	EPA 200.8		AES
Lead*	0.0015	0.0005	0.0001	mg/L	1	11/26/24 14:28	EPA 200.8		AES
Manganese*	4.69	0.0050	0.0018	mg/L	10	11/26/24 16:54	EPA 200.8		AES
Molybdenum*	0.0007	0.0005	0.00005	mg/L	1	11/26/24 14:28	EPA 200.8		AES

Green Analytical Laboratories

Veronica J. Wells

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 13:31

MW-7-EAA

2411167-01 (Ground Water)

Sampled Date: 11/18/24 15:42

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Metals by ICPMS

Selenium*	<0.0010	0.0010	0.0003	mg/L	1	11/26/24 14:28	EPA 200.8		AES
Uranium	0.0025	0.0005	0.00004	mg/L	1	11/26/24 14:28	EPA 200.8		AES
Zinc*	0.0170	0.0020	0.0006	mg/L	1	11/26/24 14:28	EPA 200.8		AES

Dissolved Mercury by CVAFS

Mercury	<100	100	19.6	ng/L	1	12/04/24 09:33	EPA 245.7		CAI
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Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 13:31

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B243413 - General Prep - Wet Chem										
Blank (B243413-BLK1) Prepared: 11/20/24 Analyzed: 11/25/24										
Alkalinity, Bicarbonate as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Total as CaCO ₃	ND	10.0	mg/L							
LCS (B243413-BS1) Prepared: 11/20/24 Analyzed: 11/25/24										
Alkalinity, Total as CaCO ₃	108	10.0	mg/L	100		108	85-115			
LCS Dup (B243413-BSD1) Prepared: 11/20/24 Analyzed: 11/25/24										
Alkalinity, Total as CaCO ₃	102	10.0	mg/L	100		102	85-115	5.71	20	
Reference (B243413-SRM1) Prepared: 11/20/24 Analyzed: 11/25/24										
Alkalinity, Total as CaCO ₃	103	10.0	mg/L	100		103	85-115			
Batch B243416 - Lachat										
Blank (B243416-BLK1) Prepared: 11/20/24 Analyzed: 11/21/24										
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B243416-BS1) Prepared: 11/20/24 Analyzed: 11/21/24										
Nitrate/Nitrite as N	0.960	0.020	mg/L as N	1.00		96.0	90-110			
LCS Dup (B243416-BSD1) Prepared: 11/20/24 Analyzed: 11/21/24										
Nitrate/Nitrite as N	0.932	0.020	mg/L as N	1.00		93.2	90-110	2.96	20	
Batch B243439 - IC- Ion Chromatograph										
Blank (B243439-BLK1) Prepared & Analyzed: 11/22/24										
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B243439-BS1) Prepared & Analyzed: 11/22/24										
Chloride	23.2	1.00	mg/L	25.0		92.8	90-110			
Fluoride	2.38	0.100	mg/L	2.50		95.4	90-110			
Sulfate	23.3	1.00	mg/L	25.0		93.3	90-110			
LCS Dup (B243439-BSD1) Prepared & Analyzed: 11/22/24										
Chloride	23.9	1.00	mg/L	25.0		95.8	90-110	3.22	20	
Fluoride	2.47	0.100	mg/L	2.50		98.6	90-110	3.38	20	

Green Analytical Laboratories

Veronica J. Wells

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 13:31

General Chemistry - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243439 - IC- Ion Chromatograph (Continued)

LCS Dup (B243439-BSD1) (Continued)

Prepared & Analyzed: 11/22/24

Sulfate	24.1	1.00	mg/L	25.0		96.4	90-110	3.30	20	
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Batch B243443 - General Prep - Wet Chem

Blank (B243443-BLK1)

Prepared & Analyzed: 11/22/24

Total Dissolved Solids	ND	10.0	mg/L							
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Reference (B243443-SRM1)

Prepared & Analyzed: 11/22/24

Total Dissolved Solids	405	10.0	mg/L	400		101	85-115			
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Batch B243462 - General Prep - Wet Chem

Blank (B243462-BLK1)

Prepared & Analyzed: 12/04/24

Total Organic Carbon	ND	0.500	mg/L							
----------------------	----	-------	------	--	--	--	--	--	--	--

LCS (B243462-BS1)

Prepared & Analyzed: 12/04/24

Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115			
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LCS Dup (B243462-BSD1)

Prepared & Analyzed: 12/04/24

Total Organic Carbon	9.95	0.500	mg/L	10.0		99.5	85-115	1.28	20	
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Batch B243466 - General Prep - Wet Chem

Reference (B243466-SRM1)

Prepared & Analyzed: 11/20/24

pH	7.03		pH Units	7.00		100	98.57-101.42			
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Green Analytical Laboratories

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 13:31

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243454 - Dissolved ICP

Blank (B243454-BLK1)

Prepared & Analyzed: 11/25/24

Aluminum	ND	0.050	mg/L
Calcium	ND	0.100	mg/L
Iron	ND	0.050	mg/L
Magnesium	ND	0.100	mg/L
Potassium	ND	1.00	mg/L
Silicon	ND	0.500	mg/L
Sodium	ND	1.00	mg/L

LCS (B243454-BS1)

Prepared & Analyzed: 11/25/24

Aluminum	3.92	0.050	mg/L	4.00	98.1	85-115
Calcium	3.92	0.100	mg/L	4.00	98.0	85-115
Iron	3.96	0.050	mg/L	4.00	99.0	85-115
Magnesium	20.0	0.100	mg/L	20.0	100	85-115
Potassium	7.71	1.00	mg/L	8.00	96.4	85-115
Silicon	3.94	0.500	mg/L	4.00	98.6	85-115
Sodium	3.08	1.00	mg/L	3.24	95.2	85-115

LCS Dup (B243454-BSD1)

Prepared & Analyzed: 11/25/24

Aluminum	3.82	0.050	mg/L	4.00	95.5	85-115	2.69	20
Calcium	3.81	0.100	mg/L	4.00	95.3	85-115	2.77	20
Iron	3.84	0.050	mg/L	4.00	95.9	85-115	3.21	20
Magnesium	19.4	0.100	mg/L	20.0	96.8	85-115	3.22	20
Potassium	7.66	1.00	mg/L	8.00	95.7	85-115	0.643	20
Silicon	3.83	0.500	mg/L	4.00	95.7	85-115	3.01	20
Sodium	2.95	1.00	mg/L	3.24	91.0	85-115	4.47	20

Green Analytical Laboratories

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 13:31

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243474 - Dissolved ICPMS

Blank (B243474-BLK1)

Prepared & Analyzed: 11/26/24

Arsenic	ND	0.0010	mg/L							
Cadmium	ND	0.0005	mg/L							
Copper	ND	0.0010	mg/L							
Lead	ND	0.0005	mg/L							
Manganese	ND	0.0005	mg/L							
Molybdenum	ND	0.0005	mg/L							
Selenium	ND	0.0010	mg/L							
Uranium	ND	0.0005	mg/L							
Zinc	ND	0.0020	mg/L							

LCS (B243474-BS1)

Prepared & Analyzed: 11/26/24

Arsenic	0.0493	0.0010	mg/L	0.0500	98.7	85-115				
Cadmium	0.0497	0.0005	mg/L	0.0500	99.4	85-115				
Copper	0.0498	0.0010	mg/L	0.0500	99.5	85-115				
Lead	0.0492	0.0005	mg/L	0.0500	98.4	85-115				
Manganese	0.0497	0.0005	mg/L	0.0500	99.4	85-115				
Molybdenum	0.0484	0.0005	mg/L	0.0500	96.7	85-115				
Selenium	0.246	0.0010	mg/L	0.250	98.5	85-115				
Uranium	0.0499	0.0005	mg/L	0.0500	99.9	85-115				
Zinc	0.0501	0.0020	mg/L	0.0500	100	85-115				

LCS Dup (B243474-BSD1)

Prepared & Analyzed: 11/26/24

Arsenic	0.0491	0.0010	mg/L	0.0500	98.1	85-115	0.568	20		
Cadmium	0.0495	0.0005	mg/L	0.0500	99.0	85-115	0.459	20		
Copper	0.0497	0.0010	mg/L	0.0500	99.4	85-115	0.160	20		
Lead	0.0489	0.0005	mg/L	0.0500	97.7	85-115	0.741	20		
Manganese	0.0498	0.0005	mg/L	0.0500	99.7	85-115	0.291	20		
Molybdenum	0.0484	0.0005	mg/L	0.0500	96.8	85-115	0.109	20		
Selenium	0.246	0.0010	mg/L	0.250	98.3	85-115	0.161	20		
Uranium	0.0490	0.0005	mg/L	0.0500	98.1	85-115	1.83	20		
Zinc	0.0503	0.0020	mg/L	0.0500	101	85-115	0.390	20		

Green Analytical Laboratories

Veronica J. Wells

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/05/24 13:31

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch B243518 - EPA 245.7

Blank (B243518-BLK1)

Prepared: 12/02/24 Analyzed: 12/04/24

Mercury	ND	100	ng/L
---------	----	-----	------

LCS (B243518-BS1)

Prepared: 12/02/24 Analyzed: 12/04/24

Mercury	917	100	ng/L	1000	91.7	76-113
---------	-----	-----	------	------	------	--------

LCS Dup (B243518-BSD1)

Prepared: 12/02/24 Analyzed: 12/04/24

Mercury	886	100	ng/L	1000	88.6	76-113	3.40	20
---------	-----	-----	------	------	------	--------	------	----

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis *Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Veronica Wells, Project Manager

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75 Suttle Street
Durango, CO 81303
(970) 247-4220

Table of Contents

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006, R 8.0

Note: Write-Out™ or similar products cannot be used on the Chain of Custody

Company or Client: GCC Energy

Address: 6473 CR 120

City: Hesperus State: CO Zip: 81326

Phone #: 970.385.4528

Contact Person: Michael Dickson for billing; Landon Beck for logistical or technical

Email Report to: mdickson@gcc.com; lbeck@strconsulting.com; tom@haygillservices.com

Project Name(optional):

Sampler Name (Print): Brandon Waddell

P.O. #:

Rush? ☐ Y ☒ N

Collected

Matrix (check one)

of containers

Lab I.D.

Sample Name or Location

2411-167

61

1) MW-7-EAA

11-18-24 15:42

☒

GROUNDWATER

☐

SURFACE WATER

☐

WASTEWATER

☐

PRODUCED WATER

☐

DRINKING WATER

☐

SOIL

☐

OTHER:

☐

No preservation

☐

Nitric Acid

☐

Hydrochloric Acid

☐

Sulfuric Acid

☐

Sodium Hydroxide

☐

OTHER:

☐

☒

GCC GW Baseline

☐

GCC SW Baseline

☐

GCC S&S Baseline

☐

☐

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PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL within 30 days after completion of the applicable service. In no event shall GAL be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by GAL, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished By:

Date: 11.14.24

Received By:

Date: 11.14.24

ADDITIONAL REMARKS:

Relinquished By:

Date: 8.05

Received By:

Date: 8.11

Relinquished By:

Date:

Received By:

Date:

Temperature at receipt:

°C

Checked by:

On Ice?

Y

N

Therm. used:

10522

Project Information

GCC Energy, LLC

6473 CR 120
Hesperus, CO 81326
Laboratory PM: Veronica Wells

GCC Energy

Phone: (970) 385-4528
Fax: (970) 385-4638

Project Name: GCC GW Baseline
Project Number:
Client PM: Michael Dickson
Comments:

Analysis	Comment
Alkalinity, Total	
Aluminum Dissolved by ICP	
Arsenic Dissolved by ICPMS	
CAB	
Cadmium Dissolved by ICPMS	
Chloride [IC]	
Copper Dissolved by ICPMS	
Fluoride [IC]	
Hardness [DISSOLVED]	
Iron Dissolved by ICP	
Lead Dissolved by ICPMS	
Manganese Dissolved by ICPMS	
Mercury Dissolved by CVAFS	
Molybdenum Dissolved by ICPMS	
Nitrate/Nitrite [LACHAT]	
pH	
Potassium Dissolved by ICP	
Selenium Dissolved by ICPMS	
Silica Dissolved by ICP	
Sodium Dissolved by ICP	
Sulfate [IC]	
Total Dissolved Solids [TDS]	
Total Organic Carbon [TOC]	
Uranium Dissolved by ICPMS	
Zinc Dissolved by ICPMS	
Hardness [DISSOLVED] subanalyses:	
Calcium Dissolved by ICP	
Magnesium Dissolved by ICP	
Silica Dissolved by ICP subanalyses:	
Silicon Dissolved by ICP	

All metals are field filtered. Send out preserved bottles



SAMPLE CONDITION RECEIPT FORM

 Date/Initials of person examining contents: 11.19.24
CDH

 Labeled by initials: _____
 (if different than above)
Client Name: GCC EnergyWork Order # 2411-167
 Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Kangaroo ☐ Third Party ☐ Other

 Custody Seals on Box/Cooler Present: ☐ Yes ☒ No Seals Intact: ☐ Yes ☐ No GAL Cooler #: _____

 Thermometer Used: #2 Samples on ice, cooling process has begun: ☒ Yes ☐ No

 Type of Ice: ☒ Wet ☐ Blue ☐ None Cooler Temp: _____ Observed Temp: 0.2 °C Correction Factor: 0 °C Final Temp: 0.2 °C
Compliance: ☐ Yes ☐ No

*Temp should be above freezing 6°C

Chain of Custody Filled Out:	☒ Yes ☐ No	1.
COC Signed when Relinquished and Received:	☒ Yes ☐ No	2.
Sampler Name and Signature on COC: *Required for compliance	☒ Yes ☐ No	3.
Samples arrived within hold time:	☒ Yes ☐ No	4.
Correct Containers Used & Intact:	☒ Yes ☐ No	5.
Short Hold Time Analysis (<72hr):	☒ Yes ☐ No	6. <u>PH</u>
Rush Turn Around Time Requested: *3 day TAT or less requires supervisor approval	☐ Yes ☒ No	7. Approved By:
Sufficient Volume:	☒ Yes ☐ No	8.
pH's acceptable upon receipt, where applicable: *Not including metals bottles	☒ Yes ☐ No ☐ N/A	9.
Dissolved Testing Needed:	☒ Yes ☐ No	10.
Field Filtered: ☒ Yes ☐ No		
Sample Labels match COC: -Includes Date/Time/ID	☒ Yes ☐ No	11.
Matrix:	☒ SL ☐ OT	
Trip Blank Present:	☐ Yes ☐ No ☐ N/A	12.
Trip Blank Custody Seals Present:	☐ Yes ☐ No ☐ N/A	
VOA's meet headspace requirement (<6mm bubbles)	☐ Yes ☐ No ☐ N/A	
Non-Conformance(s):	☐ Yes ☒ No	13.

Client Notification/Resolution:

Person Contacted: _____

Date/Time: _____

 Comments/Resolution: _____



75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
jeremy.allen@greenanalytical.com

06 December 2024

Michael Dickson
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 11/22/24 16:00. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells
Project Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. All of our certifications can be viewed at <http://greenanalytical.com/certifications/>

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water. TNI Certificate Number: TX-C24-00019

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: TX-C24-00112

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-8-EAA	2411235-01	Water	11/21/24 14:49	11/22/24 16:00	
MW-8-MI	2411235-02	Water	11/21/24 14:15	11/22/24 16:00	
MW-8-PL	2411235-03	Water	11/21/24 13:48	11/22/24 16:00	
MW-8-LM	2411235-04	Water	11/21/24 13:20	11/22/24 16:00	

Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

MW-8-EAA

2411235-01 (Ground Water)

Sampled Date: 11/21/24 14:49

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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General Chemistry

Alkalinity, Total as CaCO ₃ *	470	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Bicarbonate as CaCO ₃ *	470	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Cation/Anion Balance	-1.03	-100	-100	%	1	11/25/24 11:16	Calculation		VJW
Chloride*	12.5	5.00	2.49	mg/L	5	12/05/24 01:35	EPA 300.0		AWG
Fluoride*	<0.500	0.500	0.168	mg/L	5	12/05/24 01:35	EPA 300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.013	mg/L as N	1	12/05/24 15:17	EPA 353.2		CAI
pH*	7.30			pH Units	1	11/22/24 16:45	EPA 150.1		HIC
pH Temperature, degrees C	16.4			pH Units	1	11/22/24 16:45	EPA 150.1		HIC
Sulfate*	697	5.00	2.81	mg/L	5	12/05/24 01:35	EPA 300.0		AWG
Total Dissolved Solids*	1470	10.0		mg/L	1	11/27/24 16:22	EPA 160.1/SM 2540C		HIC
Total Organic Carbon*	5.82	0.500	0.290	mg/L	1	12/04/24 20:13	5310C	M5	CAI

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.022	mg/L	1	12/04/24 16:22	EPA 200.7		AWG
Calcium*	162	0.100	0.018	mg/L	1	12/04/24 16:22	EPA 200.7		AWG
Hardness as CaCO ₃	936	0.662	0.170	mg/L	1	12/04/24 16:22	2340 B		AWG
Iron*	2.23	0.050	0.020	mg/L	1	12/04/24 16:22	EPA 200.7		AWG
Magnesium*	129	0.100	0.030	mg/L	1	12/04/24 16:22	EPA 200.7		AWG
Potassium*	3.70	1.00	0.075	mg/L	1	12/04/24 16:22	EPA 200.7		AWG
Silica (SiO ₂)	16.2	1.07	0.0997	mg/L	1	12/04/24 16:22	Calculation		AWG
Silicon	7.56	0.500	0.047	mg/L	1	12/04/24 16:22	EPA 200.7		AWG
Sodium*	81.2	1.00	0.230	mg/L	1	12/04/24 16:22	EPA 200.7		AWG

Dissolved Metals by ICPMS

Arsenic*	0.0016	0.0010	0.0006	mg/L	1	11/26/24 14:42	EPA 200.8		AES
Cadmium*	<0.0005	0.0005	0.00006	mg/L	1	11/26/24 14:42	EPA 200.8		AES
Copper*	0.0160	0.0010	0.0003	mg/L	1	11/26/24 14:42	EPA 200.8		AES
Lead*	0.0012	0.0005	0.0001	mg/L	1	11/26/24 14:42	EPA 200.8		AES
Manganese*	4.24	0.0050	0.0018	mg/L	10	11/26/24 16:56	EPA 200.8		AES
Molybdenum*	0.0009	0.0005	0.00005	mg/L	1	11/26/24 14:42	EPA 200.8		AES

Green Analytical Laboratories

Veronica J. Wells

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

MW-8-EAA

2411235-01 (Ground Water)

Sampled Date: 11/21/24 14:49

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Metals by ICPMS

Selenium*	<0.0010	0.0010	0.0003	mg/L	1	11/26/24 14:42	EPA 200.8		AES
Uranium	0.0019	0.0005	0.00004	mg/L	1	11/26/24 14:42	EPA 200.8		AES
Zinc*	0.0227	0.0020	0.0006	mg/L	1	11/26/24 14:42	EPA 200.8		AES

Dissolved Mercury by CVAFS

Mercury	<100	100	19.6	ng/L	1	12/05/24 13:23	EPA 245.7		CAI
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Green Analytical Laboratories

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Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

MW-8-MI

2411235-02 (Ground Water)

Sampled Date: 11/21/24 14:15

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
---------	--------	----	-----	-------	----------	----------	--------	-------	---------

General Chemistry

Alkalinity, Total as CaCO ₃ *	610	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Bicarbonate as CaCO ₃ *	610	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Cation/Anion Balance	-2.37	-100	-100	%	1	11/25/24 11:16	Calculation		VJW
Chloride*	8.77	5.00	2.49	mg/L	5	12/05/24 01:56	EPA 300.0		AWG
Fluoride*	<0.500	0.500	0.168	mg/L	5	12/05/24 01:56	EPA 300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.013	mg/L as N	1	12/05/24 15:20	EPA 353.2		CAI
pH*	7.48			pH Units	1	11/22/24 16:45	EPA 150.1		HIC
pH Temperature, degrees C	16.7			pH Units	1	11/22/24 16:45	EPA 150.1		HIC
Sulfate*	319	5.00	2.81	mg/L	5	12/05/24 01:56	EPA 300.0		AWG
Total Dissolved Solids*	995	10.0		mg/L	1	11/27/24 16:24	EPA 160.1/SM 2540C		HIC
Total Organic Carbon*	2.93	0.500	0.290	mg/L	1	12/04/24 21:43	5310C		CAI

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.022	mg/L	1	12/04/24 16:32	EPA 200.7		AWG
Calcium*	71.3	0.100	0.018	mg/L	1	12/04/24 16:32	EPA 200.7		AWG
Hardness as CaCO ₃	386	0.662	0.170	mg/L	1	12/04/24 16:32	2340 B		AWG
Iron*	0.051	0.050	0.020	mg/L	1	12/04/24 16:32	EPA 200.7		AWG
Magnesium*	50.6	0.100	0.030	mg/L	1	12/04/24 16:32	EPA 200.7		AWG
Potassium*	5.73	1.00	0.075	mg/L	1	12/04/24 16:32	EPA 200.7		AWG
Silica (SiO ₂)	13.7	1.07	0.0997	mg/L	1	12/04/24 16:32	Calculation		AWG
Silicon	6.38	0.500	0.047	mg/L	1	12/04/24 16:32	EPA 200.7		AWG
Sodium*	217	1.00	0.230	mg/L	1	12/04/24 16:32	EPA 200.7		AWG

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0006	mg/L	1	11/26/24 14:43	EPA 200.8		AES
Cadmium*	<0.0005	0.0005	0.00006	mg/L	1	11/26/24 14:43	EPA 200.8		AES
Copper*	0.0086	0.0010	0.0003	mg/L	1	11/26/24 14:43	EPA 200.8		AES
Lead*	<0.0005	0.0005	0.0001	mg/L	1	11/26/24 14:43	EPA 200.8		AES
Manganese*	0.0578	0.0005	0.0002	mg/L	1	11/26/24 14:43	EPA 200.8		AES
Molybdenum*	<0.0005	0.0005	0.00005	mg/L	1	11/26/24 14:43	EPA 200.8		AES

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

MW-8-MI

2411235-02 (Ground Water)

Sampled Date: 11/21/24 14:15

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Metals by ICPMS

Selenium*	<0.0010	0.0010	0.0003	mg/L	1	11/26/24 14:43	EPA 200.8		AES
Uranium	<0.0005	0.0005	0.00004	mg/L	1	11/26/24 14:43	EPA 200.8		AES
Zinc*	<0.0020	0.0020	0.0006	mg/L	1	11/26/24 14:43	EPA 200.8		AES

Dissolved Mercury by CVAFS

Mercury	<100	100	19.6	ng/L	1	12/05/24 13:32	EPA 245.7		CAI
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Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

MW-8-PL

2411235-03 (Ground Water)

Sampled Date: 11/21/24 13:48

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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General Chemistry

Alkalinity, Total as CaCO ₃ *	405	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Bicarbonate as CaCO ₃ *	405	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Cation/Anion Balance	0.380	-100	-100	%	1	11/25/24 11:16	Calculation		VJW
Chloride*	3.37	1.00	0.497	mg/L	1	12/05/24 02:16	EPA 300.0		AWG
Fluoride*	0.233	0.100	0.0336	mg/L	1	12/05/24 02:16	EPA 300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.013	mg/L as N	1	12/05/24 15:21	EPA 353.2		CAI
pH*	7.55			pH Units	1	11/22/24 16:45	EPA 150.1		HIC
pH Temperature, degrees C	17.5			pH Units	1	11/22/24 16:45	EPA 150.1		HIC
Sulfate*	102	1.00	0.563	mg/L	1	12/05/24 02:16	EPA 300.0		AWG
Total Dissolved Solids*	490	10.0		mg/L	1	11/27/24 16:26	EPA 160.1/SM 2540C		HIC
Total Organic Carbon*	1.47	0.500	0.290	mg/L	1	12/04/24 22:02	5310C		CAI

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.022	mg/L	1	12/04/24 16:42	EPA 200.7		AWG
Calcium*	53.4	0.100	0.018	mg/L	1	12/04/24 16:42	EPA 200.7		AWG
Hardness as CaCO ₃	281	0.662	0.170	mg/L	1	12/04/24 16:42	2340 B		AWG
Iron*	0.051	0.050	0.020	mg/L	1	12/04/24 16:42	EPA 200.7		AWG
Magnesium*	35.9	0.100	0.030	mg/L	1	12/04/24 16:42	EPA 200.7		AWG
Potassium*	1.61	1.00	0.075	mg/L	1	12/04/24 16:42	EPA 200.7		AWG
Silica (SiO ₂)	20.1	1.07	0.0997	mg/L	1	12/04/24 16:42	Calculation		AWG
Silicon	9.41	0.500	0.047	mg/L	1	12/04/24 16:42	EPA 200.7		AWG
Sodium*	78.1	1.00	0.230	mg/L	1	12/04/24 16:42	EPA 200.7		AWG

Dissolved Metals by ICPMS

Arsenic*	0.0026	0.0010	0.0006	mg/L	1	11/26/24 14:45	EPA 200.8		AES
Cadmium*	<0.0005	0.0005	0.00006	mg/L	1	11/26/24 14:45	EPA 200.8		AES
Copper*	0.0052	0.0010	0.0003	mg/L	1	11/26/24 14:45	EPA 200.8		AES
Lead*	<0.0005	0.0005	0.0001	mg/L	1	11/26/24 14:45	EPA 200.8		AES
Manganese*	0.0880	0.0005	0.0002	mg/L	1	11/26/24 14:45	EPA 200.8		AES
Molybdenum*	<0.0005	0.0005	0.00005	mg/L	1	11/26/24 14:45	EPA 200.8		AES

Green Analytical Laboratories

Veronica J. Wells

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

MW-8-PL

2411235-03 (Ground Water)

Sampled Date: 11/21/24 13:48

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Metals by ICPMS

Selenium*	<0.0010	0.0010	0.0003	mg/L	1	11/26/24 14:45	EPA 200.8		AES
Uranium	<0.0005	0.0005	0.00004	mg/L	1	11/26/24 14:45	EPA 200.8		AES
Zinc*	0.0039	0.0020	0.0006	mg/L	1	11/26/24 14:45	EPA 200.8		AES

Dissolved Mercury by CVAFS

Mercury	<100	100	19.6	ng/L	1	12/05/24 13:35	EPA 245.7		CAI
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Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

MW-8-LM

2411235-04 (Ground Water)

Sampled Date: 11/21/24 13:20

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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General Chemistry

Alkalinity, Total as CaCO ₃ *	765	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Carbonate as CaCO ₃ *	100	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Alkalinity, Bicarbonate as CaCO ₃ *	665	10.0	8.00	mg/L	5	12/02/24 12:30	2320 B		HIC
Cation/Anion Balance	-4.72	-100	-100	%	1	11/25/24 11:16	Calculation		VJW
Chloride*	<5.00	5.00	2.49	mg/L	5	12/05/24 02:36	EPA 300.0		AWG
Fluoride*	3.92	0.500	0.168	mg/L	5	12/05/24 02:36	EPA 300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.013	mg/L as N	1	12/05/24 15:23	EPA 353.2		CAI
pH*	8.73			pH Units	1	11/22/24 16:45	EPA 150.1		HIC
pH Temperature, degrees C	17.5			pH Units	1	11/22/24 16:45	EPA 150.1		HIC
Sulfate*	<5.00	5.00	2.81	mg/L	5	12/05/24 02:36	EPA 300.0		AWG
Total Dissolved Solids*	750	10.0		mg/L	1	11/27/24 16:28	EPA 160.1/SM 2540C		HIC
Total Organic Carbon*	1.61	0.500	0.290	mg/L	1	12/04/24 22:23	5310C		CAI

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.022	mg/L	1	12/04/24 16:44	EPA 200.7		AWG
Calcium*	1.84	0.100	0.018	mg/L	1	12/04/24 16:44	EPA 200.7		AWG
Hardness as CaCO ₃	6.78	0.662	0.170	mg/L	1	12/04/24 16:44	2340 B		AWG
Iron*	<0.050	0.050	0.020	mg/L	1	12/04/24 16:44	EPA 200.7		AWG
Magnesium*	0.532	0.100	0.030	mg/L	1	12/04/24 16:44	EPA 200.7		AWG
Potassium*	2.07	1.00	0.075	mg/L	1	12/04/24 16:44	EPA 200.7		AWG
Silica (SiO ₂)	8.31	1.07	0.0997	mg/L	1	12/04/24 16:44	Calculation		AWG
Silicon	3.89	0.500	0.047	mg/L	1	12/04/24 16:44	EPA 200.7		AWG
Sodium*	310	1.00	0.230	mg/L	1	12/04/24 16:44	EPA 200.7		AWG

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0006	mg/L	1	11/26/24 14:47	EPA 200.8		AES
Cadmium*	<0.0005	0.0005	0.00006	mg/L	1	11/26/24 14:47	EPA 200.8		AES
Copper*	0.0143	0.0010	0.0003	mg/L	1	11/26/24 14:47	EPA 200.8		AES
Lead*	<0.0005	0.0005	0.0001	mg/L	1	11/26/24 14:47	EPA 200.8		AES
Manganese*	0.0027	0.0005	0.0002	mg/L	1	11/26/24 14:47	EPA 200.8		AES
Molybdenum*	<0.0005	0.0005	0.00005	mg/L	1	11/26/24 14:47	EPA 200.8		AES

Green Analytical Laboratories

Veronica J. Wells

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

MW-8-LM

2411235-04 (Ground Water)

Sampled Date: 11/21/24 13:20

Sampled By:

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Metals by ICPMS

Selenium*	<0.0010	0.0010	0.0003	mg/L	1	11/26/24 14:47	EPA 200.8		AES
Uranium	<0.0005	0.0005	0.00004	mg/L	1	11/26/24 14:47	EPA 200.8		AES
Zinc*	0.0107	0.0020	0.0006	mg/L	1	11/26/24 14:47	EPA 200.8		AES

Dissolved Mercury by CVAFS

Mercury	<100	100	19.6	ng/L	1	12/05/24 13:37	EPA 245.7		CAI
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Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B243487 - General Prep - Wet Chem										
Reference (B243487-SRM1)				Prepared & Analyzed: 11/22/24						
pH	7.01		pH Units	7.00		100	98.57-101.42			
Batch B243488 - General Prep - Wet Chem										
Blank (B243488-BLK1)				Prepared: 11/26/24 Analyzed: 11/27/24						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B243488-SRM1)				Prepared: 11/26/24 Analyzed: 11/27/24						
Total Dissolved Solids	375	10.0	mg/L	400		93.7	85-115			
Batch B243521 - Lachat										
Blank (B243521-BLK1)				Prepared: 12/02/24 Analyzed: 12/05/24						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B243521-BS1)				Prepared: 12/02/24 Analyzed: 12/05/24						
Nitrate/Nitrite as N	0.975	0.020	mg/L as N	1.00		97.5	90-110			
LCS Dup (B243521-BSD1)				Prepared: 12/02/24 Analyzed: 12/05/24						
Nitrate/Nitrite as N	0.975	0.020	mg/L as N	1.00		97.5	90-110	0.0205	20	
Batch B243525 - General Prep - Wet Chem										
Blank (B243525-BLK1)				Prepared & Analyzed: 12/02/24						
Alkalinity, Bicarbonate as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Total as CaCO ₃	ND	10.0	mg/L							
LCS (B243525-BS1)				Prepared & Analyzed: 12/02/24						
Alkalinity, Total as CaCO ₃	108	10.0	mg/L	100		108	85-115			
LCS Dup (B243525-BSD1)				Prepared & Analyzed: 12/02/24						
Alkalinity, Total as CaCO ₃	102	10.0	mg/L	100		102	85-115	5.71	20	
Reference (B243525-SRM1)				Prepared & Analyzed: 12/02/24						
Alkalinity, Total as CaCO ₃	105	10.0	mg/L	100		105	85-115			
Batch B243540 - General Prep - Wet Chem										
Blank (B243540-BLK1)				Prepared & Analyzed: 12/04/24						

Green Analytical Laboratories

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

General Chemistry - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243540 - General Prep - Wet Chem (Continued)

Blank (B243540-BLK1) (Continued)

Prepared & Analyzed: 12/04/24

Total Organic Carbon	ND	0.500	mg/L
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LCS (B243540-BS1)

Prepared & Analyzed: 12/04/24

Total Organic Carbon	10.0	0.500	mg/L	10.0	100	85-115
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LCS Dup (B243540-BSD1)

Prepared & Analyzed: 12/04/24

Total Organic Carbon	10.2	0.500	mg/L	10.0	102	85-115	2.17	20
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Batch B243550 - IC- Ion Chromatograph

Blank (B243550-BLK1)

Prepared & Analyzed: 12/04/24

Chloride	ND	1.00	mg/L
Fluoride	ND	0.100	mg/L
Sulfate	ND	1.00	mg/L

LCS (B243550-BS1)

Prepared & Analyzed: 12/04/24

Chloride	24.9	1.00	mg/L	25.0	99.4	90-110
Fluoride	2.58	0.100	mg/L	2.50	103	90-110
Sulfate	25.0	1.00	mg/L	25.0	100	90-110

LCS Dup (B243550-BSD1)

Prepared & Analyzed: 12/04/24

Chloride	24.8	1.00	mg/L	25.0	99.1	90-110	0.290	20
Fluoride	2.57	0.100	mg/L	2.50	103	90-110	0.272	20
Sulfate	24.9	1.00	mg/L	25.0	99.5	90-110	0.473	20

Green Analytical Laboratories

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243559 - Dissolved ICP

Blank (B243559-BLK1)

Prepared & Analyzed: 12/04/24

Aluminum	ND	0.050	mg/L
Calcium	ND	0.100	mg/L
Iron	ND	0.050	mg/L
Magnesium	ND	0.100	mg/L
Potassium	ND	1.00	mg/L
Silicon	ND	0.500	mg/L
Sodium	ND	1.00	mg/L

LCS (B243559-BS1)

Prepared & Analyzed: 12/04/24

Aluminum	3.91	0.050	mg/L	4.00	97.7	85-115
Calcium	3.86	0.100	mg/L	4.00	96.5	85-115
Iron	3.86	0.050	mg/L	4.00	96.5	85-115
Magnesium	19.6	0.100	mg/L	20.0	97.8	85-115
Potassium	7.96	1.00	mg/L	8.00	99.6	85-115
Silicon	3.92	0.500	mg/L	4.00	98.1	85-115
Sodium	3.26	1.00	mg/L	3.24	101	85-115

LCS Dup (B243559-BSD1)

Prepared & Analyzed: 12/04/24

Aluminum	3.82	0.050	mg/L	4.00	95.5	85-115	2.21	20
Calcium	3.83	0.100	mg/L	4.00	95.8	85-115	0.736	20
Iron	3.83	0.050	mg/L	4.00	95.7	85-115	0.800	20
Magnesium	19.4	0.100	mg/L	20.0	96.9	85-115	0.981	20
Potassium	7.89	1.00	mg/L	8.00	98.7	85-115	0.900	20
Silicon	3.87	0.500	mg/L	4.00	96.7	85-115	1.38	20
Sodium	3.17	1.00	mg/L	3.24	97.9	85-115	2.74	20

Green Analytical Laboratories

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243474 - Dissolved ICPMS

Blank (B243474-BLK1)

Prepared & Analyzed: 11/26/24

Arsenic	ND	0.0010	mg/L							
Cadmium	ND	0.0005	mg/L							
Copper	ND	0.0010	mg/L							
Lead	ND	0.0005	mg/L							
Manganese	ND	0.0005	mg/L							
Molybdenum	ND	0.0005	mg/L							
Selenium	ND	0.0010	mg/L							
Uranium	ND	0.0005	mg/L							
Zinc	ND	0.0020	mg/L							

LCS (B243474-BS1)

Prepared & Analyzed: 11/26/24

Arsenic	0.0493	0.0010	mg/L	0.0500	98.7	85-115				
Cadmium	0.0497	0.0005	mg/L	0.0500	99.4	85-115				
Copper	0.0498	0.0010	mg/L	0.0500	99.5	85-115				
Lead	0.0492	0.0005	mg/L	0.0500	98.4	85-115				
Manganese	0.0497	0.0005	mg/L	0.0500	99.4	85-115				
Molybdenum	0.0484	0.0005	mg/L	0.0500	96.7	85-115				
Selenium	0.246	0.0010	mg/L	0.250	98.5	85-115				
Uranium	0.0499	0.0005	mg/L	0.0500	99.9	85-115				
Zinc	0.0501	0.0020	mg/L	0.0500	100	85-115				

LCS Dup (B243474-BSD1)

Prepared & Analyzed: 11/26/24

Arsenic	0.0491	0.0010	mg/L	0.0500	98.1	85-115	0.568	20		
Cadmium	0.0495	0.0005	mg/L	0.0500	99.0	85-115	0.459	20		
Copper	0.0497	0.0010	mg/L	0.0500	99.4	85-115	0.160	20		
Lead	0.0489	0.0005	mg/L	0.0500	97.7	85-115	0.741	20		
Manganese	0.0498	0.0005	mg/L	0.0500	99.7	85-115	0.291	20		
Molybdenum	0.0484	0.0005	mg/L	0.0500	96.8	85-115	0.109	20		
Selenium	0.246	0.0010	mg/L	0.250	98.3	85-115	0.161	20		
Uranium	0.0490	0.0005	mg/L	0.0500	98.1	85-115	1.83	20		
Zinc	0.0503	0.0020	mg/L	0.0500	101	85-115	0.390	20		

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Veronica J. Wells

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B243569 - EPA 245.7

Blank (B243569-BLK1)

Prepared: 12/04/24 Analyzed: 12/05/24

Mercury	ND	100	ng/L
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LCS (B243569-BS1)

Prepared: 12/04/24 Analyzed: 12/05/24

Mercury	964	100	ng/L	1000	96.4	76-113
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LCS Dup (B243569-BSD1)

Prepared: 12/04/24 Analyzed: 12/05/24

Mercury	925	100	ng/L	1000	92.5	76-113	4.15	20
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Notes and Definitions

M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis *Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Veronica Wells, Project Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Michael Dickson

Reported:
12/06/24 09:03

Qualifier Summary

<u>LabNumber</u>	<u>Analysis</u>	<u>Analyte</u>	<u>Qualifier</u>	<u>TextBody</u>
2411235-01	Total Organic Carbon [TOC]	Total Organic Carbon	M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.

Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Veronica J. Wells'.

Veronica Wells, Project Manager

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Project Information

GCC Energy, LLC

6473 CR 120

Hesperus, CO 81326

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GCC Energy

11/22/2024

Project Name: GCC GW Baseline
 Project Number: [none]
 Client PM: Michael Dickson
 Comments:

Analysis	Comment
Alkalinity, Total	
Aluminum Dissolved by ICP	
Arsenic Dissolved by ICPMS	
CAB	
Cadmium Dissolved by ICPMS	
Chloride [IC]	
Copper Dissolved by ICPMS	
Fluoride [IC]	
Hardness [DISSOLVED]	
Iron Dissolved by ICP	
Lead Dissolved by ICPMS	
Manganese Dissolved by ICPMS	
Mercury Dissolved by CVAFS	
Molybdenum Dissolved by ICPMS	
Nitrate/Nitrite [LACHAT]	
pH	
Potassium Dissolved by ICP	
Selenium Dissolved by ICPMS	
Silica Dissolved by ICP	
Sodium Dissolved by ICP	
Sulfate [IC]	
Total Dissolved Solids [TDS]	
Total Organic Carbon [TOC]	
Uranium Dissolved by ICPMS	
Zinc Dissolved by ICPMS	
Hardness [DISSOLVED] subanalyses:	
Calcium Dissolved by ICP	
Magnesium Dissolved by ICP	
Silica Dissolved by ICP subanalyses:	
Silicon Dissolved by ICP	

All metals are field filtered. Send out preserved bottles



SAMPLE CONDITION RECEIPT FORM

 Date/Initials of person examining contents: 11.22.24
can

 Labeled by initials: _____
 (if different than above)
Client Name: GCC EnergyWork Order # 2411-235
 Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☒ Client ☐ Kangaroo ☐ Third Party ☐ Other

 Custody Seals on Box/Cooler Present: ☐ Yes ☒ No Seals Intact: ☐ Yes ☐ No GAL Cooler #: _____

 Thermometer Used: #2 Samples on ice, cooling process has begun: ☒ Yes ☐ No

 Type of Ice: ☐ Wet ☒ Blue ☐ None Cooler Temp: Observed Temp: 5.4 °C Correction Factor: 0 °C Final Temp: 5.4 °C

*Temp should be above freezing 6°C

Compliance: ☐ Yes ☐ No

Chain of Custody Filled Out:	☒ Yes ☐ No	1.
COC Signed when Relinquished and Received:	☒ Yes ☐ No	2.
Sampler Name and Signature on COC: *Required for compliance	☒ Yes ☐ No	3.
Samples arrived within hold time:	☒ Yes ☐ No	4.
Correct Containers Used & Intact:	☒ Yes ☐ No	5.
Short Hold Time Analysis (<72hr):	☒ Yes ☐ No	6. <u>PH</u>
Rush Turn Around Time Requested: *3 day TAT or less requires supervisor approval	☐ Yes ☒ No	7. Approved By:
Sufficient Volume:	☒ Yes ☐ No	8.
pH's acceptable upon receipt, where applicable: *Not including metals bottles	☒ Yes ☐ No ☐ N/A	9.
Dissolved Testing Needed:	☒ Yes ☐ No	10. <u>D&S</u>
Field Filtered: ☒ Yes ☐ No		
Sample Labels match COC: -Includes Date/Time/ID	☐ Yes ☐ No	11.
Matrix:	☒ WT ☐ SL ☐ OT	
Trip Blank Present:	☐ Yes ☐ No ☐ N/A	12.
Trip Blank Custody Seals Present:	☐ Yes ☐ No ☐ N/A	
VOA's meet headspace requirement (<6mm bubbles)	☐ Yes ☐ No ☐ N/A	
Non-Conformance(s):	☐ Yes ☒ No	13.

Client Notification/Resolution:

Person Contacted: _____

Date/Time: _____

Comments/Resolution: _____
