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January 25, 2024

State of Colorado
Division of Reclamation, Mining & Safety
1313 Sherman St., Room 215
Denver, CO 80203

Attn: Clayton Wein, Environmental Protection Specialist

Re: GCC Energy, LLC, King II Mine
CDRMS Permit # C-1981-035
Water Monitoring Analysis; King I & King II
4th Quarter 2023

Mr. Wein:

Please find enclosed a copy of quarterly water analysis reports for the 4th quarter of 2023 for the following water monitoring locations:

Wiltse Well
#1 Up-gradient Monitoring Well & Blind Duplicate MW-98
#2 Down-gradient Monitoring Well
Hay Gulch Irrigation Ditch, Down-gradient & Resample
Hay Gulch Irrigation Ditch, Up-gradient
MW-1-A
MW-3-MI, MW-3-A, MW-3-C
MW-4-MI & Blind Duplicate MW-99, MW-4-A, MW-4-C
MW-5-MI
MW-HGA-4
MW-6-LM
MW-7-EAA
MW-8-EAA, MW-8-MI, MW-8-LM, MW-8-PL
Seep 1
Seep 3

Also enclosed are summary sheets for the above water monitoring locations which include field collection data.

Please contact me at 505.238.8272 or svance@gcc.com if you have any questions or require any additional information.

Sincerely,

Sarah Vance
Environmental Manager
GCC Energy, LLC

GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Upgradient

Year		**2018**				**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		2	5	8	11	2	5	8	11	2	5	8	12	2	6	9	11	3	6	9	12	3	5	8	11
Sample Date		2/22	5/14	8/9	11/8	2/28	5/23	8/16	11/13	2/13	5/13	8/13	12/3	2/22	6/3	9/1	11/15	3/24	6/20	9/13	12/20	3/27	5/18	8/24	11/29
Lab Analysis (Y/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
Field Parameters:																									
Flow Rate	***cfs***	NM	0.60	0.70	0.70	0.25	3.63	1.17	NM	NM	0.92	0.13	1.02	0.06	0.16	NM	0.67	0.16	0.07	0.01	0.07	NM	0.74	0.89	0.64
Temperature	***deg C***	4.7	11.3	22.1	1.1	5.9	5.9	16.9	5.7	1.5	16.5	18.1	2.0	5.8	11.3	15.5	7.1	8.6	17.8	15.0	2.7	0.1	17.8	16.0	3.2
pH	***SU***	7.9	7.58	9.07	7.16	6.4	7.53	8.03	7.33	7.75	8.39	8.65	8.08	7.83	7.75	8.07	6.94	7.11	7.94	7.15	6.19	7.85	8.01	7.7	7.76
Specific Conductance	***µS/cm***	1041	304	307	307	752	306	275	682	902	314	528	434	1024	189	280	252	553	832	570	708	1508	442	764	1013
Oxygen Reduction Potential	***mV***	-164.1	111.4	-181.3	13.9	103.7	-24.0	24.4	-22.4	-4.5	81.7	118.9	120.3	51.6	86.6	58.3	109.2	3.2	97.8	-108.9	-148.2	13.3	-8.6	-27.5	-76.4
Dissolved Oxygen	***mg/L***	9.4	8.5	6.4	10.2	8.0	8.9	7.8	7.9	7.0	7.5	8.4	10.4	8.7	8.5	7.1	9.2	8.5	8.5	8.1	10.4	9.0	7.3	6.0	8.0
Lab Analytical Results:																									
Hardness as CaCO3	***mg/L***	489	101	153	149	393	136	125	372	405	150	287	213	588	92.6	131	120	280	383	273	336	697	293	342	434
pH (Lab)	***SU***	8.39	7.99	9.07	7.86	7.45	7.69	7.83	7.40	7.22	7.60	8.01	7.92	7.57	7.72	7.44	7.52	7.81	7.87	7.81	7.98	7.56	7.91	7.56	7.85
Total Dissolved Solids (Lab)	***mg/L***	700	140	215	175	535	205	225	635	587	255	340	160	685	210	185	140	380	520	355	410	955	380	480	600
Total Suspended Solids	***mg/L***	6.01	106	6.25	14.8	22.0	113	20.0	5.38	<4.0	140	19.5	13.2	55	133	51	13.2	13.4	5.07	45.4	<2.5	121	38.0	9.79	< 2.50
Calcium	***mg/L***	87.3	26.3	39.1	40.3	79.8	34.6	32.4	79.3	81.5	36.1	63.2	49.9	113	25.8	35.8	34.2	61.7	70.8	55.0	69.9	124	63.5	70.2	86.3
Magnesium	***mg/L***	65.9	8.61	13.5	11.9	47.0	12.1	10.8	42.2	49	14.5	31.3	21.5	74.3	6.87	10.1	8.35	30.5	50.1	33.1	39.2	93.9	32.6	40.5	53.0
Sodium	***mg/L***	34.6	3.31	5.33	5.00	19.1	7.24	5.81	25.4	30.9	7.67	10.9	8.39	34.3	2.71	3.97	3.53	13.8	19.3	12.4	15.1	36.8	18.1	20.6	31.6
Potassium	***mg/L***	3.52	1.18	1.24	<1.00	3.89	1.57	1.07	3.25	3.65	1.86	1.85	1.53	4.74	<1.00	3.28	<1.00	3.39	3.58	2.18	2.82	6.20	2.79	2.97	6.33
Alkalinity, Total	***mg/L***	244	67	111	120	260	390	103	233	315	102	220	137	340	68	98	87.0	162	330	209	231	365	179	247	300
Alkalinity, Bicarbonate	***mg/L***	244	67	107	120	260	390	103	233	295	102	220	131	340	68	98	87.0	162	330	209	231	365	179	247	300
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***	46.7	3.12	6.70	5.58	48.1	7.75	6.04	22.8	31.6	9.64	24.5	14.8	85.9	3.17	5.23	3.44	32.3	33.6	21.9	29.2	108	36.1	41.7	45.8
Fluoride	***mg/L***	0.285	0.224	0.272	0.224	0.252	0.208	0.214	<0.500	0.239	<0.500	0.226	0.226	0.235	0.188	0.227	0.179	0.178	0.260	0.238	0.227	0.266	0.185	0.235	0.189
Sulfate as SO4	***mg/L***	229	34	49.7	45.0	128	47.2	35.6	107	151	44.0	86.3	64.4	211	26.4	42.2	40.0	95.5	121	85.1	99.4	314	116	114	152
Total Organic Carbon (TOC)	***mg/L***	1.81	2.31	1.61	1.09	4.94	3.08	1.84	4.54	5.45	2.93	1.65	1.22	2.69	1.39	2.8	0.832	1.86	5.18	1.74	0.897	3.93	6.04	4.35	6.45
Oil & Grease	***mg/L***	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	< 5.00	< 5.00
Nitrate/Nitrite as N	***mg/L***	0.105	0.026	<0.020	<0.020	0.263	0.050	0.072	0.104	0.044	0.302	0.042	0.026	0.282	0.049	0.026	<0.02	0.118	0.165	<0.02	0.066	0.850	0.133	0.298	0.113
Sodium Adsorption Ratio (SAR)	***no unit***	0.68	0.14	0.18	0.16	0.42	0.26	0.22	0.55	0.65	0.26	0.29	0.25	0.62	0.12	0.15	0.14	0.36	0.43	0.33	0.37	0.61	0.46	0.48	0.66
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
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
Aluminum	***mg/L***	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.250	<0.050	< 0.050	< 0.100
Arsenic	***mg/L***	<0.0025	<0.0005	0.0009	<0.0005	0.0007	0.0006	0.0007	0.0005	0.0006	<0.0005	0.0007	<0.0005	0.0012	<0.0005	0.001	<0.0005	0.0005	0.0010	0.0007	0.0009	<0.0025	0.0006	0.0008	< 0.0010
Cadmium	***mg/L***	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	< 0.0005	< 0.0010
Copper	***mg/L***	0.0007	0.0011	0.0011	0.0013	0.0026	0.0013	0.0012	0.0005	0.0005	0.0010	0.0006	0.0005	0.0007	0.0009	0.0012	0.0006	0.0011	0.0011	0.0007	0.0069	0.0102	0.0036	0.0020	< 0.0040
Iron	***mg/L***	<0.0500	<0.0500	<0.0500	<0.0500	0.255	0.055	<0.0500	0.316	0.551	<0.0500	<0.0500	<0.0500	0.103	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.272	<0.0500	0.237	< 0.100
Lead	***mg/L***	<0.0025	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	< 0.0005	< 0.0010
Manganese	***mg/L***	0.0049	0.0093	0.0016	0.0043	0.127	0.0349	0.0096	0.113	0.368	0.0297	0.0087	0.0047	0.149	0.0042	0.0156	0.0074	0.0337	0.0761	0.0241	0.0398	0.432	0.0989	0.140	0.317
Mercury (total)	***mg/L***	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002								
Mercury (total low-level)	***ng/L***															<10.0	<10.0	<0.200	<100	<100	<100	<100	<100	<100	<100
Molybdenum	***mg/L***	<0.0025	0.001	0.0012	0.0009	0.0011	0.0009	0.0011	0.0007	0.0005	0.0009	0.0009	0.0009	0.0007	0.0009	0.0011	0.0008	0.0009	0.0014	0.0012	0.0012	<0.0025	0.0008	0.0013	< 0.0010
Selenium	***mg/L***	<0.0050	<0.0010	<0.0010	<0.0010	0.0017	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0018	<0.0010	<0.0010	<0.001	<0.0010	0.0012	<0.001	0.0011	<0.0050	<0.0010	< 0.0010	< 0.0020
Silica (Si02)	***mg/L***	11.0	8.4	8.64	8.31	11.3	8.55	9.17	13.4	13	7.57	7.36	9.86	13.4	7.18	9.33	8.95	9.73	13.9	10.6	11.3	12.3	12.0	11.9	14.0
Silicon	***mg/L***	5.14	3.93	4.04	3.88	5.29	3.99	4.29	6.25	6.06	3.54	3.44	4.61	6.26	3.36	4.36	4.18	4.55	6.49	4.96	5.30	5.77	5.61	5.59	6.53
Uranium	***mg/L***	0.0013	0.0001	0.0002	0.0003	0.0009	0.0003	0.0004	0.0007	<0.0005	<0.0005	0.0006	<0.0005	0.0013	<0.0005	<0.0005	<0.0005	0.0005	0.0008	0.0006	0.0006	<0.0025	<0.0005	0.0010	< 0.0010
Zinc	***mg/L***	<0.0100	<0.0020	0.0033	<0.0020	0.0044	<0.0020	<0.0020	0.0033	0.0087	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0050	<0.0100	0.0047	0.0022	< 0.0040

Notes & Definitions:

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

^ one-time analysis
Y/N yes or no
gpm gallons per minute
deg C degrees Celsius
SU standard pH units
µS/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 CaCO3.*

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

Hay Gulch Ditch Downgradient																									
Year		**2018**				**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		2	5	8	11	2	5	8	11	2	6	8	12	2	6	9	11	3	6	9	12	3	5	8	11
Sample Date		2/22	5/7	8/9	11/7	2/28	5/23	8/16	11/13	2/6	6/1	8/13	12/3	2/22	6/3	9/1	11/15	3/24	6/20	9/13	12/20	3/27	5/18	8/18	11/21
Lab Analysis (Y/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
Field Parameters:																									
Flow Rate	***cfs***	NM	NM	NM	0.50	0.25	0.30	1.05	NM	NM	1.50	0.13	NM	0.001	0.40	NM	0.67	0.06	0.04	0.01	0.07	0.10	1.34	0.20	0.08
Temperature	***deg C***	6.3	11.3	20.6	4.7	6.88	8.23	15.15	3.51	3.73	14.21	20.4	6.83	10.37	13.35	10.47	4.00	9.21	17.71	18.02	4.05	4.52	15.48	14.54	7.36
pH	***SU***	8.33	7.58	7.43	7.48	6.42	7.77	7.61	8.38	7.94	8.24	8.00	7.7	7.76	8.12	8.26	7.00	7.22	7.53	6.50	6.42	8.43	8.30	7.68	8.29
Specific Conductance	***µS/cm***	742	304	356	309	577	202	295	554	882	137	237	478	815	131	184	311	636	150	248	292	891	762	835	976
Oxygen Reduction Potential	***mV***	51.6	111.4	-10.0	-88.9	125.6	50.6	111.6	-108.1	124.2	104.8	103.0	127.8	-26.5	85.1	119.5	122.7	-85.2	136.1	39.9	-132.7	66.9	79.6	-148.0	-29.4
Dissolved Oxygen	***mg/L***	9.8	8.5	6.3	9.1	7.6	8.8	7.2	9.6	9.5	8.0	6.4	9.6	6.8	7.8	6.7	9.8	NM	7.2	7.0	9.7	10.2	6.8	7.3	9.0
Lab Analytical Results:																									
Hardness as CaCO3	***mg/L***	329	140	182	167	281	91.9	137	295	416	63.6	120	232	419	64.8	90.7	143	346	65.7	95.9	138	433	337	497	467
pH (Lab)	***SU***	8.17	8.05	8.09	7.95	7.84	7.68	7.73	7.73	7.80	7.49	7.59	7.85	7.83	7.74	7.58	7.39	8.01	7.86	7.68	7.97	7.95	8.09	8.28	8.07
Total Dissolved Solids (Lab)	***mg/L***	420	220	260	185	390	185	195	355	573	120	135	370	435	175	90	120	410	29.9	89.9	225	555	475	625	575
Total Suspended Solids	***mg/L***	49.5	<2.00	5.67	4.40	18.4	153.0	22.5	<4.00	4.20	17.5	28.6	10.5	28.0	8.4	4.8	5.44	18.3	29.2	3.67	8.00	17.8	62.0	16.0	3.38
Calcium	***mg/L***	75.4	37.5	49.0	44.7	61.6	26.0	34.5	67.2	85.6	20.3	34.2	55.6	98.2	21.2	29.8	39.3	82.1	21.4	30.2	39.0	101	75.8	114	110
Magnesium	***mg/L***	34.2	11.2	14.4	13.4	31	6.54	12.3	30.8	49.0	3.15	8.38	22.7	42.2	2.86	3.94	11.0	34.2	2.96	5.01	9.73	43.8	35.8	51.9	47.1
Sodium	***mg/L***	18.1	5.42	6.49	5.15	16.5	5.03	6.62	17.0	28.5	1.90	3.68	9.03	15.8	1.14	1.75	4.71	16.4	1.58	2.04	4.08	18.6	18.5	29.6	21.7
Potassium	***mg/L***	2.84	1.14	1.58	1.34	3.13	1.31	1.27	2.60	3.81	<1.00	1.36	1.89	3.75	<1.00	1.02	1.30	2.89	<1.00	<1.00	1.07	2.94	2.77	6.45	4.82
Alkalinity, Total	***mg/L***	265	112	170	140	150	340	140	194	297	48	110	158	315	52	72	116	282	46.0	73.0	103	303	218	293	325
Alkalinity, Bicarbonate	***mg/L***	259	104	170	140	150	340	140	188	283	48	110	154	315	52	72	116	282	46.0	73.0	103	293	218	265	325
Alkalinity, Carbonate	***mg/L***	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	14.0	<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	28.0	< 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***	23.1	7.54	7.47	5.69	40.2	16.9	7.65	14.8	30.7	1.87	4.42	17.1	59	1.16	1.21	5.07	15.0	1.23	1.69	6.57	39.6	39.4	50.5	42.7
Fluoride	***mg/L***	0.308	0.228	0.295	0.228	0.232	0.205	0.218	0.252	0.272	0.185	0.224	0.244	0.246	0.195	0.216	0.185	0.257	0.191	0.221	0.213	0.274	0.202	0.231	0.201
Sulfate as SO4	***mg/L***	86.5	40.2	46.8	45.0	91.4	18.5	42.7	83.3	143	14.2	32.4	70.2	90.1	17.3	25.7	46.3	74.7	18.8	26.4	42.2	138	127	168	138
Total Organic Carbon (TOC)	***mg/L***	1.56	1.28	1.33	1.76	2.90	2.37	2.10	3.26	4.53	1.39	1.47	1.55	2.31	1.18	1.48	1.12	1.42	1.10	1.13	1.01	<5.00	6.19	6.17	4.04
Oil & Grease	***mg/L***	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	< 5.00	< 5.00 ~
Nitrate/Nitrite as N	***mg/L***	<0.020	<0.020	<0.020	<0.020	0.17	0.146	0.090	<0.020	0.056	0.031	0.053	<0.020	0.148	0.021	<0.020	<0.020	0.041	<0.02	<0.02	<0.02	0.361	0.170	0.078	< 0.020
Sodium Adsorption Ratio (SAR)	***no unit***	0.43	0.2	0.20	0.17	0.43	0.22	0.24	0.41	0.61	0.10	0.14	0.26	0.34	0.06	0.08	0.17	0.38	0.08	0.90	0.15	0.39	0.44	0.58	0.44
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
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
Aluminum	***mg/L***	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	< 0.100	<0.050	< 0.100	< 0.050
Arsenic	***mg/L***	0.0005	0.0005	0.0008	<0.0005	0.0006	0.0006	0.0006	0.0005	0.0006	<0.0005	0.0007	<0.0005	0.0013	<0.0005	0.0007	<0.0005	<0.0005	0.0010	0.0007	0.0005	<0.001	0.0009	< 0.0010	< 0.0005
Cadmium	***mg/L***	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	< 0.0010	< 0.0005
Copper	***mg/L***	0.0005	0.0008	0.0008	0.0008	<0.0010	0.0021	0.0009	0.0007	0.0006	0.0014	0.0009	0.0005	0.0006	0.0011	0.001	0.0007	0.0009	0.0034	0.0010	0.0045	0.0070	0.0026	0.0029	0.0025
Iron	***mg/L***	<0.050	<0.050	<0.050	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	< 0.100	< 0.050
Lead	***mg/L***	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	< 0.0010	<0.0005	< 0.0010	< 0.0005
Manganese	***mg/L***	0.0962	0.0038	0.0445	0.0102	0.048	0.0125	0.0033	0.0102	0.0286	0.0012	0.0046	0.0116	0.133	0.0011	0.0021	0.0124	0.0082	0.0024	0.0175	0.0315	0.0552	0.0233	0.0156	0.0490
Mercury (total)	***mg/L***	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.00002								
Mercury (total low-level)	***ng/L***															<10.0	<10.0	<0.200	<100	<100	<100	<100	<100	<100	<100
Molybdenum	***mg/L***	0.0010	0.0011	0.0012	0.0010	0.001	0.0011	0.0012	0.0007	0.0006	0.0008	0.0012	0.0009	0.0009	0.0009	0.001	0.0009	0.0010	0.0010	0.0011	0.0009	<0.001	0.0009	0.0010	0.0008
Selenium	***mg/L***	0.0011	<0.0010	<0.0010	<0.001	0.0012	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	0.0015	<0.0010	<0.0010	<0.0010	0.0010	0.0011	<0.0010	<0.0010	< 0.0020	0.0010	< 0.0020	0.0013
Silica (Si02)	***mg/L***	10.7	8.41	8.77	8.66	8.46	5.70	8.86	11.8	12.3	6.38	7.14	10.6	12.9	6.68	8.84	9.38	12.0	6.98	7.96	8.75	11.3	11.8	13.4	13.8
Silicon	***mg/L***	5.01	3.93	4.10	4.05	3.95	2.67	4.14	5.50	5.75	2.98	3.34	4.94	6.01	3.12	4.13	4.38	5.59	3.26	3.72	4.09	5.26	5.50	6.25	6.47
Uranium	***mg/L***	0.0012	0.0004	0.0005	0.0003	0.0009	0.0002	0.0004	0.0007	0.0006	<0.0005	<0.0005	0.0005	0.0009	<0.0005	<0.0005	<0.0005	0.0008	<0.0005	<0.0005	<0.0005	0.0010	0.0007	0.0010	0.0009
Zinc	***mg/L***	<0.0020	0.0074	0.0048	0.0035	0.0022	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	0.0020	0.0022	<0.0020	0.0065	0.0042	<0.0020	< 0.0040	0.0032

Notes & Definitions:

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

~ re-sample on 12/19/23 following detection of 9.10 mg/L on 11/21/23

^ one-time analysis

Y/N yes or no
gpm gallons per minute
deg C degrees Celsius
SU standard pH units
µS/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 CaCO3.*

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

Well #1 Upgradient																									
Year		**2018**				**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		2	5	8	11	2	5	8	11	2	6	8	12	2	5	8	11	3	6	8	12	3	5	8	11
Sample Date		2/22	5/14	8/9	11/7	2/25	5/23	8/16	11/14	2/13	6/1	8/31	12/14	2/11	5/19	8/12	11/12	3/1	6/2	8/17	12/16	3/29	5/19	8/21	11/21
Lab Analysis (Y/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
Field Parameters:																									
Purge Flow Rate	***gpm***	7.2	7.2	10	7.2	10.0	8.3	11.0	6.5	8.0	10.0	8.0	8.0	8.0	8.0	8.0	4.0	8.0	5.0	9.0	6.0	7.1	10.2	8.8	6.1
Total Purged	***gal***	268	280	267	305	300	321	327	293	314	300	291	280	302	324	300	400	300	300	400	350	270	280	304	264
Depth to Water	***ft bgs***	5.40	5.77	5.65	6.50	5.98	4.50	5.68	6.08	5.55	4.17	6.25	3.72	6.48	5.82	7.25	6.55	6.47	6.80	6.80	6.30	4.92	4.42	6.15	6.40
Temperature	***deg C***	11.5	11.7	12.0	12.5	11.7	11.5	11.8	12.9	11.6	12.1	12.3	11.5	11.6	12.2	12.3	12.0	12.0	12.3	12.0	11.7	11.8	11.7	12.7	12.3
pH	***SU***	7.56	7.49	7.35	7.34	7.44	7.39	7.37	7.32	7.37	7.38	7.57	7.6	7.54	7.56	7.59	7.57	7.46	7.54	7.49	6.84	7.67	7.53	7.67	7.52
Specific Conductance	***µS/cm***	1278	1218	1289	1204	1235	1308	1253	1232	1277	1268	1067	1190	1142	1235	1212	1301	1235	1301	1235	1282	1313	1375	1201	1287
Oxygen Reduction Potential	***mV***	-185.3	-219.3	-251.6	-273.0	-232.0	-194.0	-192.0	-159.9	-193.0	-221.7	-187.2	-138.1	-153.4	-208.9	-202.5	-272.2	-306.3	-231.9	-351.0	-306.7	-162.0	-126.9	-157.9	-238.5
Lab Analytical Results:																									
Hardness as CaCO3	***mg/L***	274	275	369	287	252	350	303	263	290	319	255	247	298	313	236	286	271	311	281	317	334	561	301	303
pH (Lab)	***SU***	7.75	7.95	7.48	7.50	7.77	7.56	7.23	7.35	7.12	7.26	7.53	7.72	7.39	7.33	7.47	7.23	7.51	7.67	7.46	7.39	7.43	NA*	7.62	7.44
Total Dissolved Solids (Lab)	***mg/L***	745	770	835	730	735	860	780	705	700	775	710	690	755	785	750	745	725	790	735	745	765	835	740	755
Calcium	***mg/L***	53.4	53.8	71.5	56.7	49.1	67.8	58.2	51.5	56.5	61.6	49.6	47.4	58.1	60.9	45.4	54.8	53.3	60.3	52.1	60.2	64.2	107	58.1	58.1
Magnesium	***mg/L***	34.2	34.1	46.4	35.4	31.4	43.8	38.3	32.7	36.1	40.0	31.7	31.1	37.2	39.1	29.8	36.1	33.5	39.0	36.6	40.5	42.2	71.2	37.7	38.4
Sodium	***mg/L***	183	191	154	212	196	172	167	198	183	178	193	196	204	172	177	182	185	172	179	166	168	106	192	174
Potassium	***mg/L***	3.09	3.03	3.16	3.15	3.01	3.32	3.01	3.01	<5	3.05	3.05	3.02	<5.00	3.00	<5.00	<5.00	2.93	3.09	2.94	<5.00	<5.00	3.04	< 5.00	2.89
Alkalinity, Total	***mg/L***	620	595	630	640	610	615	615	590	600	576	520	605	570	620	600	770	640	650	570	615	640	590	602	610
Alkalinity, Bicarbonate	***mg/L***	620	595	630	640	610	615	615	590	600	576	520	587	570	620	600	770	640	590	570	615	640	590	602	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	18	<10.0	<10.0	<10.0	<10.0	<10.0	60.0	<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***	4.30	4.35	4.34	4.23	4.35	4.59	4.36	6.19	4.76	4.76	4.62	4.34	4.27	4.91	4.89	4.93	4.46	4.50	4.75	4.78	4.77	6.43	4.76	4.83
Fluoride	***mg/L***	0.354	0.335	0.390	0.359	0.355	0.349	0.335	<0.500	0.348	0.366	0.356	0.342	0.311	0.338	0.35	0.284	0.349	0.268	0.332	0.334	0.340	0.320	0.304	0.268
Sulfate as SO4	***mg/L***	106	97.2	147	89.9	91.4	131	112	92.1	104	110	79.6	87.9	102	110	98.5	122	96.4	114	103	114	122	174	90.8	102
Total Organic Carbon (TOC)	***mg/L***	3.37	3.5	3.94	3.35	3.31	3.70	3.53	3.14	3.29	3.37	3.32	3.17	3.26	3.27	3.23	3.23	3.04	3.46	3.45	1.82	3.36	4.62	3.17	2.99
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	NA	NA	NA	0.931	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	0.0590	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.150	<0.050	<0.250	<0.050	<0.250	<0.250	<0.050	<0.050	<0.050	<0.250	<0.250	<0.100	< 0.250	< 0.100
Arsenic	***mg/L***	0.0005	0.0005	0.0005	<0.0005	0.0005	0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	0.0008	<0.0025	0.0005	<0.0005	<0.0025	<0.0005	0.0006	<0.0005	<0.0025	<0.0025	0.0013	< 0.0010	< 0.0010
Cadmium	***mg/L***	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0002	<0.0001	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0025	<0.0025	<0.0010	< 0.0010	< 0.0010
Copper	***mg/L***	0.0035	0.003	0.0022	0.0025	0.0042	0.0015	0.0019	0.0012	0.0017	0.0017	0.0021	0.0007	<0.0025	0.0039	0.0038	0.0059	0.0053	0.0067	0.0069	0.0067	0.0031	0.0022	0.0016	0.0035
Iron	***mg/L***	1.44	1.39	1.98	1.52	1.26	1.74	1.58	1.41	1.49	1.53	1.24	1.7	1.66	1.69	1.19	1.43	1.25	1.65	1.32	2.07	1.70	4.63	1.56	1.81
Lead	***mg/L***	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0025	<0.0025	<0.0010	< 0.0010	< 0.0010
Manganese	***mg/L***	0.307	0.306	0.498	0.286	0.355	0.439	0.428	0.354	0.366	0.369	0.297	0.297	0.414	0.388	0.308	0.387	0.325	0.410	0.349	0.501	0.471	0.922	0.162	0.422
Mercury (dissolved)	***mg/L***	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<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
Molybdenum	***mg/L***	<0.0005	<0.0005	0.0006	<0.0005	0.0005	<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	0.0005	<0.0025	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	0.0005	<0.0025	<0.0025	0.0013	< 0.0010	< 0.0010
Selenium	***mg/L***	<0.0010	0.0171	0.0120	0.0022	0.0032	0.0024	<0.0010	<0.0020	<0.001	<0.0010	0.0095	0.0171	0.0902	0.0324	0.0331	0.0439	0.0021	0.0089	0.0131	<0.005	0.0406	<0.002	0.0022	0.0113
Silica (Si02)	***mg/L***	13.4	14.6	13.8	13.7	13.5	13.1	13.1	14.3	13.1	13.1	13.6	14.3	13	13.9	12.5	13.2	14.2	13.3	13.4	12.9	13.2	14.4	14.0	13.9
Silicon	***mg/L***	6.27	6.81	6.45	6.41	6.30	6.13	6.11	6.68	6.13	6.14	6.37	6.67	6.10	6.5	5.84	6.17	6.62	6.21	6.28	6.01	6.17	6.74	6.55	6.51
Uranium	***mg/L***	0.0002	0.0001	0.0002	0.0002	0.0002	0.0002	0.0002	<0.0002	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0025	<0.0025	<0.0010	< 0.0010	< 0.0010
Zinc	***mg/L***	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.0020	<0.0020	<0.0040	<0.0020	<0.0100	<0.0020	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	<0.0100	<0.0100	<0.0040	< 0.0040	< 0.0040

Notes & Definitions:

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

^ **one-time analysis**
***** **sample out of holding time**
Y/N **yes or no**
gpm **gallons per minute**
deg C **degrees Celsius**
SU **standard pH units**
µS/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 CaCO3.*

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

Well #2 Downgradient																										
Year		**2018**					**2019**				**2020**				**2021**				**2022**				**2023**			
Quarter		Q1	Q2	Q3	Q4	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month		2	5	8	8	11	2	5	8	11	2	6	8	12	2	5	8	11	2	5	8	12	3	5	8	11
Sample Date		2/22	5/7	8/8	8/9	11/7	2/27	5/22	8/16	11/13	2/6	6/1	8/26	12/14	2/11	5/19	8/12	11/10	2/28	5/9	8/9	12/13	3/28	5/19	8/18	11/21
Lab Analysis (Y/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***	0.1	1.00	0.10	1.00	0.50	0.25	0.50	0.25	0.50	0.25	0.25	0.25	0.13	0.50	0.25	0.25	0.25	0.25	0.25	0.25	0.04	0.33	0.60	0.34	0.19
Total Purged	***gal***	6	11	2	6.5	7.5	13.0	10.0	9.0	7.5	12.0	8.0	7.0	7.0	12.0	9.0	7.0	12.0	6.0	9.0	19.0	0.4	5.4	8.0	5.2	4.6
Depth to Water	***ft bgs***	6.68	7.4	6.65	6.59	5.17	5.85	0.92	3.60	5.20	5.60	4.00	6.29	7.48	8.10	8.70	8.32	8.75	9.14	9.70	10.25	9.65	8.55	8.65	8.95	10.07
Temperature	***deg C***	9.8	8.9	14.0	11.1	11.9	9.1	8.1	10.5	11.5	10.4	9.1	11.5	11.0	9.8	9.4	11.2	12.1	10.1	9.5	11.1	11.2	9.2	8.7	11.3	11.4
pH	***SU***	7.59	7.48	7.84	7.20	7.15	7.41	7.34	7.23	7.19	7.32	7.41	7.44	7.56	7.50	7.54	7.57	7.53	7.53	7.50	7.45	7.79	7.72	7.52	7.59	7.47
Specific Conductance	***µS/cm***	887	847	828	895	955	960	1091	1051	1083	1083	1134	1017	1099	964	939	1038	1073	1050	1019	1063	1201	1193	1253	1184	1202
Oxygen Reduction Potential	***mV***	-44.9	-34	-75.6	-127	-91.9	48.4	-57.8	-30.1	-5.5	25.3	-51.3	19.9	3.2	-4.8	-48.3	-26.0	-33.5	-94.0	-13.3	-207.6	-266.7	15.1	2.1	-18.4	-115.3
Lab Analytical Results:																										
Hardness as CaCO3	***mg/L***	412	415	422	415	465	488	537	513	603	540	575	560	569	624	529	503	521	500	527	551	557	503	641	646	582
pH (Lab)	***SU***	7.62	7.6	7.61	7.45	7.50	7.5	7.4	7.04	7.12	7.20	7.09	7.3	7.2	7.17	7.15	7.32	7.24	7.57	7.53	7.71	7.54	7.40	NA*	7.40	7.45
Total Dissolved Solids (Lab)	***mg/L***	515	545	545	575	550	575	695	655	690	695	730	665	685	660	655	685	655	605	645	680	695	770	775	855	745
Calcium	***mg/L***	70.1	70.2	72.7	70.4	78.7	81.3	87.1	83.3	99.4	87.2	92.2	90.1	90	97.9	81.2	76.8	80.1	76.0	79.1	84.6	84.1	76.4	101	98.9	88.3
Magnesium	***mg/L***	57.4	58.2	58.4	58.2	65.2	69.2	77.6	74.0	86.3	78.2	83.7	81.3	83.7	92.2	79.2	75.6	77.9	75.3	80.0	82.5	84.3	75.8	94.7	97.0	87.8
Sodium	***mg/L***	19.4	19.2	19.6	19.1	21.3	22.1	23.4	21.4	25.5	23.3	24.5	23.8	24.5	26.9	23.4	23.1	23.3	23.3	24.9	26.1	62.7	24.6	30.7	33.8	29.3
Potassium	***mg/L***	1.76	1.68	2.00	1.82	2.08	1.97	1.94	2.06	2.40	2.04	2.00	2.06	2.22	<5.00	1.94	<5.00	2.12	2.01	1.99	2.28	2.42	<2.00	2.51	2.80	2.26
Alkalinity, Total	***mg/L***	333	350	380	328	340	395	460	365	348	324	324	345	341	385	375	380	540	372	385	288	358	379	395	379	390
Alkalinity, Bicarbonate	***mg/L***	333	350	380	328	340	395	460	365	348	324	324	345	333	385	375	380	540	372	385	288	358	379	395	379	390
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	< 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	< 10.0
Chloride	***mg/L***	24.7	27.2	34.5	34.1	39.3	40.1	42.9	45.2	47.2	48.9	50.3	44.8	44.6	46	45.9	37	44.3	41.1	38.1	41.9	53.1	49.2	54.4	52.0	46.9
Fluoride	***mg/L***	0.244	0.224	0.259	0.281	0.263	0.244	0.246	0.221	<0.500	<0.500	<0.500	0.254	0.248	0.216	0.236	<0.500	0.210	0.251	0.217	0.229	0.268	0.262	0.210	0.220	< 0.200
Sulfate as SO4	***mg/L***	104	102	112	111	137	138	196	189	182	199	230	204	219	190	199	186	176	187	160	190	235	224	258	239	214
Total Organic Carbon (TOC)	***mg/L***	2.10	2.02	2.06	1.93	2.08	1.87	2.69	2.28	1.99	1.80	1.84	1.87	1.74	2.18	1.74	1.77	1.73	1.73	1.56	1.68	1.04	1.77	3.14	1.88	1.65
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	0.029	<0.020	<0.020	<0.020	< 0.020	< 0.020
Ammonia as N ^	***mg/L***	NA	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
Ortho-Phosphate as P ^	***mg/L***	NA	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
Aluminum	***mg/L***	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.250	<0.050	<0.250	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	< 0.100	< 0.100
Arsenic	***mg/L***	0.0010	0.0009	0.0012	0.0012	0.0010	0.0012	0.0011	0.0012	0.0012	0.0011	0.0009	<0.001	0.0013	<0.0025	0.0009	0.0012	<0.0025	0.0007	0.0005	0.0009	0.0015	<0.001	<0.001	< 0.0010	< 0.0010
Cadmium	***mg/L***	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0001	<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.001	< 0.0010	< 0.0010
Copper	***mg/L***	0.0056	0.0002	0.0006	0.0004	0.0003	0.001	0.0016	0.0003	0.0002	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	0.0006	0.0005	<0.0025	<0.0005	0.0006	0.0006	0.0032	0.0050	0.0017	0.0215	0.0023
Iron	***mg/L***	0.060	0.073	0.089	0.163	0.082	0.062	0.116	0.105	0.119	0.094	0.107	0.109	0.159	<0.250	<0.050	<0.250	0.076	<0.050	0.069	0.054	0.134	<0.100	<0.100	< 0.100	< 0.100
Lead	***mg/L***	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	< 0.0010	< 0.0010
Manganese	***mg/L***	0.304	0.306	0.349	0.375	0.320	0.423	0.504	0.404	0.427	0.454	0.444	0.412	0.441	0.422	0.401	0.389	0.438	0.403	0.384	0.397	0.477	0.431	0.293	0.416	0.464
Mercury (dissolved)	***mg/L***	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<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
Molybdenum	***mg/L***	0.0024	0.0022	0.0024	0.0029	0.0024	0.0029	0.0026	0.0019	0.0024	0.0021	0.0023	0.0024	0.0027	0.0026	0.0026	0.0028	0.0027	0.0029	0.0029	0.0032	0.0033	0.0030	0.0027	0.0032	0.0032
Selenium	***mg/L***	0.0012	<0.001	0.0012	0.0015	0.0013	0.0021	0.001	0.0011	0.0011	<0.010	0.0012	<0.002	0.0012	0.0069	0.0012	0.0012	<0.010	0.0013	<0.001	0.0013	<0.002	<0.002	<0.002	< 0.0020	< 0.0020
Silica (Si02)	***mg/L***	11.1	11.5	11.4	11.5	11.0	11.2	10.5	11.6	12.8	11.2	10.6	11.5	12.7	11.2	10.9	11.3	12.2	11.1	11.3	12.3	11.7	9.61	11.4	12.5	12.2
Silicon	***mg/L***	5.19	5.39	5.34	5.38	5.15	5.26	4.93	5.44	5.99	5.22	4.98	5.39	5.94	5.24	5.09	5.3	5.72	5.17	5.29	5.76	5.46	4.49	5.35	5.85	5.70
Uranium	***mg/L***	0.0013	0.0013	0.0013	0.0015	0.0014	0.0019	0.0016	0.0012	0.0015	0.0016	0.0016	0.0013	0.0017	<0.0025	0.0015	0.0015	<0.0025	0.0017	0.0016	0.0015	0.0017	0.0017	0.0022	0.0020	0.0019
Zinc	***mg/L***	0.0053	0.0022	0.0028	<0.0020	<0.0020	0.0025	<0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.0020	<0.0100	<0.0020	<0.0020	<0.0100	<0.0020	<0.0020	<0.002	<0.0040	<0.0040	<0.0040	0.0198	< 0.0040

Notes & Definitions:

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

^	**one-time analysis**
*	**sample out of holding time**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*
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

Wiltse Well																									
Year		**2018**				**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		2	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	3	6	8	11	3	5	8	11
Sample Date		2/22	5/16	8/9	11/8	2/28	5/23	8/19	11/11	2/17	5/13	8/12	12/15	2/24	5/21	8/11	11/3	3/1	6/1	8/10	11/26	3/28	5/19	8/18	11/29
Lab Analysis (Y/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
Field Parameters:																									
Purge Flow Rate	***gpm***	11.9	12.0	18.5	12.3	28.0	38.0	18.0	17.0	35.0	24.4	16.0	18.0	15.0	12.5	8.5	24.0	18.0	25.0	25.0	16.7	34.8	38.5	46.9	14.3
Total Purged	***gal***	2700	2890	2783	2747	3017	3200	3010	3058	3825	3495	3200	3030	2920	3000	1800	2800	2900	2950	3000	3000	4000	4000	3100	2612
Depth to Water	***ft bgs***	3.35	3.93	4.13	3.78	2.40	0.05	2.47	2.68	0.43	1.60	3.18	5.65	3.64	3.70	4.55	4.10	4.70	3.70	2.82	1.60	0.30	0.20	3.35	3.10
Temperature	***deg C***	8.0	10.2	11.7	10.4	8.0	9.3	10.7	9.9	6.7	9.8	11.7	8.7	8.9	9.9	11.3	10.8	9.5	10.8	12.4	9.7	7.2	9.0	11.3	11.9
pH	***SU***	7.26	7.13	7.04	7.07	7.17	7.08	7.09	7.09	7.01	7.12	7.22	7.26	7.25	7.23	7.33	7.23	7.17	7.21	7.14	7.07	7.46	7.26	7.22	7.12
Specific Conductance	***µS/cm***	2232	2144	2072	2167	2170	2151	1964	1970	2171	2017	1450	1984	1739	1789	2012	2038	1965	2039	2285	2268	2518	2449	2332	2571
Oxygen Reduction Potential	***mV***	14.3	29.9	-52.7	-18.8	22.7	-10.6	-23.7	51.9	49.33	71.9	72.2	73.7	6.9	31.2	41.5	50.5	-26.1	32.4	-76.3	41.4	34.4	39.9	5.5	45.5
Lab Analytical Results:																									
Hardness as CaCO3	***mg/L***	1090	1160	1130	1180	1150	1080	1080	1060	982	1060	1070	1130	1090	1070	1080	1080	1070	1070	1300	1200	1330	1340	1380	1320
pH (Lab)	***SU***	7.70	8.35	7.22	7.42	7.38	7.35	7.11	7.09	7.12	7.09	7.29	6.86	7.27	6.98	7.25	7.52	7.25	7.15	7.39	7.42	7.17	NA*	7.03	7.45
Total Dissolved Solids (Lab)	***mg/L***	1740	1740	1750	1720	1710	1670	1520	1480	1600	1560	1580	1540	1550	1500	1580	1640	1520	1580	1850	1740	2120	1980	1920	2050
Calcium	***mg/L***	211	216	221	230	226	214	214	208	191	206	206	215	208	199	206	209	208	206	255	232	261	269	273	251
Magnesium	***mg/L***	136	150	139	147	143	132	132	132	123	132	136	144	138	140	136	136	133	135	160	151	164	162	170	168
Sodium	***mg/L***	80.4	82.3	79.1	81.2	83.2	89.4	72.4	67.3	68.1	69.1	64	67.5	65.1	61.1	61.6	63.6	61.0	60.1	77.8	71.6	99.0	94.2	82.4	78.9
Potassium	***mg/L***	4.73	4.98	5.01	5.00	5.01	4.77	4.92	4.85	4.33	<5.00	4.48	4.54	<5.00	4.35	<5.00	4.41	4.42	4.41	4.92	4.20	5.43	5.12	5.74	5.31
Alkalinity, Total	***mg/L***	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520	505	485	530	468	485	435	460	465
Alkalinity, Bicarbonate	***mg/L***	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520	505	485	530	468	485	435	460	465
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***	66.7	60	57.2	57.5	67.2	67.8	49.9	48.2	57.7	51.8	58.1	57.9	54.8	52.3	49	52.4	49.8	45.7	57.5	52.2	79.0	73.0	59.0	62.2
Fluoride	***mg/L***	<0.500	<0.500	<0.500	0.298	0.324	0.306	<0.500	<0.500	<0.500	<0.500	0.304	0.292	0.276	0.28	<0.500	0.280	0.286	0.240	0.288	0.288	<0.500	<0.500	< 0.500	< 0.500
Sulfate as SO4	***mg/L***	832	714	733	741	801	709	627	627	711	633	704	728	683	661	679	697	688	702	818	873	1070	1060	960	1020
Total Organic Carbon (TOC)	***mg/L***	3.37	3.5	3.51	3.63	3.82	4.87	4.27	3.30	4.22	3.80	3.69	3.43	3.29	3.33	3.48	3.37	3.21	3.19	3.72	1.95	5.38	5.82	6.11	3.96
Nitrate/Nitrite as N	***mg/L***	2.26	2.48	2.26	1.99	1.95	0.651	0.896	1.31	1.05	0.865	1.25	1.48	1.82	1.49	2.06	1.87	1.69	1.53	1.16	1.01	0.469	0.619	2.32	2.85
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
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
Aluminum	***mg/L***	<0.100	<0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.250	<0.100	<0.050	<0.250	<0.050	<0.250	<0.100	<0.050	<0.100	<0.100	<0.100	<0.250	<0.250	< 0.250	< 0.250
Arsenic	***mg/L***	0.0009	0.0006	<0.0025	<0.001	<0.0010	0.0006	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	0.0005	<0.0025	<0.0025	<0.0025	<0.0010	<0.0005	0.0007	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0025
Cadmium	***mg/L***	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0001	<0.0005	<0.0025	<0.0025	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0025
Copper	***mg/L***	0.0020	0.0019	0.0018	0.0030	0.002	0.0021	0.0021	0.0012	0.0020	<0.0025	0.0013	0.0006	0.0028	<0.0025	<0.0025	0.0033	0.0031	0.0049	0.0038	0.0060	0.0119	0.0043	0.0035	< 0.0100
Iron	***mg/L***	0.132	0.151	0.125	0.121	0.151	0.379	0.287	0.209	0.285	<0.250	<0.100	0.216	<0.250	0.304	<0.250	0.154	0.129	0.212	0.161	0.178	0.255	0.252	< 0.250	< 0.250
Lead	***mg/L***	<0.0005	<0.0005	<0.0005	<0.001	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	<0.0005	<0.0025	<0.0025	<0.0025	<0.0010	<0.0005	<0.0005	<0.001	<0.0025	<0.0025	<0.0025	< 0.0025	< 0.0025
Manganese	***mg/L***	0.845	0.997	1.37	1.08	0.937	0.357	0.902	0.892	0.419	0.816	1.03	0.943	1.21	0.98	1.4	1.34	1.26	1.35	0.974	0.982	0.507	0.842	1.64	1.33
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							
Mercury (dissolved low-level)	***ng/L***																		<5.00	<100	<100	<100	<100	< 100	< 100
Molybdenum	***mg/L***	0.0020	0.002	0.002	0.0019	0.0017	0.0014	0.0020	0.0017	0.0013	<0.0025	0.0018	0.0017	<0.0025	<0.0025	<0.0025	0.0017	0.0017	0.0018	0.0019	0.0017	<0.0025	<0.0025	< 0.0025	< 0.0025
Selenium	***mg/L***	0.0027	0.0025	0.0025	<0.002	0.0025	0.0016	<0.0020	<0.0020	<0.0020	<0.0050	<0.0020	0.0022	<0.0050	<0.0050	<0.0050	<0.0020	0.0015	0.0019	0.0020	0.0029	<0.0050	<0.0050	< 0.0050	< 0.0050
Silica (Si02)	***mg/L***	14.1	15.9	16.2	15.9	14.1	13.2	15.4	14.9	12.2	12.9	13.8	15.7	14.6	14.8	15.4	16.0	15.2	14.5	15.9	14.3	12.7	14.7	15.8	14.7
Silicon	***mg/L***	6.58	7.42	7.58	7.44	6.6	6.19	7.20	6.96	5.72	6.05	6.43	7.33	6.82	6.91	7.19	7.50	7.13	6.76	7.43	6.69	5.91	6.85	7.37	6.89
Uranium	***mg/L***	0.0025	0.0024	0.0024	0.0032	0.0036	0.0044	0.0029	0.0023	0.0039	0.0032	0.0024	0.0032	<0.0025	<0.0025	<0.0025	0.0025	0.0022	0.0025	0.0034	0.0035	0.0048	0.0036	0.0026	0.0030
Zinc	***mg/L***	0.0216	0.0225	0.0214	0.0172	0.0175	0.0128	0.0138	0.0108	0.0122	0.0132	0.0118	0.0098	0.0130	0.0116	0.0311	0.0276	0.0162	0.0180	0.0157	0.0157	0.0156	0.0152	0.0255	0.0164

Notes & Definitions:

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

^	**one-time analysis**
*	**sample out of holding time**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*
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-HGA-4																										
Year		**2018**					**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		1	2	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	8	12	3	5	8	11
Sample Date		1/3	2/22	5/15	8/9	11/8	2/28	5/23	8/16	11/13	2/13	5/13	8/26	12/14	2/22	5/19	8/12	11/12	2/28	5/9	8/9	12/16	3/28	5/18	8/18	11/29
Lab Analysis (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
Field Parameters:																										
Purge Flow Rate	***gpm***	NM	0.1	1.5	2.00	1.00	1.12	1.00	1.00	0.25	1.00	0.25	0.25	0.13	0.25	0.13	0.25	0.25	0.25	0.25	0.25	0.50	0.08	0.23	0.10	0.05
Total Purged	***gal***	19	21	21	19	21	24	22	21	21	22	21	20	21	21	21	20	22	21	21	22	0.5	0.4	0.5	0.25	0.2
Depth to Water	***ft bgs***	1.37	0.55	2.60	3.98	1.90	0.49	0.42	1.95	1.15	0.38	2.36	3.80	1.75	0.90	2.91	3.95	2.33	0.95	2.02	1.61	0.92	0.47	1.03	4.05	0.85
Temperature	***deg C***	8.8	7.8	8.1	8.7	8.8	7.6	7.7	8.5	8.8	7.9	7.4	9.2	8.6	7.8	8.2	8.9	9.2	8.3	8.1	9.2	9.1	8.2	10.0	11.5	8.3
pH	***SU***	7.33	7.30	7.18	7.27	7.05	7.15	7.18	7.16	7.09	7.12	7.23	7.28	7.31	7.29	7.34	7.37	7.31	7.25	7.28	7.19	6.93	7.62	7.45	7.53	7.49
Specific Conductance	***µS/cm***	1141	1154	1098	1057	1167	1183	1102	1083	1127	1122	1093	1022	1158	975	1093	1108	1160	1197	1102	1198	970	1003	955	908	993
Oxygen Reduction Potential	***mV***	-96.6	-157.3	-130.9	-230.8	-190.9	-128.3	-140.7	-130.9	-104.9	-107.8	-86.7	-61.1	-64.7	-67.9	-116.8	-104.9	-105.8	-185.5	-113.0	-273.0	-198.3	-129.2	-125.2	-165.3	-212.7
Lab Analytical Results:																										
Hardness as CaCO3	***mg/L***		561	555	524	625	613	563	544	624	563	528	571	612	630	582	515	627	598	574	653	328	423	448	467	424
pH (Lab)	***SU***		7.58	8.15	7.33	7.12	7.2	8.17	6.95	6.88	6.78	6.89	7.07	6.95	7.38	6.89	7.05	7.03	7.22	7.26	7.20	7.63	7.08	7.37	7.33	7.41
Total Dissolved Solids (Lab)	***mg/L***		740	730	695	770	795	695	695	715	705	685	700	665	685	680	735	790	790	785	745	400	555	545	525	555
Calcium	***mg/L***		110	108	102	124	122	110	106	123	112	101	111	122	126	114	98.7	125	119	110	130	65.8	78.5	84.9	88.1	79.3
Magnesium	***mg/L***		69.3	69	65.4	76.5	74.7	70.3	67.9	76.8	68.9	67.0	71.7	74.9	76.8	72	65.2	76.6	72.9	72.5	79.9	39.7	55.1	57.2	59.9	54.9
Sodium	***mg/L***		26.5	30.4	29.9	27.6	27	28.6	28.3	31.9	27.9	30.3	30.5	26.8	28.4	27.4	26.4	23.1	23.9	28.1	27.1	14.9	36.9	39.4	41.5	38.0
Potassium	***mg/L***		2.17	2.22	2.33	2.13	2.16	2.00	2.10	2.38	2.05	2.06	2.08	2.11	2.24	2.03	<5.00	<5.00	1.82	2.02	2.13	3.07	2.16	2.40	2.56	2.21
Alkalinity, Total	***mg/L***		460	425	410	460	455	445	455	432	435	416	485	457	475	465	470	580	470	435	500	245	460	420	361	370
Alkalinity, Bicarbonate	***mg/L***		460	425	410	460	455	445	455	432	435	416	485	457	475	465	470	580	470	435	500	245	460	420	361	370
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***		8.43	7.57	6.47	9.40	10.5	8.06	8.44	9.46	8.39	7.64	8.78	10.1	9.65	9.41	11.1	13.9	12.0	10.2	14.6	28.7	3.40	3.41	3.62	3.56
Fluoride	***mg/L***		0.496	0.459	0.482	0.487	0.484	0.456	0.443	0.520	0.447	0.449	0.431	0.473	0.424	0.434	<0.500	0.420	0.472	0.413	0.450	0.231	0.397	0.357	0.374	0.331
Sulfate as SO4	***mg/L***		222	190	169	201	221	186	212	190	193	181	179	187	191	184	194	199	216	183	215	99.5	150	161	158	143
Total Organic Carbon (TOC)	***mg/L***		4.56	4.57	4.30	4.72	4.82	4.45	4.58	4.35	4.8	4.30	4.56	4.67	4.31	4.36	4.55	4.84	5.47	4.21	4.64	0.964	4.32	6.87	4.55	3.84
Nitrate/Nitrite as N	***mg/L***		<0.020	<0.020	<0.020	<0.020	0.173	<0.020	<0.020	<0.020	<0.020	<0.100	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.073	<0.020	<5.00	< 0.100	< 0.020
Ammonia as N ^	***mg/L***		NA	NA	NA	NA	NA	NA	NA	0.528	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
Aluminum	***mg/L***		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.250	<0.250	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	< 0.100	< 0.100
Arsenic	***mg/L***		0.0037	0.0034	0.0036	0.0032	0.0031	0.0029	0.0028	0.0033	0.0022	0.0025	0.0026	0.0038	0.0036	0.0033	0.0034	0.0027	0.0036	0.0031	0.0034	0.0005	0.0041	0.0040	0.0040	0.0039
Cadmium	***mg/L***		<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	< 0.0010	< 0.0010
Copper	***mg/L***		0.0006	0.0008	0.0004	0.0008	<0.0010	0.0003	0.0004	0.0002	0.0005	<0.0010	<0.0010	<0.0005	0.0006	0.0007	0.0009	<0.0025	<0.0005	0.0010	0.0005	0.0068	<0.0010	0.0027	< 0.0010	< 0.0040
Iron	***mg/L***		7.60	7.92	8.55	8.44	8.35	7.98	8.38	9.76	8.59	8.22	8.95	9.31	9.6	9.29	8.52	8.44	8.25	9.41	9.73	<0.05	9.76	10.5	9.39	9.53
Lead	***mg/L***		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	< 0.0010	< 0.0010
Manganese	***mg/L***		1.99	1.81	1.58	2.13	2.56	2.12	1.84	1.78	1.77	1.49	1.66	2.36	2.54	2.51	1.79	2.86	3.03	2.29	3.00	0.0622	0.479	0.441	0.422	0.454
Mercury (dissolved)	***mg/L***		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<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
Molybdenum	***mg/L***		0.0030	0.0031	0.0038	0.0029	0.0026	0.0027	0.0029	0.0031	0.0025	0.0030	0.0032	0.0029	0.0027	0.003	0.0033	0.0024	0.0026	0.0030	0.0030	0.0011	0.0054	0.0055	0.0057	0.0055
Selenium	***mg/L***		<0.0010	0.002	0.0016	<0.001	0.001	<0.0010	<0.0010	<0.0010	<0.001	<0.0020	<0.0020	<0.001	<0.0010	0.001	0.0057	0.0017	0.0011	<0.0010	0.0010	0.0011	<0.0020	<0.0010	< 0.0020	< 0.0020
Silica (Si02)	***mg/L***		15.8	16.4	15.7	17.3	15.9	14.9	14.9	16.5	15.2	13.9	15.4	18.3	16.9	16.3	14.3	17.7	16.7	16.0	17.8	11.7	12.6	14.1	14.0	13.0
Silicon	***mg/L***		7.37	7.67	7.34	8.10	7.46	6.96	6.96	7.69	7.09	6.48	7.21	8.56	7.88	7.61	6.68	8.29	7.81	7.50	8.34	5.48	5.89	6.59	6.57	6.06
Uranium	***mg/L***		0.0004	0.0004	0.0003	0.0005	0.0005	0.0004	0.0004	0.0003	<0.0005	<0.0010	<0.0010	0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	0.0006	<0.0010	<0.0005	< 0.0010	< 0.0010
Zinc	***mg/L***		<0.002	<0.002	<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.0040	<0.0040	<0.0020	<0.0020	<0.0020	<0.0020	<0.0100	<0.0020	<0.0020	<0.0020	0.0056	<0.0040	<0.0020	< 0.0040	< 0.0040

Notes & Definitions:

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

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-1-A																															
Year		**2018**									**2019**				**2020**				**2021**				**2022**				**2023**			
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
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
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	6/14	9/12	12/4	3/18	6/14	8/16	11/14
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
Field Parameters:																															
Purge Flow Rate	***gpm***	NM	0.1	NM	0.1	0.1	***	0.12	0.10	0.09	0.12	0.12	0.06	0.25	0.25	0.25	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.15	0.25	0.08	0.10	0.10	0.18
Total Purged	***gal***	1.5	2	1.5	1	1.3		1.5	1.5	1.6	1.0	1.5	1.1	1.5	1.0	1.0	1.0	1.3	1.0	2.0	1.0	1.3	1.0	1.0	1.0	1.0	0.8	0.8	0.8	0.8
Depth to Water	***ft bgs***	216.21	216.47	216.47	216.54	216.54		216.63	216.63	216.65	216.55	216.43	216.33	216.13	216.05	215.85	215.56	215.80	215.60	215.53	215.71	215.65	215.55	216.15	215.65	215.70	215.60	215.20	215.35	215.30
Temperature	***deg C***	9.5	9.0	8.7	9.6	9.2		9.9	10.0	8.9	7.5	10.3	9.6	9.7	8.1	9.1	9.6	9.4	8.4	9.6	10.1	9.2	9.5	10.2	10.5	9.0	8.6	10.8	11.0	9.0
pH	***SU***	7.19	7.37	7.28	6.8	6.97		6.99	7.05	7.01	7.13	6.96	7.05	7.00	7.13	7.18	7.22	7.24	7.19	7.30	7.35	7.17	7.22	7.31	7.29	6.82	7.34	7.49	7.37	7.54
Specific Conductance	***µS/cm***	1700	1723	1735	1647	1761		1734	1815	1781	1776	1681	1757	1737	1797	1855	1664	1670	1550	1647	1691	1792	1707	1717	1770	1733	1780	1676	1745	1738
Oxygen Reduction Potential	***mV***	-44.6	-52.8	-37.5	142.4	0.4		-26.4	-33.2	101.4	-11.8	25.4	-18.7	3.6	12.7	4.2	-20.1	111.4	23.8	-13.4	-6.5	38.2	-110.5	-51.9	-159.7	-29.9	4.8	93.8	4.0	-32.1
Lab Analytical Results:																															
Hardness as CaCO3	***mg/L***		159			156			160	174	159	153	148	150	159	165	161	168	168	150	158	157	152	149	146	172	174	158	150	166
pH (Lab)	***SU***		7.22			7.45			7.17	7.27	7.13	7.03	7.14	6.92	7.19	6.91	7.23	7.17	7.22	7.13	7.1	7.05	7.30	7.15	7.36	7.37	7.01	7.20	7.38	7.39
Total Dissolved Solids (Lab)	***mg/L***		1100			1150			1040	1130	1160	1150	1150	1140	1190	1150	1150	1170	1250	1150	1190	1150	1140	1140	1150	1050	1150	1180	1200	1110
Calcium	***mg/L***		30.5			29.7			30.9	34.0	31.2	29.8	27.9	29.0	30.9	31.6	30.6	32.8	32.1	28.3	29.9	30.0	28.5	28.0	27.4	32.6	33.2	29.9	27.7	31.2
Magnesium	***mg/L***		20.1			19.9			20.1	21.5	19.7	19.1	18.9	18.8	19.9	20.8	20.6	20.9	21.4	19.2	20.3	20.0	19.7	19.2	18.7	21.9	22.0	20.2	19.6	21.3
Sodium	***mg/L***		348			327			333	358	357	319	348	333	337	349	348	353	357	314	333	340	321	319	318	361	351	345	333	324
Potassium	***mg/L***		<5.00			2.12			2.23	2.47	2.34	2.18	2.29	2.12	2.13	<5.00	2.29	<3.00	<5.00	2.18	<5.00	2.34	2.23	2.01	2.12	2.11	<5.00	2.15	< 5.00	< 2.00
Alkalinity, Total	***mg/L***		415			353			385	395	375	355	368	420	360	340	325	366	400	400	370	440	405	425	410	361	372	391	368	375
Alkalinity, Bicarbonate	***mg/L***		415			353			385	395	375	355	368	420	360	340	325	366	400	400	370	440	405	425	410	361	372	391	368	375
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***		2.19			<5.00			2.12	2.20	2.74	2.33	2.72	2.66	2.74	2.71	2.74	2.88	2.73	2.34	2.78	<5.00	2.80	2.46	2.59	2.40	2.49	2.71	2.55	2.50
Fluoride	***mg/L***		0.240			<0.5			0.260	0.240	0.266	0.242	0.252	0.246	0.234	0.228	0.24	0.264	0.212	0.223	0.24	<0.5	<0.200	0.250	0.254	0.246	0.262	0.198	0.224	< 0.200
Sulfate as SO4	***mg/L***		518			522			515	511	508	494	537	495	506	532	510	508	553	531	507	458	503	516	532	517	562	607	587	510
Total Organic Carbon (TOC)	***mg/L***		1.51			1.54			1.60	1.75	1.61	1.67	1.59	1.50	1.55	1.55	1.49	1.57	1.58	1.49	1.57	1.51	1.56	1.41	1.39	1.41	1.63	1.76	1.55	1.55
Nitrate/Nitrite as N	***mg/L***		<0.020			<0.020			<0.020	0.028	<0.020	<0.020	<0.020	0.020	<0.020	0.046	<0.020	<0.020	<0.020	<0.020	0.036	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	< 0.020	< 0.020
Ammonia as N ^	***mg/L***		NA			NA			NA	NA	NA	NA	NA	0.387	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
Aluminum	***mg/L***		<0.250			<0.050			<0.050	<0.100	<0.100	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.050	<0.250	<0.050	<0.250	<0.100	<0.050	<0.050	<0.100	<0.100	<0.250	<0.250	< 0.250	< 0.100
Arsenic	***mg/L***		<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0005	<0.0015	<0.0015	<0.0025	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0010
Cadmium	***mg/L***		<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0005	<0.0001	<0.0003	<0.0015	<0.0025	<0.001	<0.0005	<0.0005	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0010
Copper	***mg/L***		0.0066			0.0041			0.0048	0.0048	0.0075	0.0064	0.0040	0.0147	0.0034	0.0012	0.004	0.0024	0.0026	0.0059	0.0068	0.0086	0.0145	0.0112	0.0096	0.0078	0.0121	0.0193	0.0046	0.0079
Iron	***mg/L***		0.590			0.614			0.644	0.647	0.581	0.589	0.613	0.510	0.614	0.559	0.637	0.579	0.572	0.61	0.592	0.647	0.533	0.544	0.451	0.406	<0.250	<0.250	< 0.250	0.437
Lead	***mg/L***		<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0015	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0010
Manganese	***mg/L***		0.0279			0.026			0.0242	0.0282	0.0281	0.0235	0.0270	0.0248	0.0303	0.0329	0.032	0.0313	0.0367	0.0316	0.0328	0.0287	0.0289	0.0295	0.0359	0.0260	0.0149	0.0027	0.0128	0.0400
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							
Mercury (dissolved low-level)	***ng/L***																							<5.00	<100	<100	<100	<100	< 100	< 100
Molybdenum	***mg/L***		<0.0025			0.0009			0.0008	0.0007	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0015	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010
Selenium	***mg/L***		<0.0050			<0.0010			<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0020	<0.0010	<0.0010	<0.0020	<0.0020	<0.0050	<0.0050	< 0.0050	< 0.0020
Silica (Si02)	***mg/L***		11.2			11.2			11.4	12.0	11.1	11.2	11.6	11.0	11.1	10.4	11.1	11.5	11.3	10.7	10.7	11.6	11.2	10.8	10.4	11.2	10.6	10.6	9.44	11.3
Silicon	***mg/L***		5.24			5.25			5.31	5.62	5.2	5.23	5.43	5.13	5.19	4.85	5.17	5.37	5.27	5.00	5.01	5.42	5.25	5.07	4.85	5.24	4.94	4.95	4.41	5.28
Uranium	***mg/L***		<0.0005			0.0003			0.0002	0.0003	0.0002	0.0001	0.0001	0.0001	<0.0010	<0.0010	<0.0025	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010
Zinc	***mg/L***		<0.0100			0.0051			<0.0100	<0.002	<0.0040	0.0022	<0.0040	0.0020	<0.0040	<0.0040	<0.0100	<0.0060	<0.0060	<0.0060	<0.0100	<0.0040	<0.0020	<0.0020	<0.0040	<0.0040	<0.0100	0.0051	< 0.0100	< 0.0040

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**
µS/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 CaCO3.*

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-1-MI																															
Year		2018									2019				2020				2021				2022				2023			
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
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
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	6/14	9/12	12/4	3/18	6/14	8/16	11/14
Lab Analysis (Y/N)		N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																															
Purge Flow Rate	*gpm*																														
Total Purged	*gal*																														
Depth to Water	*ft bgs*																														
Temperature	*deg C*	dry	dry	dry	dry	dry	***	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
pH	*SU*																														
Specific Conductance	*µS/cm*																														
Oxygen Reduction Potential	*mV*																														
Lab Analytical Results:																															
Hardness as CaCO3	*mg/L*																														
pH (Lab)	*SU*																														
Total Dissolved Solids (Lab)	*mg/L*																														
Calcium	*mg/L*																														
Magnesium	*mg/L*																														
Sodium	*mg/L*																														
Potassium	*mg/L*																														
Alkalinity, Total	*mg/L*																														
Alkalinity, Bicarbonate	*mg/L*																														
Alkalinity, Carbonate	*mg/L*																														
Alkalinity, Hydroxide	*mg/L*																														
Chloride	*mg/L*																														
Fluoride	*mg/L*																														
Sulfate as SO4	*mg/L*																														
Total Organic Carbon (TOC)	*mg/L*																														
Nitrate/Nitrite as N	*mg/L*																														
Aluminum	*mg/L*																														
Arsenic	*mg/L*																														
Cadmium	*mg/L*																														
Copper	*mg/L*																														
Iron	*mg/L*																														
Lead	*mg/L*																														
Manganese	*mg/L*																														
Mercury (dissolved)	*mg/L*																														
Mercury (dissolved low-level)	*ng/L*																														
Molybdenum	*mg/L*																														
Selenium	*mg/L*																														
Silica (Si02)	*mg/L*																														
Silicon	*mg/L*																														
Uranium	*mg/L*																														
Zinc	*mg/L*																														

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***

Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-1-C																															
Year		**2018**									**2019**				**2020**				**2021**				**2022**				**2023**			
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
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
Sample Date		1/2	2/9	3/22	4/11	5/10	--	7/23	8/7	11/18	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	6/14	9/12	12/4	3/19	6/14	8/16	11/14
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	N	N	N	N
Field Parameters:																															
Purge Flow Rate	***gpm***	MM	0.1	NM	0.1	0.1	***	0.05	0.1	0.10	0.06	0.02	0.03	0.01	0.01	0.10	0.05	0.05	0.05	0.05	0.01	0.13	0.13	0.13	0.13	0.15				
Total Purged	***gal***	1	1	1	1	1.25		1	1	1.10	1.00	1.10	1.00	1.00	1.00	0.75	0.80	1.00	1.00	2.00	1.00	1.25	1.00	1.00	1.00	1.00				
Depth to Water	***ft bgs***	216.38	216.38	216.37	216.35	216.41		216.41	216.05	216.04	216.41	216.20	216.02	216.04	216.12	216.10	216.41	216.66	216.66	216.66	216.66	216.66	216.66	216.66	216.66	216.04				
Temperature	***deg C***	9.7	9.6	6.7	9.2	10.5		20.0	14.1	9.7	5.4	9.8	10.4	11.1	6.4	9.5	11.2	9.7	7.0	10.7	12.1	10.1	7.7	12.3	12.7	7.4	dry	dry	dry	dry
pH	***SU***	7.11	7.19	7.32	7.03	7.05		6.91	6.97	6.93	7.09	6.80	6.65	6.70	6.79	6.85	6.93	6.99	7.40	7.18	7.16	7.15	7.12	7.20	7.23	6.67				
Specific Conductance	***µS/cm***	2778	2738	2751	2700	2749		2693	2675	2751	2621	3139	3172	3080	3005	3002	2653	2709	2410	2249	2290	2554	2223	2362	2278	2104				
Oxygen Reduction Potential	***mV***	6.2	-4.3	-29.6	-15.3	-42.3		-41.8	-32.5	-110.0	-23.4	27.6	10.5	51.0	50.7	-57.7	21.8	49.6	57.5	-16.8	0.0	-7.0	-92.9	-49.3	-191.8	-77.0				
Lab Analytical Results:																															
Hardness as CaCO3	***mg/L***		1190			1130			1120	1180	1010	1820	1840	1700	1600	1590	1400	1420	1320	953	975	920	750	766	638	640				
pH (Lab)	***SU***		7.22			7.2			7.20	7.02	7.24	6.93	6.67	6.63	6.80	6.62	6.83	7.12	7.08	6.86	7.04	6.89	7.22	7.06	7.40	6.98				
Total Dissolved Solids (Lab)	***mg/L***		2360			2340			2170	2200	1960	2880	2890	2750	2610	2460	2420	2450	2330	1910	1850	1840	1680	1770	1640	1490				
Calcium	***mg/L***		219			203			203	219	188	340	342	318	301	294	248	265	241	175	178	168	142	137	113	117				
Magnesium	***mg/L***		156			150			148	154	131	237	240	219	207	207	189	183	173	126	129	122	95.7	103	86.6	84.4				
Sodium	***mg/L***		260			239			239	255	265	146	119	119	143	155	168	194	206	196	214	234	229	240	261	266				
Potassium	***mg/L***		<5.00			3.07			3.04	2.65	3.13	<5.00	<5.00	<5.00	3.05	<5.00	2.82	<5.00	<5.00	2.68	<5.00	<3.00	2.68	2.48	<5.00	2.27				
Alkalinity, Total	***mg/L***		570			580			560	410	525	530	518	505	515	490	445	520	580	480	485	640	510	530	570	454				
Alkalinity, Bicarbonate	***mg/L***		570			580			560	410	525	530	518	505	515	490	445	520	580	480	485	640	510	530	570	454				
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				
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				
Chloride	***mg/L***		7.78			7.75			5.97	6.22	6.36	10.2	9.31	8.78	8.54	8.20	8.15	7.14	7.13	5.3	5.04	7.12	4.87	5.55	5.59	4.32				
Fluoride	***mg/L***		1.03			0.96			0.888	0.924	0.975	0.67	0.525	0.565	0.615	0.695	0.705	0.750	0.804	0.654	0.716	0.755	0.712	1.04	1.24	0.916				
Sulfate as SO4	***mg/L***		1160			1210			1090	1080	1070	1630	1730	1520	1400	1370	1280	1180	1150	940	872	886	805	908	821	728				
Total Organic Carbon (TOC)	***mg/L***		2.21			2.2			2.35	2.37	2.32	2.62	2.52	2.30	2.30	2.32	2.2	2.13	2.26	1.92	1.93	1.91	1.79	1.80	1.74	1.77				
Nitrate/Nitrite as N	***mg/L***		<0.020			<0.020			0.036	<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	NA	NA	NA	0.140	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	<0.100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA				
Aluminum	***mg/L***		<0.250			<0.05			<0.05	<0.100	<0.100	<0.250	<0.250	<0.250	<0.150	<0.250	<0.050	<0.050	<0.250	<0.100	<0.250	<0.150	<0.050	<0.100	<0.250	<0.100				
Arsenic	***mg/L***		<0.0025			0.0051			0.0052	0.0035	0.0038	0.0048	0.0034	<0.0025	<0.0025	0.0019	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0010	0.0009	0.0024	0.0028	<0.0010				
Cadmium	***mg/L***		<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0005	<0.0005	<0.0003	<0.0005	<0.0001	<0.0005	<0.0025	<0.0025	<0.0010	<0.0005	<0.001	<0.0025	<0.0010				
Copper	***mg/L***		0.0052			0.003			0.0049	0.0033	0.0054	0.0057	0.0014	0.0096	<0.0025	<0.0015	<0.0025	<0.0005	<0.0025	0.0042	0.0043	0.0064	0.0093	0.0086	0.0104	0.0120				
Iron	***mg/L***		<0.250			0.643			1.01	1.12	0.988	2.3	0.819	0.543	0.570	0.606	0.619	0.855	0.769	0.552	0.573	0.724	0.630	0.671	0.679	<0.100				
Lead	***mg/L***		<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0010	<0.0025	<0.0025	<0.0015	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0005	<0.0010	<0.0025	<0.0010				
Manganese	***mg/L***		0.0989			0.153			0.140	0.106	0.0807	0.075	0.0562	0.0512	0.0537	0.0473	0.0445	0.0496	0.0482	0.0419	0.0383	0.0346	0.0362	0.0342	0.0304	0.0295				
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							
Mercury (dissolved low-level)	***ng/L***																							<5.00	<100	<100				
Molybdenum	***mg/L***		<0.0025			0.0006			<0.0025	<0.0005	<0.0010	<0.0005	<0.0010	<0.0025	<0.0025	<0.0015	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0005	<0.0010	<0.0025	<0.0010				
Selenium	***mg/L***		<0.0050			<0.001			<0.0050	0.0011	<0.0020	0.0016	0.0023	<0.0050	<0.0050	<0.0030	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0020	<0.0010	<0.0020	<0.005	<0.002				
Silica (Si02)	***mg/L***		14.8			15.2			14.7	14.5	14	16.6	17.3	16.4	15.7	13.8	14.1	14.8	14.4	15.0	14.5	14.8	14.2	13.0	11.7	13.4				
Silicon	***mg/L***		6.94			7.09			6.87	6.78	6.55	7.75	8.07	7.65	7.35	6.47	6.6	6.93	6.75	7.00	6.79	6.94	6.66	6.07	5.47	6.26				
Uranium	***mg/L***		0.0024			0.0025			0.0022	0.0021	0.0016	0.002	0.0025	0.0023	<0.0025	0.0020	<0.0025	<0.0015	<0.0025	<0.0025	<0.0025	0.0010	0.0008	<0.0010	<0.0025	<0.0010				
Zinc	***mg/L***		<0.0100			0.0062			<0.0100	0.0055	<0.0040	0.0085	0.0077	<0.0100	<0.0100	<0.0060	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0040	0.0021	<0.0040	<0.0100	0.0071				

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**
µS/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**

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GCC Energy Hydrologic Monitoring Data

MW-2-A																													
Year		2018							2019				2020				2021				2022				2023			
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
Month		1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9	12	3	6	8	11
Sample Date		1/2	2/9	3/22	4/11	5/10	8/7	11/1	2/20	5/29	8/14	11/6	2/11	5/27	9/1	11/24	2/15	5/20	8/24	11/17	3/23	6/14	9/8	12/4	3/31	6/14	8/18	11/13
Lab Analysis (Y/N)		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																												
Purge Flow Rate	*gpm*	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
Total Purged	*gal*																											
Depth to Water	*ft bgs*																											
Temperature	*deg C*																											
pH	*SU*																											
Specific Conductance	*µS/cm*																											
Oxygen Reduction Potential	*mV*																											
Lab Analytical Results:																												
Hardness as CaCO3	*mg/L*																											
pH (Lab)	*SU*																											
Total Dissolved Solids (Lab)	*mg/L*																											
Calcium	*mg/L*																											
Magnesium	*mg/L*																											
Sodium	*mg/L*																											
Potassium	*mg/L*																											
Alkalinity, Total	*mg/L*																											
Alkalinity, Bicarbonate	*mg/L*																											
Alkalinity, Carbonate	*mg/L*																											
Alkalinity, Hydroxide	*mg/L*																											
Chloride	*mg/L*																											
Fluoride	*mg/L*																											
Sulfate as SO4	*mg/L*																											
Total Organic Carbon (TOC)	*mg/L*																											
Nitrate/Nitrite as N	*mg/L*																											
Aluminum	*mg/L*																											
Arsenic	*mg/L*																											
Cadmium	*mg/L*																											
Copper	*mg/L*																											
Iron	*mg/L*																											
Lead	*mg/L*																											
Manganese	*mg/L*																											
Mercury (dissolved)	*mg/L*																											
Mercury (dissolved low-level)	*ng/L*																											
Molybdenum	*mg/L*																											
Selenium	*mg/L*																											
Silica (Si02)	*mg/L*																											
Silicon	*mg/L*																											
Uranium	*mg/L*																											
Zinc	*mg/L*																											

Notes & Definitions:

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mV	**millivolts**
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GCC Energy Hydrologic Monitoring Data

MW-2-MI																													
Year		2018							2019				2020				2021				2022				2023			
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
Month		1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9	12	3	6	8	11
Sample Date		1/2	2/9	3/22	4/11	5/10	8/7	11/1	2/20	5/29	8/14	11/6	2/11	5/27	9/1	11/24	2/15	5/20	8/24	11/17	3/23	6/14	9/8	12/4	3/31	6/14	8/18	11/13
Lab Analysis (Y/N)		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																												
Purge Flow Rate	*gpm*																											
Total Purged	*gal*																											
Depth to Water	*ft bgs*																											
Temperature	*deg C*	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
pH	*SU*																											
Specific Conductance	*µS/cm*																											
Oxygen Reduction Potential	*mV*																											
Lab Analytical Results:																												
Hardness as CaCO3	*mg/L*																											
pH (Lab)	*SU*																											
Total Dissolved Solids (Lab)	*mg/L*																											
Calcium	*mg/L*																											
Magnesium	*mg/L*																											
Sodium	*mg/L*																											
Potassium	*mg/L*																											
Alkalinity, Total	*mg/L*																											
Alkalinity, Bicarbonate	*mg/L*																											
Alkalinity, Carbonate	*mg/L*																											
Alkalinity, Hydroxide	*mg/L*																											
Chloride	*mg/L*																											
Fluoride	*mg/L*																											
Sulfate as SO4	*mg/L*																											
Total Organic Carbon (TOC)	*mg/L*																											
Nitrate/Nitrite as N	*mg/L*																											
Aluminum	*mg/L*																											
Arsenic	*mg/L*																											
Cadmium	*mg/L*																											
Copper	*mg/L*																											
Iron	*mg/L*																											
Lead	*mg/L*																											
Manganese	*mg/L*																											
Mercury (dissolved)	*mg/L*																											
Mercury (dissolved low-level)	*ng/L*																											
Molybdenum	*mg/L*																											
Selenium	*mg/L*																											
Silica (Si02)	*mg/L*																											
Silicon	*mg/L*																											
Uranium	*mg/L*																											
Zinc	*mg/L*																											

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GCC Energy Hydrologic Monitoring Data

MW-2-C																													
Year		2018							2019				2020				2021				2022				2023			
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
Month		1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9	12	3	6	8	11
Sample Date		1/2	2/9	3/22	4/11	5/10	8/7	11/1	2/20	5/29	8/14	11/6	2/11	5/27	9/1	11/24	2/15	5/20	8/24	11/17	3/23	6/14	9/8	12/4	3/31	6/14	8/18	11/13
Lab Analysis (Y/N)		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																												
Purge Flow Rate	*gpm*	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
Total Purged	*gal*																											
Depth to Water	*ft bgs*																											
Temperature	*deg C*																											
pH	*SU*																											
Specific Conductance	*µS/cm*																											
Oxygen Reduction Potential	*mV*																											
Lab Analytical Results:																												
Hardness as CaCO3	*mg/L*																											
pH (Lab)	*SU*																											
Total Dissolved Solids (Lab)	*mg/L*																											
Calcium	*mg/L*																											
Magnesium	*mg/L*																											
Sodium	*mg/L*																											
Potassium	*mg/L*																											
Alkalinity, Total	*mg/L*																											
Alkalinity, Bicarbonate	*mg/L*																											
Alkalinity, Carbonate	*mg/L*																											
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Chloride	*mg/L*																											
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Sulfate as SO4	*mg/L*																											
Total Organic Carbon (TOC)	*mg/L*																											
Nitrate/Nitrite as N	*mg/L*																											
Aluminum	*mg/L*																											
Arsenic	*mg/L*																											
Cadmium	*mg/L*																											
Copper	*mg/L*																											
Iron	*mg/L*																											
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GCC Energy Hydrologic Monitoring Data

MW-3-A																													
Year		**2018**							**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	9	11	3	6	8	11
Sample Date		1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	8/14	11/12	2/4	5/26	8/31	12/1	2/10	5/18	8/10	11/9	2/24	5/11	9/6	11/18	3/16	6/15	8/8	11/16
Lab Analysis (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
Field Parameters:																													
Purge Flow Rate	***gpm***	NM	0.10	NM	0.10	0.10	0.10	0.10	0.12	0.15	0.06	0.25	0.12	0.13	0.13	0.13	0.05	0.13	0.15	0.13	0.25	0.25	0.13	0.04	0.13	0.11	0.15	0.15
Total Purged	***gal***	1.3	1.5	1.5	1.0	1.3	1.0	1.1	1.5	1.3	1.3	1.5	1.1	1.2	1.5	1.3	1.3	1.5	1.5	1.5	1.5	2.0	1.5	1.1	1.1	1.1	1.1	1.1
Depth to Water	***ft bgs***	298.37	298.04	297.86	297.76	298.17	298.55	298.27	297.85	296.79	297.27	297.33	296.47	296.87	297.21	297.02	296.97	296.72	297.47	297.46	296.67	296.74	296.96	296.62	295.59	295.32	295.97	295.81
Temperature	***deg C***	11.8	11.7	12.2	11.9	13.5	13.5	11.9	11.8	12.1	NM	13.1	11.5	13.2	13.1	11.9	12.1	12.4	13.6	12.2	11.4	13.0	15.6	12.2	11.8	12.7	15.2	11.8
pH	***SU***	8.54	8.52	8.61	8.21	8.38	8.30	8.31	8.28	8.31	8.13	8.51	8.11	8.26	8.23	8.39	8.53	8.46	8.42	8.47	8.35	8.21	8.12	8.66	8.06	7.97	8.63	8.50
Specific Conductance	***µS/cm***	2528	2506	2458	2415	2253	2336	2391	2355	2309	NM	2204	2211	2249	2112	2192	1930	1525	2091	2127	2121	2055	2066	2057	2094	2050	1374	903
Oxygen Reduction Potential	***mV***	-120.3	-125.2	-181.6	-135.8	-138.2	-155.8	-164.6	-145.9	-132.3	-138.6	-120.1	-65.7	-156.8	-98.8	-89.3	-101.3	-157.1	-149.0	-156.8	-221.2	-124.2	-269.9	-199.6	-43.5	-91.0	-162.4	-256.7
Lab Analytical Results:																													
Hardness as CaCO3	***mg/L***		11.5			11.2	12.6	14.1	11.9	10.7	10.4	11.1	10.8	10.3	11.1	9.41	10.5	8.14	8.89	8.68	8.56	9.01	9.33	7.59	8.38	8.76	5.89	9.30
pH (Lab)	***SU***		8.45			8.36	8.37	8.24	8.28	8.29	8.27	8.39	8.09	7.68	8.16	8.13	8.13	8.22	8.21	8.19	8.17	8.28	8.09	8.15	7.63	7.97	8.40	8.37
Total Dissolved Solids (Lab)	***mg/L***		1680			1670	1600	1540	1500	1530	1520	1510	1500	1460	1380	1460	1410	1350	1420	1360	1220	1400	1320	1280	1390	1310	1300	1290
Calcium	***mg/L***		3.33			3.2	3.71	4.15	3.55	3.16	3.08	3.34	3.14	3.07	3.02	2.83	3.07	2.48	2.59	2.53	2.42	2.63	2.59	2.21	2.42	2.51	2.36	2.57
Magnesium	***mg/L***		0.776			0.774	0.811	0.913	0.739	0.692	0.655	0.680	0.723	0.645	0.866	0.568	0.698	0.475	0.586	0.577	0.610	0.594	0.694	0.503	0.570	0.603	< 0.500	0.702
Sodium	***mg/L***		562			542	562	605	543	525	553	528	520	507	510	505	536	471	462	448	462	473	476	420	440	456	450	459
Potassium	***mg/L***		<2.00			1.8	<2.00	2.17	<2.00	1.92	<2.00	<5.00	<3.00	<5.00	<5.00	<5.00	<5.00	<3.00	<5.00	<2.00	1.34	<2.00	<2.00	<5.00	<5.00	<5.00	< 5.00	< 3.00
Alkalinity, Total	***mg/L***		430			480	480	475	540	450	459	420	460	430	440	470	520	530	465	485	495	560	500	400	454	458	447	465
Alkalinity, Bicarbonate	***mg/L***		360			480	420	385	330	430	423	420	460	400	440	450	520	530	465	435	455	480	500	400	454	458	415	455
Alkalinity, Carbonate	***mg/L***		70.0			<10.0	60.0	90.0	210	20	36.0	<10.0	<10.0	30.0	<10.0	20	<10.0	<10.0	<10.0	50.0	40.0	80.0	<10.0	<10.0	<10.0	<10.0	32.0	< 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***		16.4			16.1	15.1	16.0	15.2	15	15.0	14.7	13.9	13.9	13.5	14	13.5	14	14.1	14.6	14.2	14.2	15.9	15.4	16.0	16.1	16.9	16.2
Fluoride	***mg/L***		<0.500			<0.5	NA	0.383	0.406	0.404	0.396	<0.500	0.370	0.374	0.366	0.372	0.336	0.352	0.366	0.314	0.356	0.324	0.362	<0.500	<0.500	0.316	< 0.500	0.284
Sulfate as SO4	***mg/L***		812			756	706	682	716	699	724	633	637	656	624	644	600	601	599	515	584	555	557	565	571	573	560	552
Total Organic Carbon (TOC)	***mg/L***		5.32			4.7	4.62	4.52	4.15	4.10	3.84	3.81	3.42	3.48	3.39	3.15	3.16	3.18	3.01	3.02	2.96	2.84	3.02	1.54	3.04	<2.5	4.44	2.93
Nitrate/Nitrite as N	***mg/L***		<0.020			<0.020	<0.020	<0.020	0.266	<0.020	<0.020	<0.020	0.024	0.026	0.039	0.032	<0.020	0.024	<0.020	<0.020	0.022	0.030	<0.020	<0.020	0.117	0.061	< 0.020	< 0.020
Ammonia as N ^	***mg/L***		NA			NA	NA	NA	NA	NA	NA	0.354	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	0.0730	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***		<0.100			<0.050	<0.050	<0.100	<0.100	<0.050	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100	<0.050	<0.100	<0.100	<0.250	<0.250	<0.250	< 0.250	< 0.150
Arsenic	***mg/L***		<0.0025			0.0006	<0.0025	<0.0010	<0.0010	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	0.0026	0.0006	0.001	0.0018	0.0009	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025
Cadmium	***mg/L***		<0.0005			<0.0001	<0.0001	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025
Copper	***mg/L***		0.0236			0.0063	0.0117	0.0086	0.0137	0.0078	0.0067	0.0039	0.0037	0.0021	0.0051	0.0055	0.0037	0.0157	0.0156	0.0113	0.0088	0.0114	0.0189	0.0106	0.0155	0.0196	0.0065	0.0096
Iron	***mg/L***		<0.100			<0.05	<0.05	<0.100	<0.100	<0.050	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100	<0.050	<0.100	<0.100	<0.250	<0.250	<0.250	< 0.250	< 0.150
Lead	***mg/L***		<0.0025			<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.0010	<0.0010	<0.0005	<0.001	<0.002	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025
Manganese	***mg/L***		0.0232			0.018	0.0222	0.0187	0.0172	0.0185	0.0166	0.0140	0.0162	0.0136	0.0120	0.0125	0.0128	0.0121	0.0096	0.0101	0.0113	0.0100	0.0097	0.0108	0.0119	0.0096	0.0098	0.0091
Mercury (dissolved)	***mg/L***		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<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
Molybdenum	***mg/L***		0.0065			0.0046	0.0043	0.0033	0.003	0.003	0.0018	0.0027	0.0022	0.0015	<0.0025	<0.0025	<0.0025	0.0015	0.0013	<0.001	0.0012	<0.001	0.0017	0.0012	<0.0025	<0.0025	< 0.0025	< 0.0025
Selenium	***mg/L***		<0.0050			0.0109	<0.0050	0.0028	0.0039	<0.005	0.0020	<0.0020	<0.0020	0.0033	0.0086	<0.0050	0.129	0.0276	0.0167	0.0855	0.0162	0.0029	0.0106	<0.0020	0.0236	0.0174	< 0.0050	0.0094
Silica (Si02)	***mg/L***		11.1			11	12.0	12.8	11.7	11	12.7	11.8	11.6	10.5	11.0	11.2	11.3	10.1	10.7	10.9	10.8	10.7	11.1	9.39	9.32	9.89	9.16	10.9
Silicon	***mg/L***		5.18			5.17	5.62	5.97	5.46	5.16	5.95	5.53	5.43	4.92	5.14	5.22	5.28	4.73	4.98	5.11	5.07	5.01	5.19	4.39	4.36	4.63	4.28	5.09
Uranium	***mg/L***		0.0030			0.0026	0.0026	0.0027	0.0018	0.0014	0.0012	0.0011	0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010	0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025
Zinc	***mg/L***		<0.0100			<0.002	<0.002	<0.0040	<0.0040	<0.0100	<0.0080	<0.0040	<0.0040	<0.0040	<0.0100	<0.0100	<0.0100	<0.0020	<0.0040	<0.0040	<0.0020	<0.0040	<0.0040	0.0041	<0.0100	<0.0100	< 0.0100	< 0.0100

Notes & Definitions:

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

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-3-MI																													
Year		**2018**							**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	9	11	3	6	8	11
Sample Date		1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	8/21	11/12	2/4	5/26	8/31	12/1	2/10	5/18	8/10	11/9	2/24	5/11	9/6	11/18	3/16	6/15	8/8	11/16
Lab Analysis (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
Field Parameters:																													
Purge Flow Rate	***gpm***	NM	0.10	NM	0.10	0.10	0.10	0.10	0.12	0.12	0.06	0.25	0.50	0.25	0.13	0.13	0.10	0.13	0.13	0.25	0.25	0.25	0.15	0.10	0.11	0.12	0.26	0.33
Total Purged	***gal***	1.3	1.5	1.5	1.0	1.3	1.0	1.1	1.5	1.3	2.0	1.0	1.5	1.3	1.8	1.3	1.3	1.5	1.5	1.3	1.5	2.0	1.3	1.3	1.1	1.1	1.1	1.1
Depth to Water	***ft bgs***	240.73	240.55	240.65	240.84	241.04	241.97	242.13	242.15	242.32	246.55	243.07	242.85	243.05	243.6	243.9	243.93	244.25	244.28	244.15	242.90	244.05	244.65	244.3	243.83	249.55	242.86	242.65
Temperature	***deg C***	11.9	11.3	11.9	11.8	12.6	13.0	12.4	11.6	11.3	13.2	12.3	11.6	12.6	12.8	11.7	11.5	12.8	13.0	11.9	11.4	13.2	13.7	11.6	11.7	12.5	13.1	12.3
pH	***SU***	8.84	8.83	8.84	8.51	8.48	8.49	8.46	8.51	8.55	8.71	8.75	8.71	8.92	9.01	9.09	9.03	9.06	9.13	9.11	9.07	9.04	9.03	8.81	9.06	9.03	9.00	8.89
Specific Conductance	***µS/cm***	1790	1810	1771	1772	1727	1709	1746	1753	1739	1691	1739	1758	1737	1560	1555	1519	1232	1647	1765	1705	1686	1720	1739	1609	1737	1702	1784
Oxygen Reduction Potential	***mV***	-136.0	-131.4	-160.7	-99.9	-103.9	-127.8	-176.5	-113.0	-84.5	43.9	-130.8	-104.3	-174.5	-111.0	-132.4	-94.6	-120.4	-142.9	-163.3	-207.2	-104.2	-184.3	-158.9	-186.8	-192.3	-213.0	-263.6
Lab Analytical Results:																													
Hardness as CaCO3	***mg/L***		9.92			8.65	8.63	8.88	7.63	6.84	7.98	6.64	6.50	7.25	6.39	5.94	6.63	5.06	5.39	5.21	5.28	5.13	<3.31	<3.31	<3.31	<3.31	< 3.31	5.20
pH (Lab)	***SU***		8.66			8.56	8.58	8.34	8.5	8.45	8.58	8.62	8.61	8.59	8.87	8.77	8.72	8.84	8.81	8.88	8.78	8.87	8.76	8.78	8.63	8.71	8.84	8.85
Total Dissolved Solids (Lab)	***mg/L***		1170			1210	1110	1120	1120	1170	1010	1130	1130	1130	1060	1160	1120	1110	1180	1130	1070	1140	1080	1070	1140	1100	1070	1050
Calcium	***mg/L***		2.22			1.91	1.95	2.03	1.87	1.7	2.04	1.73	1.63	1.76	1.62	1.42	1.66	1.28	1.34	1.25	1.30	1.32	1.14	1.15	1.24	1.11	1.10	1.34
Magnesium	***mg/L***		1.07			0.945	0.911	0.926	0.715	0.629	0.703	0.561	0.591	0.694	0.570	0.579	0.606	0.454	0.5	0.508	0.496	0.442	<0.500	<0.500	<0.500	<0.500	< 0.500	0.449
Sodium	***mg/L***		459			417	446	476	434	419	454	437	437	427	431	431	468	410	403	390	413	415	374	389	397	408	398	405
Potassium	***mg/L***		<2.00			1.63	<2.00	<2.00	1.39	1.65	<2.00	<5.00	<2.00	<5.00	<3.00	<4.00	<5.00	<2.00	<2.00	<2.00	1.27	<2.00	<5.00	<5.00	<5.00	<5.00	< 5.00	< 2.00
Alkalinity, Total	***mg/L***		700			680	730	720	685	755	720	690	705	680	625	770	690	690	705	705	740	740	780	760	680	700	660	630
Alkalinity, Bicarbonate	***mg/L***		600			500	630	610	485	605	590	610	645	550	465	690	450	550	555	565	580	580	480	540	620	572	590	510
Alkalinity, Carbonate	***mg/L***		100			180	100	110	200	150	130	80.0	60.0	130	160	80	240	140	150	140	160	160	300	220	60.0	128	70.0	120
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***		10.7			10.7	8.54	8.83	9.21	9.25	10.2	9.13	9.21	9.61	9.45	10	9.84	10.5	10.4	10.4	10.6	10.2	11.2	10.7	10.9	10.8	10.8	10.7
Fluoride	***mg/L***		1.30			1.2	1.16	1.19	1.21	1.22	1.19	1.19	1.13	1.13	1.09	1.12	1.03	1.09	1.07	0.980	1.10	0.982	1.11	1.08	1.10	1.02	0.862	0.924
Sulfate as SO4	***mg/L***		245			250	226	230	232	229	236	224	227	231	222	110	223	227	228	230	233	213	240	238	240	243	242	241
Total Organic Carbon (TOC)	***mg/L***		9.24			8.67	7.83	7.28	6.73	6.56	6.17	5.78	5.58	6.07	5.79	5.46	5.34	5.33	5.4	5.26	5.14	4.94	5.06	2.89	5.14	4.22	4.72	4.52
Nitrate/Nitrite as N	***mg/L***		<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.034	<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	2.42
Ammonia as N ^	***mg/L***		NA			NA	NA	NA	NA	NA	NA	0.317	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	0.348	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***		<0.100			<0.050	<0.050	<0.10	<0.050	<0.050	0.167	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100	<0.050	<0.100	<0.250	<0.250	<0.250	<0.250	< 0.250	< 0.100
Arsenic	***mg/L***		0.0160			0.0152	0.0127	0.0104	0.0149	0.0107	0.0142	0.0099	0.0093	0.0086	0.0061	0.007	0.0083	0.0091	0.0091	0.0078	0.0095	0.0082	0.0084	0.0085	0.0078	0.0094	0.0076	0.0084
Cadmium	***mg/L***		<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0005	<0.0001	<0.0002	<0.0002	<0.0005	<0.0005	<0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010
Copper	***mg/L***		0.0122			0.0048	0.0071	0.0073	0.0068	0.0063	0.0049	0.0037	0.0024	<0.0025	0.0046	0.0045	0.0031	0.0131	0.0143	0.0097	0.0072	0.0126	0.0170	0.0089	0.0143	0.0187	0.0080	0.0081
Iron	***mg/L***		<0.100			<0.05	<0.05	<0.1	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100	<0.050	<0.100	<0.250	<0.250	<0.250	<0.250	< 0.250	< 0.100
Lead	***mg/L***		<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0010	<0.0010	<0.0025	<0.0025	<0.0020	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0020	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010
Manganese	***mg/L***		0.0049			0.006	0.0054	0.0072	0.0078	0.0082	0.0079	0.0099	0.0095	0.0102	0.0072	0.007	0.0069	0.0057	0.0058	0.0054	0.0051	0.0049	0.0047	0.0058	0.0063	0.0058	0.0055	0.0059
Mercury (dissolved)	***mg/L***		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<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
Molybdenum	***mg/L***		0.0170			0.016	0.0149	0.0158	0.0157	0.0167	0.0277	0.0372	0.0204	0.0195	0.0149	0.0163	0.0162	0.016	0.0149	0.0140	0.0148	0.0143	0.0150	0.0150	0.0136	0.0143	0.0125	0.0139
Selenium	***mg/L***		0.0010			0.0019	<0.0050	<0.002	0.0034	<0.005	<0.0010	<0.0020	<0.0020	<0.0050	<0.0050	<0.004	0.0462	0.0033	<0.0020	0.0091	0.0018	<0.0020	<0.0020	<0.0020	<0.0050	<0.005	< 0.0050	0.0032
Silica (Si02)	***mg/L***		9.33			8.83	9.49	10.2	8.95	8.85	9.73	9.46	8.80	8.24	8.84	9.11	9.64	8.11	8.77	8.82	9.04	8.63	7.45	7.80	7.62	7.81	7.47	9.17
Silicon	***mg/L***		4.36			4.13	4.44	4.76	4.18	4.14	4.55	4.42	4.11	3.85	4.13	4.26	4.51	3.79	4.1	4.12	4.22	4.03	3.48	3.65	3.56	3.65	3.49	4.29
Uranium	***mg/L***		0.0125			0.0126	0.0111	0.0110	0.011	0.0085	0.0080	0.0070	0.0063	0.0059	0.0043	0.0049	0.0049	0.0043	0.0041	0.0033	0.0035	0.0032	0.0034	0.0032	0.0025	<0.0025	< 0.0025	0.0026
Zinc	***mg/L***		<0.0020			0.0023	0.0023	<0.0040	0.0028	<0.0100	0.0070	<0.0040	<0.0040	<0.0100	<0.0100	<0.0080	<0.0100	<0.0020	<0.0040	<0.0040	<0.0020	<0.0040	<0.0040	<0.0040	<0.0100	<0.0100	< 0.0100	< 0.0040

Notes & Definitions:

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

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-3-C																													
Year		**2018**							**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		1	2	3	4	5	8	11	2	5	9	11	3	5	8	12	2	5	8	11	2	5	9	12	3	6	8	11
Sample Date		1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	9/17	11/12	3/13	5/26	8/31	12/1	2/10	5/18	8/10	11/10	2/24	5/11	9/6	12/13	3/29	6/15	8/8	11/16
Lab Analysis (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
Field Parameters:																													
Purge Flow Rate	***gpm***	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.13	0.13	0.10	0.03	0.08	0.13	0.13	0.13	0.13	0.13	0.15	0.10	0.15	0.03	0.24	0.09	0.11	0.10
Total Purged	***gal***	1.5	1.5	1.5	1.0	1.3	1.3	1.1	1.3	1.5	10.0	1.5	11.0	1.1	1.3	1.5	1.3	1.5	1.3	1.5	1.5	1.5	1.5	1.0	1.0	1.1	1.1	1.1
Depth to Water	***ft bgs***	297.01	296.66	296.57	296.62	296.78	297.12	296.80	296.39	295.56	295.70	295.50	299.35	294.99	294.60	295.26	295.97	295.25	295.70	295.68	294.45	295.11	295.45	295.10	294.25	293.70	294.46	294.41
Temperature	***deg C***	11.7	11.4	11.6	12.2	13.0	13.3	11.5	11.0	11.4	13.5	12.5	11.3	13.4	15.0	14.0	9.9	12.3	15.6	9.6	9.4	13.2	14.4	1.9	13.2	12.9	14.6	11.7
pH	***SU***	8.43	8.43	8.45	8.25	8.28	8.26	8.17	8.28	8.29	8.31	8.20	7.98	8.44	8.45	8.73	8.71	8.50	8.71	8.85	8.62	8.43	8.29	9.15	8.44	8.42	8.37	8.26
Specific Conductance	***µS/cm***	4923	4864	5063	5019	4916	4953	5127	5155	5184	5144	5144	4921	3143	5039	4251	4426	3755	4571	5244	4564	4694	5306	2397	5300	5353	5283	5584
Oxygen Reduction Potential	***mV***	-187.9	-183.5	-155.4	-154.7	-161.4	-180.5	-217.6	-185.4	-188.5	-151.8	-184.4	-155.0	-240.5	-174.4	-150.0	-202.7	-149.6	-255.3	-227.4	-325.6	-223.4	-307.9	-277.2	57.8	-199.5	-202.4	-275.0
Lab Analytical Results:																													
Hardness as CaCO3	***mg/L***		16.1			40.3	17.9	21.7	17.3	16.8	18.6	18.6	18.3	16.0	18.1	16.9	18.5	14.8	16.9	16.7	16.0	17.4	20.4	16.4	17.1	13.7	16.1	17.7
pH (Lab)	***SU***		8.35			8.34	8.31	8.24	8.2	8.23	8.31	8.12	7.98	8.41	8.36	8.36	8.43	8.38	8.47	8.87	8.44	8.47	8.18	8.49	8.81	8.29	8.21	8.27
Total Dissolved Solids (Lab)	***mg/L***		3540			3610	3520	3360	3300	3440	3500	3390	3220	3180	3170	3280	3200	3230	3300	3200	3270	3250	3280	3140	3150	2310	3220	3300
Calcium	***mg/L***		3.81			7.28	4.01	4.70	4.05	3.74	4.30	4.23	4.26	3.81	3.97	3.72	4.25	3.59	3.84	3.76	3.66	4.10	4.49	3.68	3.91	3.32	3.63	3.97
Magnesium	***mg/L***		1.59			5.38	1.92	2.41	1.75	1.8	1.91	1.94	1.86	1.58	1.98	1.84	1.92	1.42	1.77	1.78	1.67	1.74	2.23	1.75	1.77	1.33	1.70	1.89
Sodium	***mg/L***		1200			1350	1220	1460	1270	1100	1360	1300	1280	1240	1250	1250	1360	1220	1220	1170	1200	1260	1360	1170	1260	906	1240	1270
Potassium	***mg/L***		<10.0			<5.00	<5.00	<5.00	<5.00	5.24	<5.00	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<6.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	<5.00	< 10.0	< 10.0
Alkalinity, Total	***mg/L***		1910			1760	1730	2050	2000	2110	2190	2130	2160	2050	1820	2090	2170	2130	2140	2230	2180	2170	2110	2120	2220	1410	2140	2140
Alkalinity, Bicarbonate	***mg/L***		1810			1600	1670	1900	1830	2000	2020	2070	2000	1800	1690	1970	1710	1910	1950	1950	1820	1870	1990	2120	1920	1410	2070	2060
Alkalinity, Carbonate	***mg/L***		100			160	60.0	150	170	110	170	60.0	160	250	130	120	460	220	190	280	360	300	120	<10.0	300	<10.0	70.0	80.0
Alkalinity, Hydroxide	***mg/L***		<10.0			<10.0	NA	<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***		549			544	524	561	577	575	620	542	549	555	552	578	574	577	582	462	608	605	613	604	622	360	639	644
Fluoride	***mg/L***		4.15			3.52	3.84	4.04	4.04	3.91	3.78	3.66	3.61	3.51	3.47	3.53	3.37	3.34	3.36	3.16	3.37	3.06	3.51	3.25	3.38	1.96	2.59	2.91
Sulfate as SO4	***mg/L***		<10.0			<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	252	< 10.0	< 10.0
Total Organic Carbon (TOC)	***mg/L***		337			343	306	141	122	129	132	107	81.9	23.4	17.1	15.7	15.7	16.3	15.7	16.4	17.9	16.2	16.1	10.4	19.2	5.72	18.9	19.2
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	<0.020	<0.020	<0.040	<0.020	<0.020	<0.100	<0.020	<0.020	<0.020	< 0.020	< 0.020
Ammonia as N ^	***mg/L***		NA			NA	NA	NA	NA	NA	NA	0.500	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	0.212	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***		<0.500			1.47	<0.500	<0.250	<0.250	<0.500	<0.250	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.300	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.500	<0.250	< 0.500	< 0.500
Arsenic	***mg/L***		0.0194			0.0168	0.0148	0.0155	0.0218	0.0171	0.0192	0.0188	0.0087	0.0133	0.0106	0.0125	0.0113	0.0163	0.0195	0.0170	0.0157	0.0130	0.0151	0.0146	0.0194	0.0206	0.0149	0.0170
Cadmium	***mg/L***		<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.001	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0035	< 0.0050	< 0.0050
Copper	***mg/L***		0.0409			0.0183	0.0257	0.0227	0.0223	0.0168	0.0102	0.0109	0.0069	0.0064	0.0136	0.0156	0.0102	0.0499	0.0434	0.0323	0.0287	0.0347	0.0555	0.0268	0.0220	0.0571	0.0185	0.0293
Iron	***mg/L***		<0.500			0.252	<0.500	<0.250	<0.250	0.344	0.328	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.300	0.464	0.310	0.260	0.305	0.427	<0.250	<0.500	<0.25	< 0.500	< 0.500
Lead	***mg/L***		<0.0025			<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.005	<0.0035	< 0.0050	< 0.0050
Manganese	***mg/L***		0.0307			0.0275	0.0243	0.0252	0.0483	0.063	0.0378	0.0266	0.0245	0.0175	0.0102	0.0079	0.0052	0.0046	0.0034	0.0032	0.0028	0.0040	0.0025	0.0034	0.0054	0.0065	< 0.0050	< 0.0050
Mercury (dissolved)	***mg/L***		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<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	<500	<100	<100	<100	< 100	< 100
Molybdenum	***mg/L***		0.0221			0.0189	0.0155	0.0140	0.0134	0.0121	0.0081	0.0075	0.0082	0.0085	0.0076	0.0075	0.008	0.0069	0.0061	0.0061	0.0059	0.0065	0.0058	0.0056	0.0111	0.0093	0.0065	0.0059
Selenium	***mg/L***		0.0383			0.0268	0.0232	0.0261	0.0464	0.0203	0.0203	0.0173	0.0125	0.0129	0.0135	0.0191	0.027	0.0411	0.0372	0.0319	0.0335	0.0185	0.0247	0.0199	0.0259	0.0396	0.0242	0.0282
Silica (Si02)	***mg/L***		<10.7			9.69	8.68	10.7	8.24	8.35	9.06	<10.7	<10.7	<10.7	<10.7	<10.7	<10.7	7.48	8.4	8.33	7.79	7.59	8.75	7.04	<10.7	8.03	< 10.7	< 10.7
Silicon	***mg/L***		<5.00			4.53	4.06	5.01	3.85	3.9	4.24	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	3.5	3.93	3.89	3.64	3.55	4.09	3.29	<5.00	3.75	< 5.00	< 5.00
Uranium	***mg/L***		0.0091			0.0087	0.0089	0.0113	0.0077	0.0046	0.0053	0.0034	0.0045	0.0033	<0.0050	<0.0050	<0.0050	0.0025	0.0025	<0.0025	<0.0025	<0.0025	0.0025	0.0025	0.0051	0.0044	< 0.0050	< 0.0050
Zinc	***mg/L***		<0.0100			<0.0100	0.0664	0.0814	0.123	0.128	0.0567	0.0886	<0.0100	<0.0100	<0.0200	0.0332	0.0294	0.0363	0.0347	0.0377	0.0404	0.0181	0.0385	0.0228	<0.0200	0.0229	< 0.0200	< 0.0200

Notes & Definitions:

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

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-4-A																													
Year		**2018**							**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		1	2	3	4	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	9	11	3	6	8	11
Sample Date		1/3	2/21	3/23	4/12	5/14	8/8	11/5	2/27	5/22	8/15	11/12	2/6	5/26	8/27	11/25	2/10	5/18	8/10	11/10	2/23	5/11	9/1	11/17	3/9	6/15	8/7	11/16
Lab Analysis (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
Field Parameters:																												
Purge Flow Rate	***gpm***	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.06	0.13	0.03	0.03	0.13	0.13	0.05	0.13	0.25	0.20	0.22	0.13	0.13	0.06	0.05	0.03	0.08	0.05
Total Purged	***gal***	1.3	1.5	1.5	1.0	1.5	1.5	1.1	1.5	1.3	1.1	1.0	1.5	1.2	1.3	1.3	1.3	1.3	1.5	1.3	1.8	1.5	1.0	1.1	1.1	1.1	1.1	1.1
Depth to Water	***ft bgs***	334.31	334.73	334.81	335.07	335.58	336.06	336.73	335.6	335.07	335.21	335.16	336.35	337.16	336.88	336.13	335.46	335.72	335.93	336.16	336.01	336.31	336.74	337.16	337.66	330.46	335.36	335.49
Temperature	***deg C***	10.9	9.8	11.4	10.9	17.8	12.9	11.6	11.1	10.4	13.6	11.6	10.3	12.5	14.0	12.3	10.3	11.2	12.1	11.6	9.4	12.4	15.6	12.4	11.6	15.0	15.2	12.4
pH	***SU***	8.33	8.37	8.41	8.19	8.20	8.10	8.12	8.15	8.08	8.02	8.11	8.07	8.19	8.27	8.30	8.25	8.30	8.38	8.38	8.35	8.34	8.33	8.77	8.41	8.38	8.33	8.25
Specific Conductance	***µS/cm***	2259	2267	2207	2214	2183	2192	2246	2205	2237	2201	2211	2271	2273	2165	2249	2052	1618	2205	2268	2294	2244	2236	2236	2090	2246	2171	2298
Oxygen Reduction Potential	***mV***	-35.2	-75.9	-117.3	-77.9	-81.8	-137.5	-157.6	-92.3	-89.3	-54.3	-19.8	15.3	-71.3	-11.5	-10.6	29.0	-63.4	-48.7	-77.3	-153.2	-78.6	-203.9	-66.6	35.8	-41.9	-76.5	-167.0
Lab Analytical Results:																												
Hardness as CaCO3	***mg/L***		7.73			7.84	7.69	8.81	7.76	7.31	8.62	8.00	8.19	7.46	7.87	7.77	8.87	7.02	5.81	7.54	8.32	7.88	8.44	7.41	7.78	8.02	6.50	7.47
pH (Lab)	***SU***		8.28			8.31	8.21	8.24	8.05	8.08	8.15	8.02	8.11	7.90	8.19	8.16	8.04	8.15	8.09	8.21	8.24	8.24	8.50	8.29	8.10	8.12	8.23	8.30
Total Dissolved Solids (Lab)	***mg/L***		1490			1470	1430	1350	1450	1410	1540	1490	1500	1480	1460	1560	1370	1430	1510	1470	1400	1540	1480	1430	1390	1480	1480	1400
Calcium	***mg/L***		1.81			1.75	1.71	1.92	1.77	1.68	1.94	1.82	1.88	1.67	1.79	1.73	2.04	1.65	1.41	1.76	1.87	1.88	1.95	1.67	1.73	1.83	1.58	1.75
Magnesium	***mg/L***		0.778			0.846	0.832	0.973	0.809	0.756	0.914	0.837	0.850	0.798	0.826	0.836	0.917	0.704	0.555	0.765	0.890	0.771	0.868	0.783	0.842	0.839	0.616	0.751
Sodium	***mg/L***		507			528	531	568	535	515	548	529	551	498	533	531	565	507	411	488	504	523	520	482	559	535	503	509
Potassium	***mg/L***		<2.00			1.5	<2.00	<2.00	<2.00	<2.00	4.75	<5.00	<3.00	<5.00	<5.00	<5.00	<5.00	<3.00	<5.00	<2.00	<2.00	<2.00	<2.00	<5.00	<5.00	1.24	< 5.00	< 5.00
Alkalinity, Total	***mg/L***		530			560	575	575	545	565	575	544	560	585	605	538	620	590	580	670	535	605	590	480	569	579	562	515
Alkalinity, Bicarbonate	***mg/L***		490			560	555	575	505	544	535	528	560	545	565	530	620	530	580	670	485	455	590	480	531	579	524	515
Alkalinity, Carbonate	***mg/L***		40.0			<10.0	20.0	<10.0	40	32	40.0	16.0	<10.0	40.0	40	<10.0	<10.0	60	<10.0	<10.0	50.0	150	<10.0	<10.0	38.0	<10.0	38.0	< 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***		10.0			9.94	9.55	8.60	8.93	8.99	8.91	8.76	8.83	8.89	10.1	9.15	8.79	9.15	9.17	9.04	9.04	8.97	9.89	9.61	9.72	10.3	10.6	10.3
Fluoride	***mg/L***		<0.500			<0.500	<0.500	0.143	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.500	<0.500	0.165	< 0.500	< 0.500
Sulfate as SO4	***mg/L***		579			561	522	450	567	584	615	559	557	580	542	607	561	577	593	551	581	525	580	590	602	594	571	583
Total Organic Carbon (TOC)	***mg/L***		3.46			3.59	3.60	3.59	3.47	3.40	3.33	3.25	3.10	3.49	3.48	3.27	3.42	3.42	3.23	3.28	3.31	3.32	3.40	1.99	3.78	3.35	3.44	2.86
Nitrate/Nitrite as N	***mg/L***		<0.020			<0.02	<0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.255	<0.020	<0.020	<0.020	<0.020	< 0.020	< 0.020
Ammonia as N ^	***mg/L***		NA			NA	NA	NA	NA	NA	NA	0.312	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
Aluminum	***mg/L***		<0.100			<0.05	<0.05	<0.100	<0.100	<0.100	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100	<0.100	<0.100	<0.100	<0.250	<0.250	<0.250	< 0.250	< 0.250
Arsenic	***mg/L***		0.0019			0.0005	<0.0025	<0.0010	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	0.0005	<0.0010	<0.0010	0.0008	<0.0010	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0025
Cadmium	***mg/L***		<0.0001			<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.001	<0.001	<0.0025	<0.0025	< 0.0025	< 0.0025
Copper	***mg/L***		0.0124			0.0077	0.0105	0.0084	0.0081	0.0061	0.0120	0.0037	0.0034	0.0020	0.0056	0.0053	0.0036	0.0135	0.0161	0.0126	0.0097	0.0133	0.0215	0.0213	0.0207	0.0201	0.0044	0.0108
Iron	***mg/L***		<0.100			<0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100	<0.100	<0.100	<0.100	<0.250	<0.250	<0.250	< 0.250	< 0.250
Lead	***mg/L***		<0.0005			<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.001	<0.002	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025
Manganese	***mg/L***		0.0035			0.0033	<0.0075	0.0034	0.0032	0.0031	0.0026	0.0016	0.0033	0.0031	0.0029	0.0035	0.0029	0.0029	0.003	0.0030	0.0032	0.0033	0.0035	0.0031	0.0036	0.0030	0.0032	0.0029
Mercury (dissolved)	***mg/L***		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<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
Molybdenum	***mg/L***		0.0005			<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025
Selenium	***mg/L***		0.0014			0.0025	<0.0050	<0.0020	0.0036	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0050	<0.0050	<0.0050	<0.0010	<0.0020	<0.0040	0.0010	<0.0020	<0.0020	<0.0020	<0.0050	<0.0050	< 0.0050	< 0.0050
Silica (Si02)	***mg/L***		9.47			10	10.2	11.2	9.65	9.81	11.0	10.5	10.3	8.55	9.44	9.96	10.4	8.98	8.57	10.0	9.75	9.80	10.3	8.80	10.3	9.55	8.45	9.58
Silicon	***mg/L***		4.43			4.7	4.77	5.22	4.51	4.59	5.14	4.89	4.79	4.00	4.42	4.65	4.87	4.2	4.01	4.67	4.56	4.58	4.80	4.11	4.82	4.46	3.95	4.48
Uranium	***mg/L***		0.0003			<0.0001	<0.0005	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0025
Zinc	***mg/L***		0.0022			0.0024	<0.0100	<0.0040	<0.0040	0.0033	<0.0020	<0.0040	<0.0040	<0.0040	<0.0100	<0.0100	<0.0100	0.0021	<0.0040	<0.0040	<0.0020	<0.0040	<0.0040	<0.0040	<0.0100	<0.0100	< 0.0100	< 0.0100

Notes & Definitions:

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

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-4-MI																													
Year		**2018**							**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		1	2	3	4	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	9	11	3	5	8	11
Sample Date		1/3	2/21	3/23	4/12	5/14	8/8	11/5	2/27	5/22	8/15	11/12	2/6	5/26	8/27	11/25	2/10	5/18	8/10	11/10	2/23	5/11	9/1	11/17	3/9	5/31	8/7	11/16
Lab Analysis (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
Field Parameters:																													
Purge Flow Rate	***gpm***	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.13	0.25	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.15	0.09	0.22	0.13	0.91	0.12
Total Purged	***gal***	1.3	1.5	1.5	1.0	1.3	1.8	1.6	2.0	1.3	1.1	1.0	1.3	1.2	1.3	1.3	1.5	1.3	1.5	1.5	1.3	1.5	1.0	1.3	1.1	1.1	1.1	1.2
Depth to Water	***ft bgs***	330.52	330.42	330.53	330.5	329.62	331.1	336.57	331.1	331.06	331.92	332.1	332.5	332.87	332.45	333.29	333.22	329.27	333.57	333.65	333.45	333.8	334.22	334.15	334.35	334.85	335.3	335.55
Temperature	***deg C***	11.2	11.0	10.5	10.9	10.1	11.8	11.3	11.1	10.8	13.3	11.6	11.8	12.2	12.9	11.8	10.8	11.6	12.1	11.7	11.0	12.0	13.0	11.5	11.5	12.9	12.5	12.1
pH	***SU***	8.62	8.48	8.53	8.01	8.50	8.14	8.25	8.38	8.23	8.14	8.26	8.18	8.42	8.45	8.57	8.57	8.60	8.59	8.59	8.46	8.56	8.51	7.87	8.62	8.62	8.62	8.53
Specific Conductance	***µS/cm***	1848	1856	1841	1816	1739	1756	1808	1716	1800	1830	1776	1795	1794	1730	1777	1605	1258	1711	1761	1745	1727	1718	1749	1673	1728	1710	1791
Oxygen Reduction Potential	***mV***	-112.5	-151.3	-145.7	-117.7	-130.0	-178.2	-202.3	-140.4	-154.7	-127.3	-76.8	-50.6	-131.2	-92.0	-87.7	-53.9	-105.9	-97.8	-118.1	-141.5	-128.8	-247.1	-131.9	85.0	-139.7	-81.2	-267.6
Lab Analytical Results:																													
Hardness as CaCO3	***mg/L***		6.01			5.88	6.06	6.39	5.35	4.93	5.65	3.31	4.70	<3.31	5.19	2.84	4.91	3.79	4.59	4.53	4.17	4.15	4.59	<3.31	3.84	4.11	< 3.31	3.91
pH (Lab)	***SU***		8.47			8.48	8.31	8.47	8.35	8.3	8.44	8.08	8.33	8.02	8.28	8.38	8.21	8.38	8.28	8.59	8.35	8.42	8.68	8.48	8.25	8.41	8.44	8.59
Total Dissolved Solids (Lab)	***mg/L***		1220			1140	1120	1100	1130	1130	1140	1120	1110	1110	1070	1170	1130	1100	1130	1090	1100	1140	1070	1060	1030	1030	1060	1050
Calcium	***mg/L***		1.64			1.55	1.56	1.60	1.44	1.3	1.51	1.32	1.21	1.22	1.32	1.14	1.97	1.05	1.23	1.09	1.05	1.13	1.13	0.971	0.979	1.02	0.838	0.982
Magnesium	***mg/L***		0.465			0.49	0.524	0.580	0.428	0.408	0.458	<0.500	0.406	<0.500	0.459	<0.400	<0.500	0.285	0.37	0.441	0.372	0.321	0.431	<0.500	0.338	0.381	< 0.500	0.354
Sodium	***mg/L***		447			471	470	500	462	458	496	477	441	460	459	458	476	431	427	418	430	443	448	384	468	427	428	424
Potassium	***mg/L***		<2.00			1.39	<2.00	<2.00	1.43	1.77	2.03	<5.00	<2.00	<5.00	<3.00	<4.00	<5.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<5.00	<2.00	<2.00	< 5.00	< 2.00
Alkalinity, Total	***mg/L***		965			955	968	995	510	890	970	978	985	1030	1020	1010	990	1020	985	1140	935	1020	1180	920	1040	965	955	985
Alkalinity, Bicarbonate	***mg/L***		875			865	896	885	420	650	880	886	895	935	940	965	910	900	865	1020	825	870	1040	720	980	865	907	945
Alkalinity, Carbonate	***mg/L***		90.0			90	72.0	110	90	240	90.0	92.0	90.0	90.0	80	40	80	120	120	120	110	150	140	200	60.0	100	48.0	40.0
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	< 10.0	< 10.0
Chloride	***mg/L***		8.74			7.99	5.68	5.38	5.98	5.98	5.83	5.47	5.37	5.11	5.02	4.97	4.89	4.85	4.91	4.98	4.55	4.36	4.29	<5.00	25.4	3.91	< 5.00	3.62
Fluoride	***mg/L***		5.02			4.82	4.84	4.94	5.49	5.44	5.38	5.31	5.11	5.16	5	5.27	4.92	5.03	5.2	4.78	5.16	4.73	5.42	5.13	5.42	5.31	4.32	4.83
Sulfate as SO4	***mg/L***		68.6			54.4	48.3	47.6	38.7	34.4	31.9	28.2	24.6	21.9	20	18.7	17.1	16.1	16.4	13.7	13.4	12.4	12.7	11.7	21.8	10.1	< 5.00	8.16
Total Organic Carbon (TOC)	***mg/L***		9.54			9.25	8.94	8.48	8.37	8.25	7.81	6.42	6.63	6.55	5.93	5.77	5.78	5.36	5.29	5.09	4.80	4.28	4.73	2.31	4.82	4.52	4.06	4.05
Nitrate/Nitrite as N	***mg/L***		<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	<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	0.240	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	0.280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***		<0.100			<0.050	<0.100	<0.100	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.250	<0.100	<0.100	< 0.250	< 0.100
Arsenic	***mg/L***		0.0139			0.0153	0.014	0.0119	0.0164	0.0111	0.0116	0.0107	0.0127	0.0139	0.0084	0.0092	0.0088	0.011	0.0099	0.0093	0.0120	0.0092	0.0094	0.0090	0.0100	0.0074	0.0090	0.0101
Cadmium	***mg/L***		<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0005	<0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	< 0.0025	< 0.0010
Copper	***mg/L***		0.0079			0.0063	0.0071	0.0078	0.0087	0.0153	0.0051	0.0027	0.0028	0.0020	0.0052	0.0045	0.004	0.0103	0.0134	0.0107	0.0116	0.0107	0.0177	0.0177	0.0196	0.0049	0.0039	0.0086
Iron	***mg/L***		<0.100			<0.050	<0.100	<0.100	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.250	<0.100	<0.100	< 0.250	< 0.100
Lead	***mg/L***		<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0025	<0.0020	<0.0025	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.002	<0.0010	<0.001	<0.0025	< 0.0025	< 0.0010
Manganese	***mg/L***		0.0080			0.007	0.0068	0.0084	0.0091	0.0084	0.0084	0.0073	0.0085	0.0086	0.0086	0.0092	0.0094	0.0073	0.0075	0.0077	0.0076	0.0080	0.0078	0.0084	0.0076	0.0077	0.0079	0.0074
Mercury (dissolved)	***mg/L***		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<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
Molybdenum	***mg/L***		0.0151			0.0119	0.0115	0.0129	0.0121	0.0119	0.0108	0.0101	0.0096	0.0091	0.0081	0.0089	0.0082	0.0076	0.0068	0.0065	0.0065	0.0062	0.0064	0.0064	0.0060	0.0052	0.0051	0.0050
Selenium	***mg/L***		<0.0010			0.0022	0.0113	<0.0020	0.002	<0.0010	<0.0010	<0.0020	<0.0020	<0.0010	<0.005	<0.0040	0.0143	<0.0010	<0.0020	<0.0040	<0.0010	<0.0020	<0.0020	<0.0020	<0.0020	<0.0050	< 0.0050	< 0.0020
Silica (Si02)	***mg/L***		8.30			8.9	9.29	10.3	8.86	9.06	10.2	9.51	8.21	7.81	8.39	8.88	9.26	7.82	8.69	8.54	8.49	8.30	8.76	6.89	9.27	8.23	6.72	8.64
Silicon	***mg/L***		3.88			4.16	4.34	4.81	4.14	4.24	4.76	4.45	3.84	3.65	3.92	4.15	4.33	3.66	4.06	3.99	3.97	3.88	4.09	3.22	4.34	3.85	3.14	4.04
Uranium	***mg/L***		0.0183			0.0173	0.0151	0.0191	0.0269	0.0176	0.0168	0.0145	0.0163	0.0195	0.0121	0.0139	0.0137	0.0115	0.0112	0.0097	0.0089	0.0086	0.0084	0.0088	0.0075	0.0063	0.0063	0.0070
Zinc	***mg/L***		<0.0020			<0.0020	<0.0020	<0.0040	<0.0020	<0.0020	<0.0100	<0.0040	<0.0040	<0.0040	<0.0100	<0.0080	<0.0100	<0.0020	<0.0040	<0.0040	<0.0020	<0.0040	<0.0040	<0.0040	0.0044	<0.0100	< 0.0100	< 0.0040

Notes & Definitions:

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

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-4-C																													
Year		**2018**							**2019**				**2020**				**2021**				**2022**				**2023**			
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
Month		1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	9	11	3	5	8	11
Sample Date		1/3	2/21	3/23	4/12	5/14	8/8	11/5	2/27	5/22	8/15	11/12	2/4	5/26	8/27	12/1	2/10	5/18	8/10	11/10	2/23	5/11	9/1	11/17	3/9	5/31	8/18	11/16
Lab Analysis (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
Field Parameters:																													
Purge Flow Rate	***gpm***	NM	0.10	NM	0.10	0.10	0.10	0.20	0.12	0.06	0.13	0.13	0.13	0.13	0.13	0.13	0.10	0.13	0.13	0.13	0.25	0.25	0.18	0.08	0.09	0.16	0.08	0.08
Total Purged	***gal***	1.5	1.5	1.5	1.0	1.5	1.0	1.3	1.5	1.3	1.1	1.0	1.5	1.2	1.5	1.3	1.5	1.5	1.5	1.5	1.5	1.5	1.0	1.1	1.1	1.1	1.1	1.1
Depth to Water	***ft bgs***	282.35	281.30	303.30	304.05	NM	302.55	302.17	302.45	303.93	304.93	305.73	306.44	304.90	307.80	308.05	308.65	308.58	309.32	309.90	309.80	311.45	310.88	311.37	310.15	311.45	311.85	311.55
Temperature	***deg C***	11.7	10.8	12.5	11.4	12.4	12.9	11.5	11.3	11.2	12.5	11.7	11.2	12.7	13.0	11.4	10.0	11.4	12.3	11.7	10.3	12.2	13.8	12.1	11.1	13.8	13.7	12.4
pH	***SU***	7.80	7.88	7.94	7.75	7.79	7.76	7.79	7.87	7.86	7.81	7.85	7.87	7.97	8.00	8.05	8.02	8.05	8.12	8.11	8.06	8.05	8.06	8.28	8.15	8.09	8.17	8.02
Specific Conductance	***µS/cm***	5834	5903	5628	5792	5592	5583	5775	5710	5712	5930	5636	5729	5636	5429	5665	5106	4047	5454	5687	5698	5645	5589	5649	5116	5678	5560	5842
Oxygen Reduction Potential	***mV***	-123.8	-154.3	-131.3	-134.9	-129.3	-157.6	-209.0	-160.1	-180.1	-156.8	-148.7	-135.9	-147.7	-132.1	-128.7	-106.2	-100.6	-142.3	-173.0	-255.6	-178.7	-278.7	-161.3	-158.1	-168.9	-182.7	-255.3
Lab Analytical Results:																													
Hardness as CaCO3	***mg/L***		26.5			26.2	25.9	28.6	23.6	22.5	25.2	24.4	24.0	22.7	23	21.8	25.6	19.6	21.9	20.9	22.2	21.4	26.0	20.1	21.1	21.0	24.3	22.1
pH (Lab)	***SU***		7.84			7.97	7.96	8.27	7.9	7.92	7.95	7.85	7.95	7.76	7.92	7.94	7.96	7.97	7.96	8.08	8.01	8.07	8.19	8.15	7.98	8.12	8.04	8.13
Total Dissolved Solids (Lab)	***mg/L***		3730			3660	3650	3590	3580	3590	3610	3610	3580	3570	3510	3610	3720	3540	3600	3630	3520	3580	3670	3530	3620	3450	3390	3560
Calcium	***mg/L***		6.32			6.15	5.90	6.60	5.5	5.21	5.83	5.61	5.57	5.31	5.3	5.15	5.98	4.64	5.07	4.77	5.04	5.14	6.01	4.65	4.78	4.78	5.69	5.15
Magnesium	***mg/L***		2.61			2.62	2.72	2.94	2.39	2.3	2.57	2.53	2.44	2.30	2.36	2.18	2.58	1.95	2.25	2.19	2.33	2.07	2.68	2.07	2.22	2.20	2.45	2.23
Sodium	***mg/L***		1410			1400	1410	1590	1410	1370	1440	1430	1440	1390	1400	1400	1520	1310	1340	1270	1360	1350	1530	1290	1410	1360	1440	1360
Potassium	***mg/L***		<10.0			<5.00	<5.00	5.36	<5.00	<5.00	5.42	<10.0	<5.00	<10.0	<10.0	<10.0	<10.0	<6.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	<10.0	<10.0	< 10.0	< 10.0
Alkalinity, Total	***mg/L***		2600			2410	2480	2450	2470	2550	2500	2470	2480	2460	2500	2950	2470	2500	2410	2630	2360	2500	2430	2250	2580	2240	2460	2460
Alkalinity, Bicarbonate	***mg/L***		2600			2330	2480	2450	2470	2350	2390	2410	2420	2340	2390	2880	2430	2360	2290	2410	2180	2300	2430	2250	2490	2240	2330	2420
Alkalinity, Carbonate	***mg/L***		<10.0			80	<10.0	<10.0	<10.0	200	110	60.0	60.0	120	110	70	40	140	120	220	180	200	<10.0	<10.0	90.0	<10.0	130	40.0
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***		592			573	533	590	575	554	580	525	528	555	543	565	557	553	572	561	562	563	570	583	576	581	566	586
Fluoride	***mg/L***		2.53			2.52	2.48	2.54	2.64	2.62	2.59	2.51	2.41	2.36	2.34	2.37	2.21	2.16	2.28	2.04	2.26	2.02	2.34	2.22	2.23	2.15	2.10	2.02
Sulfate as SO4	***mg/L***		34.5			27	18.7	11.2	5.07	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<10.0	<10.0	<5.00	< 10.0	< 10.0
Total Organic Carbon (TOC)	***mg/L***		3.23			3.23	2.80	3.46	3.24	2.62	2.63	4.18	2.23	2.50	2.31	3.72	4.57	4.92	4.81	4.70	5.93	4.91	4.39	3.19	4.75	5.54	7.10	19.6
Nitrate/Nitrite as N	***mg/L***		<0.020			<0.020	<0.020	<0.020	0.061	<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	<0.100	<0.020	<0.020	<0.02	< 0.020	< 0.020
Ammonia as N ^	***mg/L***		NA			NA	NA	NA	NA	NA	NA	0.424	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	0.182	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***		<0.500			<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.500	<0.250	<0.500	<0.500	<0.500	<0.500	<0.300	<0.250	<0.250	<0.250	<0.250	<0.250	<0.500	<0.500	<0.500	< 0.500	< 0.500
Arsenic	***mg/L***		0.0246			0.0195	0.0202	0.0164	0.0211	0.0171	0.0178	0.0179	0.0203	0.0195	0.015	0.0182	0.0177	0.0212	0.0248	0.0213	0.0213	0.0172	0.0219	0.0207	0.0218	0.0155	0.0237	0.0179
Cadmium	***mg/L***		<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.001	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	< 0.0050	< 0.0050
Copper	***mg/L***		0.0482			0.0389	0.0280	0.0230	0.0249	0.0382	0.0198	0.0107	0.0111	0.0069	0.0151	0.0148	0.0111	0.0464	0.0499	0.0370	0.0302	0.0371	0.0618	0.0573	0.0606	0.0160	0.0731	0.0292
Iron	***mg/L***		<0.500			0.373	0.397	0.474	0.279	0.391	0.522	0.619	0.591	0.551	<0.500	0.553	0.837	0.355	0.793	0.551	0.598	0.801	0.795	<0.500	0.731	0.572	0.630	0.604
Lead	***mg/L***		<0.0025			<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<0.005	< 0.0050	< 0.0050
Manganese	***mg/L***		0.0647			0.0529	0.0381	0.0283	0.0268	0.0174	0.0162	0.0096	0.0209	0.0103	0.008	0.0076	0.0059	0.0063	0.005	0.0047	0.0051	0.0046	0.0049	0.0046	<0.0050	<0.005	< 0.0050	< 0.0050
Mercury (dissolved)	***mg/L***		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<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	<500	<100	<100	<100	< 100	< 100
Molybdenum	***mg/L***		0.0086			0.0072	0.0071	0.0057	0.0074	0.007	0.0056	0.0047	0.0045	0.0044	<0.005	<0.005	<0.0050	0.0037	0.0031	0.0031	0.0033	0.0031	0.0036	0.0034	<0.0050	<0.005	< 0.0050	< 0.0050
Selenium	***mg/L***		0.0378			0.0317	0.0260	0.0211	0.0339	0.0195	0.0195	0.0156	0.0140	0.0129	0.0112	0.0182	<0.0100	0.0186	0.028	0.0269	0.0219	0.0146	0.0218	0.0256	0.0258	0.0194	0.0119	0.0216
Silica (Si02)	***mg/L***		<10.7			11	11.2	12.8	10.1	10.5	11.3	11.0	9.88	<10.7	<10.7	<10.7	10.8	8.35	9.54	9.37	9.28	8.56	10.4	<10.7	<10.7	<10.7	< 10.7	< 10.7
Silicon	***mg/L***		<5.00			5.16	5.24	6.00	4.7	4.89	5.29	5.14	4.62	<5.00	<5.00	<5.00	5.06	3.91	4.46	4.38	4.34	4.00	4.87	<5.00	<5.00	<5.00	< 5.00	< 5.00
Uranium	***mg/L***		0.0311			0.0311	0.0277	0.0246	0.0215	0.0154	0.0086	0.0073	0.0063	0.0039	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	< 0.0050	< 0.0050
Zinc	***mg/L***		<0.0100			<0.0100	<0.0100	<0.0100	<0.0100	0.0038	<0.0100	<0.0100	<0.0100	<0.0100	<0.0200	<0.0200	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0200	<0.0200	< 0.0200	< 0.0200

Notes & Definitions:

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

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-6-A																												
Year		**2018**	**2019**										**2020**				**2021**				**2022**				**2023**			
Quarter		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	11	2	5	8	11	2	5	8	11	2	5	8	11	3	5	8	11
Sample Date		12/28	1/31	2/21	3/21	4/23	5/20	6/19	7/23	8/15	9/24	11/7	2/5	5/14	8/11	11/25	2/9	5/17	8/9	11/9	2/15	5/10	8/31	11/25	3/13	5/18	8/8	11/16
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	N	N	N	N	N
Field Parameters:																												
Purge Flow Rate	***gpm***	NM	NM	0.10	2.00	0.03	0.03	0.03	0.06	0.03	0.02	0.01	0.05	0.13	0.05	0.05	0.05	0.02	0.13	0.02	0.05	0.10						
Total Purged	***gal***	36.3	0.5	0.5	2.0	2.0	1.3	1.0	1.3	1.1	1.3	1.5	1.1	1.0	1.3	1.0	1.0	1.0	1.0	1.0	1.0	1.0						
Depth to Water	***ft bgs***	304.33	306.41	307.40	309.60	311.05	312.50	314.20	315.75	316.43	NM	318.70	315.46	319.63	319.64	319.65	319.66	319.66	319.64	319.66	320.30	320.68						
Temperature	***deg C***	7.4	10.7	8.1	7.5	9.6	7.3	12.5	12.3	11.9	10.4	10.4	7.8	9.8	19.5	8.0	9.7	12.6	19.4	10.7	11.5	17.3	dry	dry	dry	dry	dry	dry
pH	***SU***	7.32	6.64	6.66	6.74	6.65	6.73	6.76	6.75	6.76	6.80	6.79	6.89	6.95	6.97	7.10	7.03	7.10	7.11	7.11	7.02	7.05						
Specific Conductance	***µS/cm***	6573	6053	6072	6107	6012	6057	5725	5598	5562	5451	5108	5043	4779	4339	4656	4051	3198	4238	4465	4486	4477						
Oxygen Reduction Potential	***mV***	-22.8	19.4	24.6	12.6	11.8	34.8	86.6	25.8	6.5	29.2	20.5	36.7	51.7	62.3	55.2	73.5	83.5	5.2	26.5	-56.1	2.4						
Lab Analytical Results:																												
Hardness as CaCO3	***mg/L***	4360		4190			3920			3540		3070	3200	2780	2690	2710	2660	2550	2740	2510	2440	2490						
pH (Lab)	***SU***	7.10		6.85			6.77			6.85		6.87	6.9	6.93	6.66	7.04	7.20	6.93	7.1	6.98	7.19	7.26						
Total Dissolved Solids (Lab)	***mg/L***	6520		6520			120*			6080		5210	4980	4670	4490	4570	4480	4390	4440	4310	4440	4450						
Calcium	***mg/L***	615		559			553			492		431	467	400	398	406	398	378	415	370	359	365						
Magnesium	***mg/L***	687		678			617			560		484	495	431	411	413	404	390	413	385	374	383						
Sodium	***mg/L***	294		283			296			304		276	296	274	261	273	272	266	263	254	257	268						
Potassium	***mg/L***	15.0		14.4			12.4			12.8		11.1	<20.0	10.6	10.3	10.5	11.1	10.7	11	10.4	10.7	10.6						
Alkalinity, Total	***mg/L***	160		160			143			183		220	215	233	236	246	245	290	255	295	285	270						
Alkalinity, Bicarbonate	***mg/L***	160		160			143			183		220	215	233	236	246	245	290	255	295	285	270						
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						
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						
Chloride	***mg/L***	97.4		28.6			27.3			29.9		29.6	28.4	29.0	26.0	26.6	24.9	25.8	26	26.6	26.2	26.1						
Fluoride	***mg/L***	2.83		<0.500			<0.500			<0.500		<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500						
Sulfate as SO4	***mg/L***	205		4300			4280			4260		3460	3080	3020	3160	2890	2620	2740	2780	2790	2870	2820						
Total Organic Carbon (TOC)	***mg/L***	3.45		3.08			2.91			3.57		3.10	3.16	3.39	3.31	3.26	1.71	3.82	3.33	3.25	3.26	3.14						
Nitrate/Nitrite as N	***mg/L***	<0.020		<0.020			<0.020			<0.020		<0.020	0.049	0.154	0.117	0.093	0.039	0.156	0.118	0.096	0.131	0.103						
Ammonia as N ^	***mg/L***	NA		NA			NA			NA		2.72	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						
Aluminum	***mg/L***	<0.500		<0.250			<0.250			<0.250		<0.250	<1.00	<0.500	<0.250	<0.500	<0.250	<0.250	<0.250	<0.250	<0.250	<0.250						
Arsenic	***mg/L***	<0.0025		<0.0025			0.0009			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025						
Cadmium	***mg/L***	<0.0005		<0.0005			0.0001			<0.0005		<0.0005	<0.0005	<0.0010	<0.0005	<0.0010	<0.0005	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025						
Copper	***mg/L***	0.0116		0.0081			0.0035			0.0039		0.0017	0.0028	<0.0050	<0.0025	<0.0050	<0.0025	0.0068	0.0082	0.0063	0.0065	0.0093						
Iron	***mg/L***	1.37		3.75			3.93			3.22		2.72	1.95	1.38	1.10	1.24	1.17	0.890	1.48	1.15	1.41	1.37						
Lead	***mg/L***	<0.0025		<0.0025			<0.0005			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025						
Manganese	***mg/L***	0.788		0.802			0.724			0.690		0.585	0.551	0.526	0.520	0.454	0.437	0.397	0.407	0.391	0.420	0.431						
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						
Molybdenum	***mg/L***	<0.0025		<0.0025			<0.0005			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025						
Selenium	***mg/L***	<0.0050		<0.0050			0.0028			<0.0050		<0.0050	<0.005	<0.0100	<0.0050	<0.0100	<0.0050	<0.0050	<0.0050	<0.0100	<0.0040	<0.0050						
Silica (Si02)	***mg/L***	12.3		11.9			14.3			13.4		12.5	<21.4	11.0	11.4	12.3	11.9	13.2	14.3	13.6	12.7	12.3						
Silicon	***mg/L***	5.77		5.57			6.69			6.28		5.83	<10.00	5.17	5.35	5.76	5.58	6.17	6.67	6.36	5.96	5.73						
Uranium	***mg/L***	<0.0005		<0.0005			<0.0001			<0.0005		<0.0005	<0.0025	<0.0050	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025	<0.0020	<0.0025						
Zinc	***mg/L***	0.0689		<0.0100			0.0082			0.0108		0.0117	0.0107	<0.0200	0.0159	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100	<0.0080	<0.0100						

Notes & Definitions:

*	**Anomalous value under review**
^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-6-MI																													
Year		**2018**	**2019**											**2020**				**2021**				**2022**				**2023**			
Quarter		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	5	6	7	8	9	11	2	5	8	11	2	5	8	11	2	5	8	11	3	5	8	11
Sample Date		12/29	1/31	2/25	3/21	4/19	5/20	5/30	6/19	7/23	8/15	9/24	11/7	2/5	5/14	8/11	11/24	2/9	5/17	8/9	11/9	2/15	5/10	8/1	11/25	3/13	5/31	8/8	11/16
Lab Analysis (Y/N)		Y	N	Y	N	N	N#	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																													
Purge Flow Rate	***gpm***	NM	NM	NM	0.5	0.1	0.015	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
Total Purged	***gal***	11.3	0.5	1.5	0.5	1.0	0.9																						
Depth to Water	***ft bgs***	374.49	368.09	367.92	370.49	369.50	371.00																						
Temperature	***deg C***	14.3	13.6	10.8	9.7	16.7	3.9																						
pH	***SU***	8.26	7.43	7.21	7.55	7.97	7.84																						
Specific Conductance	***µS/cm***	3390	3620	3132	2619	2202	2527																						
Oxygen Reduction Potential	***mV***	103.0	-80.2	77.6	59.8	38.3	64.9																						
Lab Analytical Results:																													
Hardness as CaCO3	***mg/L***	679		147																									
pH (Lab)	***SU***	8.18		8.35																									
Total Dissolved Solids (Lab)	***mg/L***	2480		1880																									
Calcium	***mg/L***	104		23.4																									
Magnesium	***mg/L***	102		21.6																									
Sodium	***mg/L***	646		565																									
Potassium	***mg/L***	12.0		5.30																									
Alkalinity, Total	***mg/L***	395		615																									
Alkalinity, Bicarbonate	***mg/L***	345		615																									
Alkalinity, Carbonate	***mg/L***	50.0		<10.0																									
Alkalinity, Hydroxide	***mg/L***	<10.0		<10.0																									
Chloride	***mg/L***	175		178																									
Fluoride	***mg/L***	2.06		2.46																									
Sulfate as SO4	***mg/L***	1210		585																									
Total Organic Carbon (TOC)	***mg/L***	3.63		4.55																									
Nitrate/Nitrite as N	***mg/L***	0.023		<0.020																									
Aluminum	***mg/L***	<0.100		<0.100																									
Arsenic	***mg/L***	0.0084		0.0144																									
Cadmium	***mg/L***	<0.0001		<0.0002																									
Copper	***mg/L***	0.0113		0.0112																									
Iron	***mg/L***	<0.100		<0.100																									
Lead	***mg/L***	<0.0005		<0.0010																									
Manganese	***mg/L***	0.0500		0.0224																									
Mercury (dissolved)	***mg/L***	<0.0002		<0.0002																									
Mercury (dissolved low-level)	***ng/L***																												
Molybdenum	***mg/L***	0.0558		0.0690																									
Selenium	***mg/L***	0.0098		0.0127																									
Silica (Si02)	***mg/L***	9.93		9.05																									
Silicon	***mg/L***	4.64		4.23																									
Uranium	***mg/L***	0.0200		0.0118																									
Zinc	***mg/L***	0.0092		0.0143																									

Notes & Definitions:

**No sample collected, due to low yield, insufficient volume for lab sample after field parameters we measured**

Y/N **yes or no**
gpm **gallons per minute**
deg C **degrees Celsius**
SU **standard pH units**
µS/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 CaCO3.*

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-6-C																												
Year		**2018**	**2019**										**2020**				**2021**				**2022**				**2023**			
Quarter		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	11	2	5	8	11	2	5	8	11	2	5	8	11	3	5	8	11
Sample Date		12/24	1/30	2/21	3/21	4/23	5/20	6/19	7/23	8/15	9/24	11/7	2/5	5/12	8/11	11/24	2/9	5/17	8/9	11/9	2/15	5/10	8/1	11/25	3/13	5/18	8/8	11/16
Lab Analysis (Y/N)		N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																												
Purge Flow Rate	***gpm***	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
Total Purged	***gal***																											
Depth to Water	***ft bgs***																											
Temperature	***deg C***																											
pH	***SU***																											
Specific Conductance	***µS/cm***																											
Oxygen Reduction Potential	***mV***																											
Lab Analytical Results:																												
Hardness as CaCO3	***mg/L***																											
pH (Lab)	***SU***																											
Total Dissolved Solids (Lab)	***mg/L***																											
Calcium	***mg/L***																											
Magnesium	***mg/L***																											
Sodium	***mg/L***																											
Potassium	***mg/L***																											
Alkalinity, Total	***mg/L***																											
Alkalinity, Bicarbonate	***mg/L***																											
Alkalinity, Carbonate	***mg/L***																											
Alkalinity, Hydroxide	***mg/L***																											
Chloride	***mg/L***																											
Fluoride	***mg/L***																											
Sulfate as SO4	***mg/L***																											
Total Organic Carbon (TOC)	***mg/L***																											
Nitrate/Nitrite as N	***mg/L***																											
Aluminum	***mg/L***																											
Arsenic	***mg/L***																											
Cadmium	***mg/L***																											
Copper	***mg/L***																											
Iron	***mg/L***																											
Lead	***mg/L***																											
Manganese	***mg/L***																											
Mercury (dissolved)	***mg/L***																											
Mercury (dissolved low-level)	***ng/L***																											
Molybdenum	***mg/L***																											
Selenium	***mg/L***																											
Silica (Si02)	***mg/L***																											
Silicon	***mg/L***																											
Uranium	***mg/L***																											
Zinc	***mg/L***																											

Notes & Definitions:

Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*
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-6-LM																													
Year		**2018**	**2019**											**2020**				**2021**				**2022**				**2023**			
Quarter		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	2	5	8	11	3	5	8	11
Sample Date		12/30	1/31	2/25	3/21	4/23	5/20	6/19	7/23	8/15	9/24	10/28	11/7	2/5	5/14	8/11	11/25	2/9	5/17	8/9	11/9	2/15	5/10	8/31	11/25	3/13	5/31	8/8	11/16
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
Field Parameters:																													
Purge Flow Rate	***gpm***	NM	NM	0.06	2.00	0.03	0.03	0.10	0.06	0.03	0.02	0.01	0.03	0.01	0.13	0.01	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.13	0.20	0.06	0.03	0.05	0.05
Total Purged	***gal***	0.5	0.5	1.5	2.0	2.0	2.3	1.3	1.3	1.8	2.0	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.0	1.5	1.0	1.2	1.0	1.5	1.4	1.4
Depth to Water	***ft bgs***	535.72	538.73	539.34	540.64	539.98	537.58	540.00	540.35	540.24	540.17	539.80	540.18	539.70	539.45	539.98	540.30	539.78	540.20	541.25	541.34	541.00	541.30	542.20	541.30	541.37	541.50	541.88	541.85
Temperature	***deg C***	7.9	14.3	7.8	8.1	9.1	9.3	11.7	14.0	13.4	11.6	10.1	12.4	10.5	11.3	14.8	11.4	10.2	11.6	14.4	11.1	11.0	11.8	13.1	10.4	8.7	14.4	13.5	10.9
pH	***SU***	7.64	7.38	7.51	7.54	7.49	7.54	7.67	7.80	7.65	7.43	7.45	7.37	7.39	7.54	7.44	7.47	7.44	7.54	7.52	7.49	7.46	7.56	7.64	7.70	7.77	7.58	7.67	7.55
Specific Conductance	***µS/cm***	6011	3784	3503	1461	1164	1296	1400	1272	1532	2104	2267	2113	2283	2287	2442	2495	2136	1629	2531	2478	2362	2297	2053	1889	1599	1321	1525	1655
Oxygen Reduction Potential	***mV***	185.3	10.7	40.9	-32.8	-35.8	-111.0	-194.5	-163.6	-67.2	6.4	-48.0	19.9	-128.9	-222.9	32.1	21.8	3.5	-188.8	-2.6	-36.6	-135.8	-112.6	-181.6	-132.5	-80.3	-41.7	-75.3	-173.0
Lab Analytical Results:																													
Hardness as CaCO3	***mg/L***	2260		1270			431			621			843	1060	965	1130	1160	1120	1010	1280	1130	1030	954	971	870	687	456	573	621
pH (Lab)	***SU***	7.60		7.52			7.47			7.59			7.32	7.43	7.18	6.95	7.45	7.49	7.45	7.37	7.57	7.54	7.60	7.90	7.60	7.75	7.58	7.79	7.76
Total Dissolved Solids (Lab)	***mg/L***	5100		2840			875			1150			1630	1840	1840	2040	2020	1990	1830	2290	2050	1990	1840	1870	1620	1290	940	1030	1060
Calcium	***mg/L***	367		216			75.9			103			136	173	150	179	184	176	154	201	174	159	145	152	133	109	76.8	91.5	99.1
Magnesium	***mg/L***	325		177			58.7			88.3			122	153	143	165	171	166	152	189	170	154	144	143	131	101	64.2	83.5	90.6
Sodium	***mg/L***	459		248			129			153			172	203	188	194	194	188	169	177	166	162	158	163	150	139	125	128	132
Potassium	***mg/L***	173		64.5			14.0			13.7			11.3	11	7.82	7.20	6.04	5.96	5.22	5.69	4.99	5.22	<5.00	4.84	4.34	4.04	3.14	< 5.00	3.34
Alkalinity, Total	***mg/L***	205		315			371			381			355	320	353	335	329	336	346	330	380	365	365	337	310	368	470	390	355
Alkalinity, Bicarbonate	***mg/L***	205		315			371			381			355	320	353	335	329	336	346	330	380	365	365	337	310	368	470	390	355
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
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
Chloride	***mg/L***	256		43.7			5.73			8.70			11.4	11	11.7	12.2	12.4	11	10.5	12.6	11.1	10.5	10.9	10.7	9.29	6.75	5.09	5.75	6.09
Fluoride	***mg/L***	0.530		<0.500			0.324			<0.500			<0.500	0.352	<0.500	0.346	0.356	0.318	0.340	0.418	0.306	0.328	<0.500	0.310	0.322	0.328	0.254	< 0.200	0.240
Sulfate as SO4	***mg/L***	3050		1790			338			492			830	951	904	1260	1170	1020	978	1300	1100	555	931	1010	848	563	366	500	534
Total Organic Carbon (TOC)	***mg/L***	3.46		2.61			1.57			1.78			1.85	1.76	1.84	1.87	1.93	3.17	1.81	1.91	1.94	1.83	1.74	2.08	1.29	2.13	<2.5	1.66	0.764
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	0.022	< 0.020	< 0.020
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			1.99	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
Aluminum	***mg/L***	<0.250		<0.250			<0.050			<0.050			<0.100	<0.250	<0.250	<0.150	<0.250	<0.250	<0.150	<0.100	<0.100	<0.250	<0.250	<0.100	<0.100	<0.100	<0.100	< 0.250	< 0.100
Arsenic	***mg/L***	0.0039		0.0049			0.0036			0.0038			0.0035	0.0044	0.0034	0.0038	0.0036	0.0038	0.0038	0.0039	0.0038	0.0042	0.0034	0.0034	0.0043	0.0054	0.0030	< 0.0025	0.0040
Cadmium	***mg/L***	<0.0005		<0.0005			<0.0001			<0.0001			<0.0002	<0.0002	<0.0005	<0.0003	<0.0005	<0.0005	<0.0015	<0.0010	<0.0010	<0.0010	<0.0025	<0.001	<0.0010	<0.0025	<0.0010	< 0.0025	< 0.0010
Copper	***mg/L***	0.0135		0.0064			0.0017			0.0018			0.0069	0.0014	<0.0025	<0.0015	<0.0025	<0.0025	0.0042	0.0046	0.0040	0.0044	0.0038	0.0054	0.0030	0.0100	0.0016	< 0.0025	0.0032
Iron	***mg/L***	<0.250		<0.250			<0.050			<0.050			<0.100	<0.250	<0.250	<0.150	<0.250	<0.250	<0.150	<0.100	<0.100	<0.250	<0.250	<0.100	<0.100	0.152	<0.1	< 0.250	< 0.100
Lead	***mg/L***	<0.0025		<0.0025			<0.0005			<0.0005			<0.0010	<0.001	<0.0025	<0.0015	<0.0025	<0.0025	<0.0015	<0.0010	<0.0010	<0.0010	<0.0025	<0.001	<0.0010	<0.0025	<0.001	< 0.0025	< 0.0010
Manganese	***mg/L***	0.383		0.223			0.0692			0.148			0.166	0.184	0.171	0.267	0.292	0.253	0.203	0.257	0.263	0.339	0.249	0.174	0.220	0.221	0.0961	0.111	0.0727
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
Molybdenum	***mg/L***	0.0490		0.0169			0.0037			0.0025			0.0022	0.002	<0.0025	0.0023	<0.0025	<0.0025	<0.0015	0.0016	0.0013	0.0013	<0.0025	0.0014	0.0011	<0.0025	<0.0010	< 0.0025	< 0.0010
Selenium	***mg/L***	0.0080		<0.0050			<0.0010			<0.0010			<0.0020	<0.002	<0.0050	<0.0030	<0.0050	0.0151	<0.0030	<0.0020	<0.0040	<0.0020	<0.0050	0.0028	0.0026	0.0060	0.0028	< 0.0050	0.0031
Silica (Si02)	***mg/L***	10.5		13.5			17.0			17.4			15.9	17.1	15.1	14.7	16.0	15.6	16.4	16.8	16.6	16.0	15.5	17.3	16.7	16.8	17.4	16.3	17.2
Silicon	***mg/L***	4.91		6.29			7.96			8.12			7.43	7.97	7.07	6.88	7.47	7.3	7.68	7.85	7.75	7.49	7.24	8.07	7.80	7.84	8.12	7.64	8.06
Uranium	***mg/L***	0.0230		0.0075			0.0039			0.0054			0.0047	0.0055	0.0043	0.0046	0.0042	0.0039	0.0030	0.0037	0.0032	0.0028	0.0025	0.0026	0.0025	<0.0025	0.0011	< 0.0025	0.0020
Zinc	***mg/L***	0.0323		<0.0100			<0.0020			<0.0040			<0.0040	<0.004	<0.0100	0.0069	<0.0100	<0.0100	<0.0060	<0.0040	<0.0040	<0.0040	<0.0100	<0.0040	<0.0040	<0.0100	<0.0040	< 0.0100	< 0.0040

Notes & Definitions:

^ **one-time analysis**
Y/N **yes or no**
gpm **gallons per minute**
deg C **degrees Celsius**
SU **standard pH units**
µS/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 CaCO3.*

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-7-EAA

Year		2018	2019											2020				2021				2022				2023			
Quarter		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
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
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
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	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
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	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
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	36.85	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
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	10.3	10.1	10.5	10.9	10.6	10.5	10.7	10.8	11.1	13.1	11.7	11.8	11.4
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
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
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
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
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
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
Calcium	mg/L	170		179			171			173			162	165	175	183	157	186	167	167	164	173	166	154	165	174	161	151	173
Magnesium	mg/L	124		142			135			137			144	134	142	150	133	152	131	138	133	149	132	129	134	143	134	127	141
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	<0.0025	<0.0025	<0.0025	< 0.0025	< 0.0010
Manganese	mg/L	3.72		4.49			4.01			4.22			4.76	4.86	3.63	4.49	4.42	5.22	4.21	4.39	4.66	4.48	4.58	4.61	4.75	4.69	4.22	4.46	4.40
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
Molybdenum	mg/L	0.0008		0.0011			0.0007			0.0009			<0.0010	0.001	<0.0010	<0.0015	<0.0025	0.0006	<0.0025	<0.0025	<0.0010	0.0007	0.0007	<0.0025	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010
Selenium	mg/L	<0.0020		<0.0020			<0.0010			0.0011			<0.0020	<0.002	<0.0020	<0.0030	<0.0050	<0.0010	<0.0050	<0.0050	<0.0020	<0.0010	0.0012	<0.0050	<0.0020	<0.0050	<0.0050	< 0.0050	< 0.0020
Silica (Si02)	mg/L	16.6		16.1			16.1			16.9			16.8	16.4	15.8	16.9	14.9	17.7	17.1	16.7	17.2	18.3	16.8	16.1	16.9	17.5	17.0	15.2	16.5
Silicon	mg/L	7.75		7.52			7.55			7.90			7.83	7.67	7.37	7.91	6.96	8.28	7.97	7.81	8.03	8.57	7.86	7.54	7.92	8.16	7.95	7.11	7.72
Uranium	mg/L	0.0021		0.0018			0.0017			0.0018			0.0020	0.0019	0.0016	0.0018	<0.0025	0.0018	<0.0025	<0.0025	0.0015	<0.0025	0.0018	<0.0025	0.0016	<0.0025	0.0018	< 0.0025	0.0025
Zinc	mg/L	<0.0050		<0.0040			0.0021			0.0020			<0.0040	<0.004	<0.0040	<0.0060	<0.0100	0.0022	<0.0100	<0.0100	<0.0040	<0.0020	0.0041	<0.0100	<0.0040	<0.0100	<0.0100	< 0.0100	< 0.0040

Notes & Definitions:

^	one-time analysis
Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/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 CaCO3.*

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-8-EAA

Year		2018	2019											2020				2021				2022				2023			
Quarter		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
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
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
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	0.25	0.25	0.33	0.11	0.09	0.38
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
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
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
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
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
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
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
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
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
Calcium	mg/L	152		151			148			154			143	149	153	160	134	156	146	146	149	158	150	143	149	163	159	152	156
Magnesium	mg/L	119		118			120			121			124	119	127	130	115	127	115	120	118	131	119	115	121	130	130	123	125
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	<0.0025	<0.0025	< 0.0025	< 0.0010
Manganese	mg/L	3.17		3.52			3.06			3.37			3.39	3.7	3.36	3.54	3.81	3.55	3.5	3.6	3.66	3.77	3.70	3.77	3.87	3.98	3.85	3.91	4.16
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
Molybdenum	mg/L	0.0009		0.0011			0.0008			0.0011			0.0008	<0.0010	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	0.0009	0.0009	<0.0025	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010
Selenium	mg/L	<0.0020		<0.0020			0.0010			0.0013			<0.0010	<0.0020	<0.0020	<0.0030	<0.0050	0.0046	<0.0030	<0.0050	0.0035	<0.0010	0.0015	<0.0050	<0.0020	<0.0050	<0.0050	< 0.0050	< 0.0020
Silica (Si02)	mg/L	16.3		15.3			15.7			16.1			15.9	15.7	15.0	16.1	14.2	16.0	16.5	15.5	16.4	17.3	16.0	15.4	16.2	16.9	16.6	15.4	16.5
Silicon	mg/L	7.63		7.15			7.32			7.52			7.42	7.32	7.02	7.53	6.63	7.48	7.72	7.24	7.68	8.10	7.47	7.18	7.60	7.89	7.75	7.22	7.72
Uranium	mg/L	0.0021		0.0017			0.0016			0.0018			0.0019	0.0019	0.0017	0.0017	<0.0025	0.0016	0.0016	<0.0025	0.0015	<0.0025	<0.0025	<0.0025	0.0016	<0.0025	0.0017	< 0.0025	0.0019
Zinc	mg/L	<0.0050		<0.0040			<0.0020			<0.0020			<0.0020	<0.0040	<0.0040	<0.0060	<0.0100	<0.0060	<0.0060	<0.0100	<0.0040	<0.0020	0.0021	<0.0100	<0.0040	<0.0100	0.0063	< 0.0100	< 0.0040

Notes & Definitions:

^	one-time analysis
Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/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 CaCO3.*

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-8-MI																													
Year		**2018**	**2019**											**2020**				**2021**				**2022**				**2023**			
Quarter		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
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
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
Field Parameters:																													
Purge Flow Rate	***gpm***	1.10	1.00	0.50	3.00	0.50	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
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	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
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
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
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
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
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
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
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
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
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
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
Sodium	***mg/L***	344		312			289			289			275	269	272	260	232	237	256	229	238	226	220	213	210	230	236	216	215
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	< 0.0025	< 0.0010
Manganese	***mg/L***	0.0495		0.0383			0.0327			0.0351			0.0377	0.0391	0.0393	0.0551	0.0546	0.0579	0.0412	0.0544	0.0443	0.0603	0.0553	0.0597	0.0693	0.0569	0.0560	0.0562	0.0562
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
Molybdenum	***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	<0.0010	<0.0005	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010
Selenium	***mg/L***	<0.0020		<0.0020			0.0010			0.0010			<0.0010	<0.0020	0.0020	<0.0030	<0.0050	0.0425	0.0037	0.0072	0.0264	0.0016	0.0040	<0.0050	0.0183	0.0119	0.0049	0.0050	0.0076
Silica (Si02)	***mg/L***	12.1		12.4			12.8			12.5			12.6	12.2	11.9	12.9	12.1	13.5	13.2	13.6	13.7	15.2	14.0	13.6	14.0	13.7	13.9	12.5	13.8
Silicon	***mg/L***	5.65		5.78			5.99			5.83			5.88	5.71	5.55	6.05	5.67	6.32	6.17	6.35	6.39	7.08	6.57	6.35	6.52	6.42	6.48	5.85	6.45
Uranium	***mg/L***	0.0002		0.0002			0.0002			0.0001			0.0001	<0.0010	<0.0025	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010	<0.0025	<0.0025	<0.0025	<0.0010	<0.0025	<0.0025	< 0.0025	< 0.0010
Zinc	***mg/L***	<0.0050		<0.0040			<0.0020			<0.0020			<0.0020	<0.0040	<0.0040	<0.0060	<0.0100	<0.0060	<0.0060	<0.0100	<0.0040	<0.0020	<0.0020	<0.0100	<0.0040	<0.0100	0.0047	< 0.0100	< 0.0040

Notes & Definitions:

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-8-LM

Year		**2018**	**2019**											**2020**				**2021**				**2022**				**2023**			
Quarter		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
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
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
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	0.25	0.13	0.13	0.13	0.13	0.25	0.25	0.25	0.25	0.15	NM	0.14	0.03	0.16	0.20
Total Purged	***gal***	30	4.0	1.5	1.0	2.0	1.3	6.8	2.0	2.0	1.0	1.0	1.5	1.0	1.0	2.0	1.0	2.0	1.5	1.0	1.0	1.0	1.0	1.0	NM	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
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
pH	***SU***	8.37	8.70	8.71	8.41	8.70	8.50	8.66	8.64	8.58	8.44	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
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
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
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
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
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
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
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
Sodium	***mg/L***	382		341			317			306			305	309	315	337	304	319	315	308	291	316	298	298	301	287	315	289	299
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
Iron	***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
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
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
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
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	<0.0025	<0.0005	<0.0025	<0.0015	< 0.0025	< 0.0010
Selenium	***mg/L***	0.0020		<0.0020			<0.0010			<0.0010			<0.0010	<0.0010	<0.0020	<0.0030	<0.0050	0.0031	<0.0030	<0.0050	<0.0020	<0.0010	<0.0010	<0.0050	<0.0010	<0.0050	<0.0030	< 0.0050	< 0.0020
Silica (Si02)	***mg/L***	9.09		8.45			8.68			8.28			7.77	7.62	7.40	7.84	7.4	8.17	8.21	7.82	8.28	8.44	8.13	7.63	8.45	6.83	7.53	6.17	8.14
Silicon	***mg/L***	4.25		3.95			4.06			3.87			3.63	3.56	3.46	3.67	3.46	3.82	3.84	3.66	3.87	3.95	3.80	3.56	3.95	3.19	3.52	2.89	3.80
Uranium	***mg/L***	0.0044		<0.0002			0.0001			0.0001			<0.0002	<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	<0.0015	< 0.0025	< 0.0010
Zinc	***mg/L***	0.0080		<0.0040			0.0023			<0.0020			<0.0020	<0.002	<0.0040	<0.0060	<0.0100	<0.0060	<0.0060	<0.0100	<0.0040	<0.0020	0.0079	<0.0100	0.0022	<0.0100	0.0032	< 0.0100	< 0.0040

Notes & Definitions:

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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-8-PL																													
Year		**2018**	**2019**											**2020**				**2021**				**2022**				**2023**			
Quarter		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
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
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
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	0.25	0.75	0.25	0.25	0.25	0.25	0.25	0.13	1.00	0.22	0.18	0.13	0.16
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	2.0	1.8	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	16.0	<10.0	12.0	<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
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
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
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
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
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
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
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
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	<0.050	<0.100	<0.050	< 0.100	< 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
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
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
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
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	<0.0005	<0.0025	<0.0010	<0.0025	<0.0025	<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
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
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	<0.0010	<0.0005	<0.0025	<0.0005	< 0.0010	< 0.0005
Selenium	***mg/L***	0.0012		<0.0020			<0.0010			<0.0010			<0.0010	<0.001	<0.0010	<0.0020	<0.0020	0.0038	<0.0020	<0.0020	0.0031	<0.0010	0.0014	<0.0020	0.0012	<0.0050	0.0006	< 0.0020	< 0.0010
Silica (Si02)	***mg/L***	14.1		16.3			17.7			18.5			18.0	18.9	18.7	19.9	18.5	20.1	21.5	20	20.8	22.2	20.4	20.8	20.9	22.6	21.5	20.6	20.8
Silicon	***mg/L***	6.58		7.64			8.28			8.67			8.42	8.82	8.75	9.28	8.66	9.40	10.00	9.37	9.71	10.4	9.54	9.75	9.75	10.6	10.0	9.61	9.71
Uranium	***mg/L***	0.0052		0.0040			0.0010			0.0009			0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.001	<0.0010	<0.0005	<0.0005	<0.0025	<0.0010	<0.0005	<0.0025	0.0001	< 0.0010	< 0.0005
Zinc	***mg/L***	0.0344		<0.0040			<0.0020			<0.0080			<0.0020	<0.0020	<0.0100	<0.0040	<0.0040	<0.0020	<0.004	<0.0040	<0.0020	<0.0020	<0.0020	<0.0040	<0.0020	<0.0100	0.0009	< 0.0040	< 0.0020

Notes & Definitions:

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/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 CaCO3.*

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.*

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11 December 2023

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326

RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 11/29/23 14:03. 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,

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: T104704514-23-18

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: T104704398-23-16

Table of Contents

Samples in Report	3
Sample Results	4
Quality Assurance Results	10
Notes and Definitions	15
Qualifier Summary	16
Chain of Custody & Attachments	17

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GCC Energy, LLC	Project:	GCC GW & SW Baseline	
6473 CR 120	Project Name / Number:	[none]	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	12/11/23 14:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Wiltse Well	2311320-01	Water	11/29/23 11:12	11/29/23 14:03	
Hay Gulch Ditch Up Gradient (HGDUG)	2311320-02	Water	11/29/23 12:32	11/29/23 14:03	
MW-HGA-4	2311320-03	Water	11/29/23 12:07	11/29/23 14:03	

Green Analytical Laboratories

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.

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

Wiltse Well

2311320-01 (Ground Water)
Sampled Date: 11/29/23 11:12

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**465**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**465**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Cation/Anion Balance	**-2.13**	-100	-100	%	1	12/07/23 09:28	Calculation		JDA
Chloride*	**62.2**	5.00	0.278	mg/L	5	12/05/23 21:37	EPA300.0		AWG
Fluoride*	<0.500	0.500	0.0486	mg/L	5	12/05/23 21:37	EPA300.0		AWG
Nitrate/Nitrite as N*	**2.85**	0.100	0.014	mg/L as N	5	12/07/23 14:29	EPA353.2		AWG
pH*	**7.45**			pH Units	1	11/30/23 12:25	EPA150.1		CAI
pH Temperature, degrees C	**17.0**			pH Units	1	11/30/23 12:25	EPA150.1		CAI
Sulfate*	**1020**	10.0	1.24	mg/L	10	12/06/23 09:40	EPA300.0		AWG
Total Dissolved Solids*	**2050**	10.0		mg/L	1	12/04/23 15:55	EPA160.1		IDB/CAI
Total Organic Carbon*	**3.96**	0.500	0.175	mg/L	1	12/05/23 18:44	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.220	mg/L	5	12/05/23 19:21	EPA200.7		AES
Calcium*	**251**	0.500	0.309	mg/L	5	12/05/23 19:21	EPA200.7		AES
Hardness as CaCO3	**1320**	3.31	1.49	mg/L	5	12/05/23 19:21	2340 B		AES
Iron*	<0.250	0.250	0.076	mg/L	5	12/05/23 19:21	EPA200.7		AES
Magnesium*	**168**	0.500	0.176	mg/L	5	12/05/23 19:21	EPA200.7		AES
Potassium*	**5.31**	5.00	0.519	mg/L	5	12/05/23 19:21	EPA200.7		AES
Silica (Si02)	**14.7**	5.35	0.814	mg/L	5	12/05/23 19:21	Calculation		AES
Silicon	**6.89**	2.50	0.381	mg/L	5	12/05/23 19:21	EPA200.7		AES
Sodium*	**78.9**	5.00	2.05	mg/L	5	12/05/23 19:21	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0018	mg/L	5	12/04/23 17:43	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	12/04/23 17:43	EPA200.8		AES
Copper*	<0.0100	0.0100	0.0021	mg/L	5	12/04/23 17:43	EPA200.8	B3	AES
Lead*	<0.0025	0.0025	0.0002	mg/L	5	12/04/23 17:43	EPA200.8		AES
Manganese*	**1.33**	0.0025	0.0009	mg/L	5	12/04/23 17:43	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0009	mg/L	5	12/04/23 17:43	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0018	mg/L	5	12/04/23 17:43	EPA200.8		AES
Uranium	**0.0030**	0.0025	0.0002	mg/L	5	12/04/23 17:43	EPA200.8		AES
Zinc*	**0.0164**	0.0100	0.0024	mg/L	5	12/04/23 17:43	EPA200.8		AES

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Veronica J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

Wiltse Well

2311320-01 (Ground Water)
Sampled Date: 11/29/23 11:12

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/06/23 13:03	EPA245.7		CAI

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Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

Hay Gulch Ditch Up Gradient (HGDUG)

2311320-02 (Surface Water)
Sampled Date: 11/29/23 12:32

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**300**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**300**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Cation/Anion Balance	**3.21**	-100	-100	%	1	12/07/23 09:28	Calculation		JDA
Chloride*	**45.8**	1.00	0.0555	mg/L	1	12/05/23 21:57	EPA300.0		AWG
Fluoride*	**0.189**	0.100	0.00971	mg/L	1	12/05/23 21:57	EPA300.0		AWG
Nitrate/Nitrite as N*	**0.113**	0.020	0.003	mg/L as N	1	12/07/23 14:30	EPA353.2		AWG
Oil & Grease (HEM)	<5.00	5.00	2.87	mg/L	1	12/07/23 09:30	EPA1664 A		IDB
pH*	**7.85**			pH Units	1	11/30/23 12:25	EPA150.1		CAI
pH Temperature, degrees C	**17.4**			pH Units	1	11/30/23 12:25	EPA150.1		CAI
SAR	**0.66**			No Unit	1	12/05/23 19:26	Calculation		AES
Sulfate*	**152**	1.00	0.124	mg/L	1	12/05/23 21:57	EPA300.0		AWG
Total Dissolved Solids*	**600**	10.0		mg/L	1	12/04/23 15:55	EPA160.1		IDB/CAI
Total Organic Carbon*	**6.45**	0.500	0.175	mg/L	1	12/05/23 19:03	5310C		AES
Total Suspended Solids*	<2.50	2.50		mg/L	1	12/04/23 00:00	2540 D		CAI/IDB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	12/05/23 19:26	EPA200.7		AES
Calcium*	**86.3**	0.200	0.124	mg/L	2	12/05/23 19:26	EPA200.7		AES
Hardness as CaCO3	**434**	1.32	0.598	mg/L	2	12/05/23 19:26	2340 B		AES
Iron*	<0.100	0.100	0.030	mg/L	2	12/05/23 19:26	EPA200.7		AES
Magnesium*	**53.0**	0.200	0.070	mg/L	2	12/05/23 19:26	EPA200.7		AES
Potassium*	**6.33**	2.00	0.208	mg/L	2	12/05/23 19:26	EPA200.7		AES
Silica (Si02)	**14.0**	2.14	0.326	mg/L	2	12/05/23 19:26	Calculation		AES
Silicon	**6.53**	1.00	0.152	mg/L	2	12/05/23 19:26	EPA200.7		AES
Sodium*	**31.6**	2.00	0.818	mg/L	2	12/05/23 19:26	EPA200.7		AES
Total Recoverable Metals by ICPMS (E200.8)									
Mercury	<0.0100	0.0100	0.00430	ug/L	1	12/07/23 10:24	EPA200.8		AES

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

Hay Gulch Ditch Up Gradient (HGDUG)

2311320-02 (Surface Water)
Sampled Date: 11/29/23 12:32

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0007	mg/L	2	12/04/23 17:47	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	12/04/23 17:47	EPA200.8		AES
Copper*	<0.0040	0.0040	0.0008	mg/L	2	12/04/23 17:47	EPA200.8	B3	AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	12/04/23 17:47	EPA200.8		AES
Manganese*	**0.317**	0.0010	0.0003	mg/L	2	12/04/23 17:47	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0004	mg/L	2	12/04/23 17:47	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0007	mg/L	2	12/04/23 17:47	EPA200.8		AES
Uranium	<0.0010	0.0010	0.00009	mg/L	2	12/04/23 17:47	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	12/04/23 17:47	EPA200.8		AES

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Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

MW-HGA-4

2311320-03 (Ground Water)
Sampled Date: 11/29/23 12:07

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**370**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**370**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Cation/Anion Balance	**4.24**	-100	-100	%	1	12/07/23 09:28	Calculation		JDA
Chloride*	**3.56**	1.00	0.0555	mg/L	1	12/05/23 22:17	EPA300.0		AWG
Fluoride*	**0.331**	0.100	0.00971	mg/L	1	12/05/23 22:17	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	12/07/23 14:33	EPA353.2		AWG
pH*	**7.41**			pH Units	1	11/30/23 12:25	EPA150.1		CAI
pH Temperature, degrees C	**16.4**			pH Units	1	11/30/23 12:25	EPA150.1		CAI
Sulfate*	**143**	1.00	0.124	mg/L	1	12/05/23 22:17	EPA300.0		AWG
Total Dissolved Solids*	**555**	10.0		mg/L	1	12/04/23 15:55	EPA160.1		IDB/CAI
Total Organic Carbon*	**3.84**	1.00	0.350	mg/L	2	12/06/23 11:29	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	12/05/23 19:28	EPA200.7		AES
Calcium*	**79.3**	0.200	0.124	mg/L	2	12/05/23 19:28	EPA200.7		AES
Hardness as CaCO3	**424**	1.32	0.598	mg/L	2	12/05/23 19:28	2340 B		AES
Iron*	**9.53**	0.100	0.030	mg/L	2	12/05/23 19:28	EPA200.7		AES
Magnesium*	**54.9**	0.200	0.070	mg/L	2	12/05/23 19:28	EPA200.7		AES
Potassium*	**2.21**	2.00	0.208	mg/L	2	12/05/23 19:28	EPA200.7		AES
Silica (Si02)	**13.0**	2.14	0.326	mg/L	2	12/05/23 19:28	Calculation		AES
Silicon	**6.06**	1.00	0.152	mg/L	2	12/05/23 19:28	EPA200.7		AES
Sodium*	**38.0**	2.00	0.818	mg/L	2	12/05/23 19:28	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0039**	0.0010	0.0007	mg/L	2	12/04/23 17:49	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	12/04/23 17:49	EPA200.8		AES
Copper*	<0.0040	0.0040	0.0008	mg/L	2	12/04/23 17:49	EPA200.8	B3	AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	12/04/23 17:49	EPA200.8		AES
Manganese*	**0.454**	0.0010	0.0003	mg/L	2	12/04/23 17:49	EPA200.8		AES
Molybdenum*	**0.0055**	0.0010	0.0004	mg/L	2	12/04/23 17:49	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0007	mg/L	2	12/04/23 17:49	EPA200.8		AES
Uranium	<0.0010	0.0010	0.00009	mg/L	2	12/04/23 17:49	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	12/04/23 17:49	EPA200.8		AES

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

MW-HGA-4

2311320-03 (Ground Water)
Sampled Date: 11/29/23 12:07

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/06/23 13:10	EPA245.7		CAI

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233574 - General Prep - Wet Chem										
Blank (B233574-BLK1)				Prepared & Analyzed: 12/01/23						
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L							
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B233574-BS1)				Prepared & Analyzed: 12/01/23						
Alkalinity, Total as CaCO3	100	10.0	mg/L	100		100	85-115			
LCS Dup (B233574-BSD1)				Prepared & Analyzed: 12/01/23						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115	2.02	20	
Reference (B233574-SRM1)				Prepared & Analyzed: 12/01/23						
Alkalinity, Total as CaCO3	75.0	10.0	mg/L	72.7		103	85-115			
Batch B233576 - General Prep - Wet Chem										
Reference (B233576-SRM1)				Prepared & Analyzed: 11/30/23						
pH	7.05		pH Units	7.00		101	98.57-101.42			
Batch B233587 - General Prep - Wet Chem										
Blank (B233587-BLK1)				Prepared: 12/01/23 Analyzed: 12/04/23						
Total Suspended Solids	ND	2.50	mg/L							
Reference (B233587-SRM1)				Prepared: 12/01/23 Analyzed: 12/04/23						
Total Suspended Solids	86.0	2.50	mg/L	100		86.0	85-115			
Batch B233591 - Dissolved ICP										
Blank (B233591-BLK1)				Prepared: 12/04/23 Analyzed: 12/05/23						
SAR	0.00		No Unit							
Batch B233596 - General Prep - Wet Chem										
Blank (B233596-BLK1)				Prepared & Analyzed: 12/04/23						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B233596-SRM1)				Prepared & Analyzed: 12/04/23						
Total Dissolved Solids	370	10.0	mg/L	400		92.5	85-115			
Batch B233608 - General Prep - Wet Chem										

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233608 - General Prep - Wet Chem (Continued)										
Blank (B233608-BLK1)				Prepared & Analyzed: 12/05/23						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B233608-BS1)				Prepared & Analyzed: 12/05/23						
Total Organic Carbon	9.88	0.500	mg/L	10.0		98.8	85-115			
LCS Dup (B233608-BSD1)				Prepared & Analyzed: 12/05/23						
Total Organic Carbon	9.79	0.500	mg/L	10.0		97.9	85-115	0.925	20	
Batch B233612 - IC- Ion Chromatograph										
Blank (B233612-BLK1)				Prepared & Analyzed: 12/05/23						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B233612-BS1)				Prepared & Analyzed: 12/05/23						
Chloride	25.1	1.00	mg/L	25.0		100	90-110			
Fluoride	2.45	0.100	mg/L	2.50		98.0	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.4	90-110			
Batch B233626 - Lachat										
Blank (B233626-BLK1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B233626-BS1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110			
LCS Dup (B233626-BSD1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110	0.499	20	
Batch B233636 - General Prep - Wet Chem										
Blank (B233636-BLK1)				Prepared & Analyzed: 12/07/23						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (B233636-BS1)				Prepared & Analyzed: 12/07/23						
Oil & Grease (HEM)	37.6	5.00	mg/L	40.0		94.0	85-115			
LCS Dup (B233636-BSD1)				Prepared & Analyzed: 12/07/23						
Oil & Grease (HEM)	37.2	5.00	mg/L	40.0		93.0	85-115	1.07	20	

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233591 - Dissolved ICP										
Blank (B233591-BLK1)				Prepared: 12/04/23 Analyzed: 12/05/23						
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 (B233591-BS1)				Prepared: 12/04/23 Analyzed: 12/05/23						
Aluminum	4.12	0.050	mg/L	4.00		103	85-115			
Calcium	3.83	0.100	mg/L	4.00		95.8	85-115			
Iron	3.91	0.050	mg/L	4.00		97.8	85-115			
Magnesium	19.9	0.100	mg/L	20.0		99.5	85-115			
Potassium	8.23	1.00	mg/L	8.00		103	85-115			
Silicon	4.12	0.500	mg/L	4.00		103	85-115			
Sodium	3.37	1.00	mg/L	3.24		104	85-115			
LCS Dup (B233591-BSD1)				Prepared: 12/04/23 Analyzed: 12/05/23						
Aluminum	4.07	0.050	mg/L	4.00		102	85-115	1.19	20	
Calcium	3.80	0.100	mg/L	4.00		95.0	85-115	0.794	20	
Iron	3.83	0.050	mg/L	4.00		95.7	85-115	2.24	20	
Magnesium	19.8	0.100	mg/L	20.0		98.8	85-115	0.718	20	
Potassium	8.18	1.00	mg/L	8.00		102	85-115	0.558	20	
Silicon	4.06	0.500	mg/L	4.00		102	85-115	1.42	20	
Sodium	3.32	1.00	mg/L	3.24		102	85-115	1.50	20	

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

Total Recoverable Metals by ICPMS (E200.8) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233555 - Mercury by 200.8										
Blank (B233555-BLK1)				Prepared & Analyzed: 12/07/23						
Mercury	ND	0.0100	ug/L							
LCS (B233555-BS1)				Prepared & Analyzed: 12/07/23						
Mercury	0.0910	0.0100	ug/L	0.100		91.0	85-115			
LCS Dup (B233555-BSD1)				Prepared & Analyzed: 12/07/23						
Mercury	0.0907	0.0100	ug/L	0.100		90.7	85-115	0.329	20	

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233592 - Dissolved ICPMS										
Blank (B233592-BLK1)				Prepared & Analyzed: 12/04/23						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0005	mg/L							
Copper	0.0010	0.0005	mg/L							B3
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 (B233592-BS1)				Prepared & Analyzed: 12/04/23						
Arsenic	0.0572	0.0005	mg/L	0.0500		114	85-115			
Cadmium	0.0519	0.0005	mg/L	0.0500		104	85-115			
Copper	0.0501	0.0005	mg/L	0.0500		100	85-115			
Lead	0.0502	0.0005	mg/L	0.0500		100	85-115			
Manganese	0.0519	0.0005	mg/L	0.0500		104	85-115			
Molybdenum	0.0498	0.0005	mg/L	0.0500		99.6	85-115			
Selenium	0.280	0.0010	mg/L	0.250		112	85-115			
Uranium	0.0503	0.0005	mg/L	0.0500		101	85-115			
Zinc	0.0493	0.0020	mg/L	0.0500		98.6	85-115			
LCS Dup (B233592-BSD1)				Prepared & Analyzed: 12/04/23						
Arsenic	0.0572	0.0005	mg/L	0.0500		114	85-115	0.0217	20	
Cadmium	0.0515	0.0005	mg/L	0.0500		103	85-115	0.834	20	
Copper	0.0504	0.0005	mg/L	0.0500		101	85-115	0.569	20	
Lead	0.0495	0.0005	mg/L	0.0500		99.1	85-115	1.32	20	
Manganese	0.0522	0.0005	mg/L	0.0500		104	85-115	0.542	20	
Molybdenum	0.0501	0.0005	mg/L	0.0500		100	85-115	0.565	20	
Selenium	0.282	0.0010	mg/L	0.250		113	85-115	0.437	20	
Uranium	0.0497	0.0005	mg/L	0.0500		99.3	85-115	1.18	20	
Zinc	0.0501	0.0020	mg/L	0.0500		100	85-115	1.67	20	

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 14:14

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233601 - EPA 245.7										
Blank (B233601-BLK1)				Prepared: 12/04/23 Analyzed: 12/06/23						
Mercury	ND	100	ng/L							
LCS (B233601-BS1)				Prepared: 12/04/23 Analyzed: 12/06/23						
Mercury	1700	100	ng/L	2000		84.9	76-113			
LCS Dup (B233601-BSD1)				Prepared: 12/04/23 Analyzed: 12/06/23						
Mercury	1700	100	ng/L	2000		85.0	76-113	0.123	20	

Notes and Definitions

B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.
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 J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project:	GCC GW & SW Baseline	
6473 CR 120	Project Name / Number:	[none]	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	12/11/23 14:14

Qualifier Summary

LabNumber	Analysis	Analyte	Qualifier	TextBody
2311320-01	Copper Dissolved by ICPMS	Copper	B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.
2311320-02	Copper Dissolved by ICPMS	Copper	B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.
2311320-03	Copper Dissolved by ICPMS	Copper	B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.
B233592-BLK1	Copper Dissolved by ICPMS	Copper	B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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Table of Contents

Green Analytical Laboratories

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75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Page 17 of 20 2311320 GAL FINAL 12 11 23 1414 12/11/23 14:14:53

Company or Client: GCC Energy
Address: 6473 CR 120
City: Hesperus **State:** CO **Zip:** 81326
Phone #: 970.385.4528
Contact Person: Tom Bird for billing, Landon Beck for logistical or technical
Email Report to: Tom@haygulchservices.com; LBECK@resourcehydrogeologic.com
Project Name(optional):
Sampler Name (Print): BRANDON WADDELL

Bill to (if different):
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Email:

	Sample Name or Location	Collected Date	Collected Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCC GW Baseline	GCC S&S Baseline	GCC SW Baseline						
2311-320 01	WILTSE WELL	11.29.23	11:12								1	2		4			X								
02	HAY GULCH DITCH UP GRADIENT (HGDUG)	11.29.23	12:32								2	2	1	4					X						
03	MW-HGA-4	11.29.23	12:07								1	2		4			X								

ANALYSIS REQUEST

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 receive by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequental 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: 11.29.23 Time: 14:03	**Received By:**
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:

ADDITIONAL REMARKS:
Report to State? (Circle) Yes No

laser #2

7.8 °C Temperature at receipt:
NRN CHECKED BY
X On Ice
No Ice

† GAL cannot always accept verbal changes. Please fax or email written change requests.
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Just Click Printing Form #17-0301

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: Tom Bird
Comments: All Metals Are Field Filtered. Send Out PRESERVED bottles per Landon. 11-01-18

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

Project Information

Printed: 11/29/2023 2:47 pm

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 SW Baseline w-LLHg
Project Number: GCC SW Baseline 2021
Client PM: Tom Bird
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 200.8 Low Level	Do not field filter
Molybdenum Dissolved by ICPMS	
Nitrate/Nitrite [LACHAT]	
Oil & Grease	
pH	
Potassium Dissolved by ICP	
SAR-Calc	
Selenium Dissolved by ICPMS	
Silica Dissolved by ICP	
Sodium Dissolved by ICP	
Sulfate [IC]	
Total Dissolved Solids [TDS]	
Total Organic Carbon [TOC]	
Total Suspended Solids [TSS]	Label bottle TSS
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

The GCC SW Baseline bottle set has two poly 250 ml bottles for metals. One is for LL Hg totals so does not get field-filtered, while the other metals bottle gets field-filtered. Please label one metals bottle in each set "DO NOT FIELD FILTER, LL Hg" as a reminder for them out in the field. Please make a note in LIMS for this to be standard quarterly practice.

GAL Analytical Laboratories

SAMPLE CONDITION RECEIPT FORM

Client Name: G.C.C. ENERGY **Work Order #** 2311-320

Courier: ☐Fed Ex ☐UPS ☐USPS ☑Client ☐Kangaroo

Custody Seals on Box/Cooler Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☐ No

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

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: Observed Temp: 7.8 °C Correction Factor: Ø °C Final Temp: 7.8 °C

*Temp should be above freezing to 6°C

Date/Initials of person examining contents: 11/29/23 GL

Labeled by initials: _____
(if different than above)

Chain of Custody Present:	☑Yes ☐No	1.
Chain of Custody Filled Out:	☑Yes ☐No	2.
Chain of Custody Relinquished:	☑Yes ☐No	3.
Sampler Name and Signature on COC:	☑Yes ☐No	4.
Samples arrived within hold time:	☑Yes ☐No	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No	6. pH
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume:	☑Yes ☐No	8.
Correct Containers Used:	☑Yes ☐No	9.
Containers Intact:	☑Yes ☐No	10.
Dissolved Testing Needed: Field Filtered: ☑Yes ☐No	☑Yes ☐No	11.
Sample Labels match COC: -Includes Date/Time/ID Matrix:	☑Yes ☐No WT SL OT	12.
Trip Blank Present: Trip Blank Custody Seals Present:	☐Yes ☑No ☐N/A ☐Yes ☐No ☑N/A	13.

Client Notification/Resolution:

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

75 Suttle Street
Durango, CO 81303
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970.247.4227 Fax
www.greenanalytical.com

11 December 2023

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326

RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 11/21/23 15:25. 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,

Jeremy D Allen
Laboratory Director

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: T104704514-23-18

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: T104704398-23-16

Table of Contents

Samples in Report	3
Sample Results	4
Quality Assurance Results	12
Notes and Definitions	17
Chain of Custody & Attachments	18

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Well #2 Down Gradient	2311270-01	Water	11/21/23 11:23	11/21/23 15:25	
Well #1 Up Gradient	2311270-02	Water	11/21/23 13:45	11/21/23 15:25	
Hay Gulch Ditch Down Gradient	2311270-03	Water	11/21/23 12:00	11/21/23 15:25	
M-98	2311270-04	Water	11/21/23 14:45	11/21/23 15:25	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

Well #2 Down Gradient

2311270-01 (Ground Water)
Sampled Date: 11/21/23 11:23

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**390**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**390**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Cation/Anion Balance	**0.820**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**46.9**	2.00	0.111	mg/L	2	12/04/23 19:44	EPA300.0		AWG
Fluoride*	<0.200	0.200	0.0194	mg/L	2	12/04/23 19:44	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	12/01/23 15:35	EPA353.2		AES
pH*	**7.45**			pH Units	1	11/22/23 14:00	EPA150.1		CAI
pH Temperature, degrees C	**19.5**			pH Units	1	11/22/23 14:00	EPA150.1		CAI
Sulfate*	**214**	2.00	0.248	mg/L	2	12/04/23 19:44	EPA300.0		AWG
Total Dissolved Solids*	**745**	10.0		mg/L	1	11/28/23 17:06	EPA160.1		CAI
Total Organic Carbon*	**1.65**	0.500	0.175	mg/L	1	11/28/23 00:00	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/28/23 20:24	EPA200.7		AES
Calcium*	**88.3**	0.200	0.124	mg/L	2	11/28/23 20:24	EPA200.7		AES
Hardness as CaCO3	**582**	1.32	0.598	mg/L	2	11/28/23 20:24	2340 B		AES
Iron*	<0.100	0.100	0.030	mg/L	2	11/28/23 20:24	EPA200.7		AES
Magnesium*	**87.8**	0.200	0.070	mg/L	2	11/28/23 20:24	EPA200.7		AES
Potassium*	**2.26**	2.00	0.208	mg/L	2	11/28/23 20:24	EPA200.7		AES
Silica (Si02)	**12.2**	2.14	0.326	mg/L	2	11/28/23 20:24	Calculation		AES
Silicon	**5.70**	1.00	0.152	mg/L	2	11/28/23 20:24	EPA200.7		AES
Sodium*	**29.3**	2.00	0.818	mg/L	2	11/28/23 20:24	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0007	mg/L	2	11/27/23 13:43	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 13:43	EPA200.8		AES
Copper*	**0.0023**	0.0010	0.0008	mg/L	2	11/27/23 13:43	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 13:43	EPA200.8		AES
Manganese*	**0.464**	0.0010	0.0003	mg/L	2	11/27/23 13:43	EPA200.8		AES
Molybdenum*	**0.0032**	0.0010	0.0004	mg/L	2	11/27/23 13:43	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0007	mg/L	2	11/27/23 13:43	EPA200.8		AES
Uranium	**0.0019**	0.0010	0.00009	mg/L	2	11/27/23 13:43	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 13:43	EPA200.8		AES

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Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

Well #2 Down Gradient

2311270-01 (Ground Water)
Sampled Date: 11/21/23 11:23

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 12:41	EPA245.7		CAI

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

Well #1 Up Gradient

2311270-02 (Ground Water)
Sampled Date: 11/21/23 13:45

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**610**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**610**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Cation/Anion Balance	**0.870**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**4.83**	2.00	0.111	mg/L	2	12/04/23 20:24	EPA300.0		AWG
Fluoride*	**0.268**	0.200	0.0194	mg/L	2	12/04/23 20:24	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	12/01/23 15:36	EPA353.2		AES
pH*	**7.44**			pH Units	1	11/22/23 14:00	EPA150.1		CAI
pH Temperature, degrees C	**19.2**			pH Units	1	11/22/23 14:00	EPA150.1		CAI
Sulfate*	**102**	2.00	0.248	mg/L	2	12/04/23 20:24	EPA300.0		AWG
Total Dissolved Solids*	**755**	10.0		mg/L	1	11/28/23 17:08	EPA160.1		CAI
Total Organic Carbon*	**2.99**	1.00	0.350	mg/L	2	11/28/23 13:21	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/28/23 20:27	EPA200.7		AES
Calcium*	**58.1**	0.200	0.124	mg/L	2	11/28/23 20:26	EPA200.7		AES
Hardness as CaCO3	**303**	1.32	0.598	mg/L	2	11/28/23 20:27	2340 B		AES
Iron*	**1.81**	0.100	0.030	mg/L	2	11/28/23 20:27	EPA200.7		AES
Magnesium*	**38.4**	0.200	0.070	mg/L	2	11/28/23 20:27	EPA200.7		AES
Potassium*	**2.89**	2.00	0.208	mg/L	2	11/28/23 20:26	EPA200.7		AES
Silica (Si02)	**13.9**	2.14	0.326	mg/L	2	11/28/23 20:27	Calculation		AES
Silicon	**6.51**	1.00	0.152	mg/L	2	11/28/23 20:27	EPA200.7		AES
Sodium*	**174**	2.00	0.818	mg/L	2	11/28/23 20:26	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0007	mg/L	2	11/27/23 13:44	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 13:44	EPA200.8		AES
Copper*	**0.0035**	0.0010	0.0008	mg/L	2	11/27/23 13:44	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 13:44	EPA200.8		AES
Manganese*	**0.422**	0.0010	0.0003	mg/L	2	11/27/23 13:44	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0004	mg/L	2	11/27/23 13:44	EPA200.8		AES
Selenium*	**0.0113**	0.0020	0.0007	mg/L	2	11/27/23 13:44	EPA200.8		AES
Uranium	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 13:44	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 13:44	EPA200.8		AES

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Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

Well #1 Up Gradient

2311270-02 (Ground Water)
Sampled Date: 11/21/23 13:45

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 12:44	EPA245.7		CAI

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

Hay Gulch Ditch Down Gradient

2311270-03 (Surface Water)
Sampled Date: 11/21/23 12:00

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**325**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**325**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Cation/Anion Balance	**3.51**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**42.7**	1.00	0.0555	mg/L	1	12/04/23 20:44	EPA300.0		AWG
Fluoride*	**0.201**	0.100	0.00971	mg/L	1	12/04/23 20:44	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	12/01/23 15:37	EPA353.2		AES
Oil & Grease (HEM)	**9.10**	5.00	2.87	mg/L	1	12/04/23 16:04	EPA1664 A		JDA
pH*	**8.07**			pH Units	1	11/22/23 14:00	EPA150.1		CAI
pH Temperature, degrees C	**19.5**			pH Units	1	11/22/23 14:00	EPA150.1		CAI
SAR	**0.44**			No Unit	1	11/28/23 20:29	Calculation		AES
Sulfate*	**138**	1.00	0.124	mg/L	1	12/04/23 20:44	EPA300.0		AWG
Total Dissolved Solids*	**575**	10.0		mg/L	1	11/28/23 17:10	EPA160.1		CAI
Total Organic Carbon*	**4.04**	0.500	0.175	mg/L	1	11/28/23 00:50	5310C		JDA
Total Suspended Solids*	**3.38**	2.50		mg/L	1	11/22/23 12:15	2540 D		JDA
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.044	mg/L	1	11/28/23 20:29	EPA200.7		AES
Calcium*	**110**	0.100	0.062	mg/L	1	11/28/23 20:29	EPA200.7		AES
Hardness as CaCO3	**467**	0.662	0.299	mg/L	1	11/28/23 20:29	2340 B		AES
Iron*	<0.050	0.050	0.015	mg/L	1	11/28/23 20:29	EPA200.7		AES
Magnesium*	**47.1**	0.100	0.035	mg/L	1	11/28/23 20:29	EPA200.7		AES
Potassium*	**4.82**	1.00	0.104	mg/L	1	11/28/23 20:29	EPA200.7		AES
Silica (Si02)	**13.8**	1.07	0.163	mg/L	1	11/28/23 20:29	Calculation		AES
Silicon	**6.47**	0.500	0.076	mg/L	1	11/28/23 20:29	EPA200.7		AES
Sodium*	**21.7**	1.00	0.409	mg/L	1	11/28/23 20:29	EPA200.7		AES
Total Recoverable Metals by ICPMS (E200.8)									
Mercury	<0.0100	0.0100	0.00430	ug/L	1	12/07/23 10:21	EPA200.8		AES

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Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

Hay Gulch Ditch Down Gradient

2311270-03 (Surface Water)
Sampled Date: 11/21/23 12:00

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Metals by ICPMS									
Arsenic*	<0.0005	0.0005	0.0004	mg/L	1	11/27/23 13:46	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.00003	mg/L	1	11/27/23 13:46	EPA200.8		AES
Copper*	**0.0025**	0.0005	0.0004	mg/L	1	11/27/23 13:46	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00004	mg/L	1	11/27/23 13:46	EPA200.8		AES
Manganese*	**0.0490**	0.0005	0.0002	mg/L	1	11/27/23 13:46	EPA200.8		AES
Molybdenum*	**0.0008**	0.0005	0.0002	mg/L	1	11/27/23 13:46	EPA200.8		AES
Selenium*	**0.0013**	0.0010	0.0004	mg/L	1	11/27/23 13:46	EPA200.8		AES
Uranium	**0.0009**	0.0005	0.00004	mg/L	1	11/27/23 13:46	EPA200.8		AES
Zinc*	**0.0032**	0.0020	0.0005	mg/L	1	11/27/23 13:46	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

M-98

2311270-04 (Ground Water)
Sampled Date: 11/21/23 14:45

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**600**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**600**	10.0	6.06	mg/L	5	12/01/23 11:00	2320 B		IDB
Cation/Anion Balance	**0.540**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**4.85**	2.00	0.111	mg/L	2	12/04/23 21:04	EPA300.0		AWG
Fluoride*	**0.268**	0.200	0.0194	mg/L	2	12/04/23 21:04	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	12/01/23 15:38	EPA353.2		AES
pH*	**7.79**			pH Units	1	11/22/23 14:00	EPA150.1		CAI
pH Temperature, degrees C	**18.0**			pH Units	1	11/22/23 14:00	EPA150.1		CAI
Sulfate*	**101**	2.00	0.248	mg/L	2	12/04/23 21:04	EPA300.0		AWG
Total Dissolved Solids*	**725**	10.0		mg/L	1	11/28/23 17:12	EPA160.1		CAI
Total Organic Carbon*	**2.97**	1.00	0.350	mg/L	2	11/28/23 13:49	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/28/23 20:34	EPA200.7		AES
Calcium*	**53.8**	0.200	0.124	mg/L	2	11/28/23 20:34	EPA200.7		AES
Hardness as CaCO3	**285**	1.32	0.598	mg/L	2	11/28/23 20:34	2340 B		AES
Iron*	**1.54**	0.100	0.030	mg/L	2	11/28/23 20:34	EPA200.7		AES
Magnesium*	**36.6**	0.200	0.070	mg/L	2	11/28/23 20:34	EPA200.7		AES
Potassium*	**2.84**	2.00	0.208	mg/L	2	11/28/23 20:34	EPA200.7		AES
Silica (Si02)	**13.5**	2.14	0.326	mg/L	2	11/28/23 20:34	Calculation		AES
Silicon	**6.30**	1.00	0.152	mg/L	2	11/28/23 20:34	EPA200.7		AES
Sodium*	**176**	2.00	0.818	mg/L	2	11/28/23 20:34	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0007	mg/L	2	11/27/23 13:47	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 13:47	EPA200.8		AES
Copper*	**0.0032**	0.0010	0.0008	mg/L	2	11/27/23 13:47	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 13:47	EPA200.8		AES
Manganese*	**0.387**	0.0010	0.0003	mg/L	2	11/27/23 13:47	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0004	mg/L	2	11/27/23 13:47	EPA200.8		AES
Selenium*	**0.0130**	0.0020	0.0007	mg/L	2	11/27/23 13:47	EPA200.8		AES
Uranium	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 13:47	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 13:47	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

M-98

2311270-04 (Ground Water)
Sampled Date: 11/21/23 14:45

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 12:46	EPA245.7		CAI

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Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233378 - General Prep - Wet Chem										
Blank (B233378-BLK1)				Prepared & Analyzed: 11/10/23						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (B233378-BS1)				Prepared & Analyzed: 11/10/23						
Oil & Grease (HEM)	35.4	5.00	mg/L	40.0		88.5	85-115			
LCS Dup (B233378-BSD1)				Prepared & Analyzed: 11/10/23						
Oil & Grease (HEM)	34.1	5.00	mg/L	40.0		85.3	85-115	3.74	20	
Batch B233504 - General Prep - Wet Chem										
Blank (B233504-BLK1)				Prepared & Analyzed: 11/22/23						
Total Suspended Solids	ND	2.50	mg/L							
Reference (B233504-SRM1)				Prepared & Analyzed: 11/22/23						
Total Suspended Solids	93.0	2.50	mg/L	100		93.0	85-115			
Batch B233524 - General Prep - Wet Chem										
Reference (B233524-SRM1)				Prepared & Analyzed: 11/22/23						
pH	7.00		pH Units	7.00		100	98.57-101.42			
Batch B233530 - General Prep - Wet Chem										
Blank (B233530-BLK1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B233530-BS1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	9.66	0.500	mg/L	10.0		96.6	85-115			
LCS Dup (B233530-BSD1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	9.81	0.500	mg/L	10.0		98.1	85-115	1.53	20	
Batch B233537 - Dissolved ICP										
Blank (B233537-BLK1)				Prepared: 11/27/23 Analyzed: 11/28/23						
SAR	0.00		No Unit							
Batch B233547 - General Prep - Wet Chem										
Blank (B233547-BLK1)				Prepared & Analyzed: 11/28/23						
Total Dissolved Solids	ND	10.0	mg/L							

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233547 - General Prep - Wet Chem (Continued)										
Reference (B233547-SRM1)				Prepared & Analyzed: 11/28/23						
Total Dissolved Solids	390	10.0	mg/L	400		97.5	85-115			
Batch B233574 - General Prep - Wet Chem										
Blank (B233574-BLK1)				Prepared & Analyzed: 12/01/23						
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L							
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B233574-BS1)				Prepared & Analyzed: 12/01/23						
Alkalinity, Total as CaCO3	100	10.0	mg/L	100		100	85-115			
LCS Dup (B233574-BSD1)				Prepared & Analyzed: 12/01/23						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115	2.02	20	
Reference (B233574-SRM1)				Prepared & Analyzed: 12/01/23						
Alkalinity, Total as CaCO3	75.0	10.0	mg/L	72.7		103	85-115			
Batch B233582 - Lachat										
Blank (B233582-BLK1)				Prepared & Analyzed: 12/01/23						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B233582-BS1)				Prepared & Analyzed: 12/01/23						
Nitrate/Nitrite as N	1.06	0.020	mg/L as N	1.00		106	90-110			
LCS Dup (B233582-BSD1)				Prepared & Analyzed: 12/01/23						
Nitrate/Nitrite as N	1.06	0.020	mg/L as N	1.00		106	90-110	0.113	20	
Batch B233588 - IC- Ion Chromatograph										
Blank (B233588-BLK1)				Prepared & Analyzed: 12/04/23						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B233588-BS1)				Prepared & Analyzed: 12/04/23						
Chloride	24.4	1.00	mg/L	25.0		97.4	90-110			
Fluoride	2.44	0.100	mg/L	2.50		97.5	90-110			
Sulfate	23.7	1.00	mg/L	25.0		94.7	90-110			
LCS Dup (B233588-BSD1)				Prepared & Analyzed: 12/04/23						

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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jeremy.allen@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303
www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

General Chemistry - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233588 - IC- Ion Chromatograph (Continued)										
LCS Dup (B233588-BSD1) (Continued)			Prepared & Analyzed: 12/04/23							
Chloride	25.1	1.00	mg/L	25.0		100	90-110	2.88	20	
Fluoride	2.51	0.100	mg/L	2.50		100	90-110	2.75	20	
Sulfate	24.4	1.00	mg/L	25.0		97.6	90-110	2.98	20	

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233537 - Dissolved ICP										
Blank (B233537-BLK1)			Prepared: 11/27/23 Analyzed: 11/28/23							
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 (B233537-BS1)			Prepared: 11/27/23 Analyzed: 11/28/23							
Aluminum	4.00	0.050	mg/L	4.00		100	85-115			
Calcium	3.84	0.100	mg/L	4.00		95.9	85-115			
Iron	3.78	0.050	mg/L	4.00		94.5	85-115			
Magnesium	19.7	0.100	mg/L	20.0		98.7	85-115			
Potassium	7.68	1.00	mg/L	8.00		96.0	85-115			
Silicon	4.06	0.500	mg/L	4.00		102	85-115			
Sodium	3.26	1.00	mg/L	3.24		101	85-115			
LCS Dup (B233537-BSD1)			Prepared: 11/27/23 Analyzed: 11/28/23							
Aluminum	4.01	0.050	mg/L	4.00		100	85-115	0.188	20	
Calcium	3.95	0.100	mg/L	4.00		98.8	85-115	2.95	20	
Iron	3.82	0.050	mg/L	4.00		95.5	85-115	1.04	20	
Magnesium	20.0	0.100	mg/L	20.0		100	85-115	1.29	20	
Potassium	7.61	1.00	mg/L	8.00		95.2	85-115	0.873	20	
Silicon	4.10	0.500	mg/L	4.00		102	85-115	0.850	20	
Sodium	3.23	1.00	mg/L	3.24		99.6	85-115	0.956	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

Total Recoverable Metals by ICPMS (E200.8) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233555 - Mercury by 200.8										
Blank (B233555-BLK1)				Prepared & Analyzed: 12/07/23						
Mercury	ND	0.0100	ug/L							
LCS (B233555-BS1)				Prepared & Analyzed: 12/07/23						
Mercury	0.0910	0.0100	ug/L	0.100		91.0	85-115			
LCS Dup (B233555-BSD1)				Prepared & Analyzed: 12/07/23						
Mercury	0.0907	0.0100	ug/L	0.100		90.7	85-115	0.329	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233529 - Dissolved ICPMS										
Blank (B233529-BLK1)				Prepared & Analyzed: 11/27/23						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0005	mg/L							
Copper	ND	0.0005	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 (B233529-BS1)				Prepared & Analyzed: 11/27/23						
Arsenic	0.0523	0.0005	mg/L	0.0500		105	85-115			
Cadmium	0.0516	0.0005	mg/L	0.0500		103	85-115			
Copper	0.0499	0.0005	mg/L	0.0500		99.8	85-115			
Lead	0.0498	0.0005	mg/L	0.0500		99.6	85-115			
Manganese	0.0531	0.0005	mg/L	0.0500		106	85-115			
Molybdenum	0.0509	0.0005	mg/L	0.0500		102	85-115			
Selenium	0.263	0.0010	mg/L	0.250		105	85-115			
Uranium	0.0537	0.0005	mg/L	0.0500		107	85-115			
Zinc	0.0484	0.0020	mg/L	0.0500		96.9	85-115			
LCS Dup (B233529-BSD1)				Prepared & Analyzed: 11/27/23						
Arsenic	0.0524	0.0005	mg/L	0.0500		105	85-115	0.0608	20	
Cadmium	0.0514	0.0005	mg/L	0.0500		103	85-115	0.431	20	
Copper	0.0510	0.0005	mg/L	0.0500		102	85-115	2.20	20	
Lead	0.0502	0.0005	mg/L	0.0500		100	85-115	0.707	20	
Manganese	0.0530	0.0005	mg/L	0.0500		106	85-115	0.170	20	
Molybdenum	0.0511	0.0005	mg/L	0.0500		102	85-115	0.380	20	
Selenium	0.261	0.0010	mg/L	0.250		104	85-115	0.607	20	
Uranium	0.0530	0.0005	mg/L	0.0500		106	85-115	1.32	20	
Zinc	0.0494	0.0020	mg/L	0.0500		98.8	85-115	2.00	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/11/23 09:52

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233526 - EPA 245.7										
Blank (B233526-BLK1)				Prepared: 11/27/23 Analyzed: 12/01/23						
Mercury	ND	100	ng/L							
LCS (B233526-BS1)				Prepared: 11/27/23 Analyzed: 12/01/23						
Mercury	1900	100	ng/L	2000		94.9	76-113			
LCS Dup (B233526-BSD1)				Prepared: 11/27/23 Analyzed: 12/01/23						
Mercury	1830	100	ng/L	2000		91.6	76-113	3.49	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

Jeremy D Allen, Laboratory Director

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GREEN ANALYTICAL LABORATORIES
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Fax: (970) 247-4227
dzufelt@greenanalytical.com
75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC Energy
Address: 6473 CR 120
City: Hesperus **State:** CO **Zip:** 81326
Phone #: 970.385.4528
Contact Person: Tom Bird for billing, Landon Beck for logistical or technical
Email Report to: Tom@haygulchservices.com; LBECK@resourcehydrogeologic.com
Project Name(optional):
Sampler Name (Print): BRANDON WADDELL

Bill to (if different):
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Email:

ANALYSIS REQUEST

	Sample Name or Location	Collected Date	Collected Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER :	No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCC GW Baseline	GCC S&S Baseline	GCC SW Baseline						
2311-270																									
01	WELL #2 DOWN GRADIENT	11-21-23	11:23								1	2		4			X								
02	WELL #1 UP GRADIENT	11-21-23	13:45								1	2		4			X								
03	HAYGULCH DITCH DOWN GRADIENT	11-21-23	12:00								2	2	1	4					X						
04	M-98	11-21-23	14:45								1	2		4			X								

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 receive by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequental 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: 11-21-23 Time: 3:25 Pm	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:

ADDITIONAL REMARKS:
Report to State? (Circle) Yes No

Laser #2

Temperature at receipt: 8.10c
CHECKED BY: MRN
On Ice: X
No Ice:

† GAL cannot always accept verbal changes. Please fax or email written change requests.
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Project Information

Printed: 11/21/2023 4:11 pm

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: Tom Bird
Comments: All Metals Are Field Filtered. Send Out PRESERVED bottles per Landon. 11-01-18

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

Project Information

Printed: 11/21/2023 4:14 pm

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 SW Baseline w-LLHg
Project Number: GCC SW Baseline 2021
Client PM: Tom Bird
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 200.8 Low Level	Do not field filter
Molybdenum Dissolved by ICPMS	
Nitrate/Nitrite [LACHAT]	
Oil & Grease	
pH	
Potassium Dissolved by ICP	
SAR-Calc	
Selenium Dissolved by ICPMS	
Silica Dissolved by ICP	
Sodium Dissolved by ICP	
Sulfate [IC]	
Total Dissolved Solids [TDS]	
Total Organic Carbon [TOC]	
Total Suspended Solids [TSS]	Label bottle TSS
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

The GCC SW Baseline bottle set has two poly 250 ml bottles for metals. One is for LL Hg totals so does not get field-filtered, while the other metals bottle gets field-filtered. Please label one metals bottle in each set "DO NOT FIELD FILTER, LL Hg" as a reminder for them out in the field. Please make a note in LIMS for this to be standard quarterly practice.

Analytical Laboratories

SAMPLE CONDITION RECEIPT FORM

Client Name: GCC Energy

Work Order # 2311-270

Courier: ☐Fed Ex ☐UPS ☐USPS ☑Client ☐Kangaroo

Custody Seals on Box/Cooler Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☐ No

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

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: Observed Temp: 8.1 °C Correction Factor: Ø °C Final Temp 8.1 °C

*Temp should be above freezing to 6°C

Date/Initials of person examining contents: 11/21/23 SL

Labeled by initials: _____
(if different than above)

Chain of Custody Present:	☑Yes ☐No	1.
Chain of Custody Filled Out:	☑Yes ☐No	2.
Chain of Custody Relinquished:	☑Yes ☐No	3.
Sampler Name and Signature on COC:	☑Yes ☐No	4.
Samples arrived within hold time:	☑Yes ☐No	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No	6. pH
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume:	☑Yes ☐No	8.
Correct Containers Used:	☑Yes ☐No	9.
Containers Intact:	☑Yes ☐No	10.
Dissolved Testing Needed: Field Filtered: ☑Yes ☐No	☑Yes ☐No	11. Diss
Sample Labels match COC: -Includes Date/Time/ID Matrix:	☑Yes ☐No WT SL OT	12.
Trip Blank Present: Trip Blank Custody Seals Present:	☐Yes ☐No ☑N/A ☐Yes ☐No ☑N/A	13.

Client Notification/Resolution:

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

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

02 January 2024

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326

RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 12/19/23 16:40. 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,

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: T104704514-23-18

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: T104704398-23-16

Table of Contents

Samples in Report	3
Sample Results	4
Quality Assurance Results	5
Notes and Definitions	5
Chain of Custody & Attachments	6

GCC Energy, LLC	Project:	GCC SW Baseline w-LLHg	
6473 CR 120	Project Name / Number:	[none]	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	01/02/24 09:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Hay Gulch Down Gradient	2312168-01	Water	12/19/23 11:10	12/19/23 16:40	

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC SW Baseline w-LLHg	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	01/02/24 09:41

Hay Gulch Down Gradient

2312168-01 (Surface Water)
Sampled Date: 12/19/23 11:10

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Oil & Grease (HEM)	<5.00	5.00	2.87	mg/L	1	12/29/23 12:56	EPA1664 A		IDB

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC SW Baseline w-LLHg	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	01/02/24 09:41

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233636 - General Prep - Wet Chem										
Blank (B233636-BLK1)				Prepared & Analyzed: 12/07/23						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (B233636-BS1)				Prepared & Analyzed: 12/07/23						
Oil & Grease (HEM)	37.6	5.00	mg/L	40.0		94.0	85-115			
LCS Dup (B233636-BSD1)				Prepared & Analyzed: 12/07/23						
Oil & Grease (HEM)	37.2	5.00	mg/L	40.0		93.0	85-115	1.07	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 J Wells

Veronica Wells, Project Manager

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Table of Contents

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC Energy
Address: 6473 CR 120
City: Hesperus **State:** CO **Zip:** 81326
Phone #: 970.385.4528
Contact Person: Tom Bird for billing, Landon Beck for logistical or technical
Email Report to: Tom@haygulchservices.com; LBECK@resourcehydrogeologic.com
Project Name(optional):
Sampler Name (Print): BRANDON WADDELL

Bill to (if different):
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Email:

	Sample Name or Location	Collected Date	Collected Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	No preservation (general)	HNO3	HCl	H2SO4	Other:	Other:	GCC GW Baseline	GCC S&S Baseline	GCC SW Baseline						
2312-168 01	HAYGULCH DOWN GRADIENT	12.19.23	11:10		X								1						X						

ANALYSIS REQUEST

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 receive by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequental 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: 12.19.23 Time: 4:40	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:

ADDITIONAL REMARKS:
Report to State? (Circle) Yes No

Laser #2
5.8°c
Temperature at receipt:
VJW
CHECKED BY
On Ice ✓
No Ice

† GAL cannot always accept verbal changes. Please fax or email written change requests.
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Just Click Printing Form #17-0301

GAL Analytical Laboratories

SAMPLE CONDITION RECEIPT FORM

Client Name: GCC Energy **Work Order #** 2312-168

Courier: ☐Fed Ex ☐UPS ☐USPS ☑Client ☐Kangaroo

Custody Seals on Box/Cooler Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☐ No

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

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: Observed Temp: 5.8 °C Correction Factor: Ø °C Final Temp: 5.8 °C

*Temp should be above freezing to 6°C

Date/Initials of person examining contents: MRN 12/19/2

Labeled by initials: _____
(if different than above)

Chain of Custody Present:	☑Yes ☐No	1.
Chain of Custody Filled Out:	☑Yes ☐No	2.
Chain of Custody Relinquished:	☑Yes ☐No	3.
Sampler Name and Signature on COC:	☑Yes ☐No	4.
Samples arrived within hold time:	☑Yes ☐No	5.
Short Hold Time Analysis (<72hr):	☐Yes ☑No	6.
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume:	☑Yes ☐No	8.
Correct Containers Used:	☑Yes ☐No	9.
Containers Intact:	☑Yes ☐No	10.
Dissolved Testing Needed: Field Filtered: ☐Yes ☐No	☐Yes ☑No	11.
Sample Labels match COC: -Includes Date/Time/ID Matrix:	☑Yes ☐No WT SL OT	12.
Trip Blank Present: Trip Blank Custody Seals Present:	☐Yes ☐No ☑N/A ☐Yes ☐No ☑N/A	13.

Client Notification/Resolution:

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

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30 November 2023

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 11/14/23 16:30. 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,

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: T104704514-23-18

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: T104704398-23-16

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 14:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1-A	2311176-01	Water	11/14/23 11:19	11/14/23 16:30	
MW-5-M1	2311176-02	Water	11/14/23 12:32	11/14/23 16:30	

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 14:45

MW-1-A

2311176-01 (Ground Water)
Sampled Date: 11/14/23 11:19

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**375**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**375**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Cation/Anion Balance	**0.0800**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**2.50**	2.00	0.111	mg/L	2	11/27/23 19:55	EPA300.0		AWG
Fluoride*	<0.200	0.200	0.0194	mg/L	2	11/27/23 19:55	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/28/23 10:07	EPA353.2		AWG
pH*	**7.39**			pH Units	1	11/15/23 15:00	EPA150.1		CAI
pH Temperature, degrees C	**19.0**			pH Units	1	11/15/23 15:00	EPA150.1		CAI
Sulfate*	**510**	5.00	0.620	mg/L	5	11/27/23 20:15	EPA300.0		AWG
Total Dissolved Solids*	**1110**	10.0		mg/L	1	11/20/23 17:39	EPA160.1		JDA
Total Organic Carbon*	**1.55**	0.500	0.175	mg/L	1	11/27/23 20:45	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/28/23 18:13	EPA200.7		AES
Calcium*	**31.2**	0.200	0.124	mg/L	2	11/28/23 18:13	EPA200.7		AES
Hardness as CaCO3	**166**	1.32	0.598	mg/L	2	11/28/23 18:13	2340 B		AES
Iron*	**0.437**	0.100	0.030	mg/L	2	11/28/23 18:13	EPA200.7		AES
Magnesium*	**21.3**	0.200	0.070	mg/L	2	11/28/23 18:13	EPA200.7		AES
Potassium*	<2.00	2.00	0.208	mg/L	2	11/28/23 18:13	EPA200.7		AES
Silica (Si02)	**11.3**	2.14	0.326	mg/L	2	11/28/23 18:13	Calculation		AES
Silicon	**5.28**	1.00	0.152	mg/L	2	11/28/23 18:13	EPA200.7		AES
Sodium*	**324**	2.00	0.818	mg/L	2	11/28/23 18:13	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0007	mg/L	2	11/27/23 12:27	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 12:27	EPA200.8		AES
Copper*	**0.0079**	0.0010	0.0008	mg/L	2	11/27/23 12:27	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 12:27	EPA200.8		AES
Manganese*	**0.0400**	0.0010	0.0003	mg/L	2	11/27/23 12:27	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0004	mg/L	2	11/27/23 12:27	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0007	mg/L	2	11/27/23 12:27	EPA200.8		AES
Uranium	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 12:27	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 12:27	EPA200.8		AES

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Veronica J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 14:45

MW-1-A

2311176-01 (Ground Water)
Sampled Date: 11/14/23 11:19

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	11/27/23 14:12	EPA245.7		CAI

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 14:45

MW-5-M1

2311176-02 (Ground Water)
Sampled Date: 11/14/23 12:32

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**920**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	**20.0**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**900**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Cation/Anion Balance	**-3.17**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**5.40**	2.00	0.111	mg/L	2	11/27/23 20:34	EPA300.0		AWG
Fluoride*	<0.200	0.200	0.0194	mg/L	2	11/27/23 20:34	EPA300.0		AWG
Nitrate/Nitrite as N*	**0.141**	0.020	0.003	mg/L as N	1	11/28/23 10:11	EPA353.2		AWG
pH*	**8.30**			pH Units	1	11/15/23 15:00	EPA150.1		CAI
pH Temperature, degrees C	**19.3**			pH Units	1	11/15/23 15:00	EPA150.1		CAI
Sulfate*	**5.71**	2.00	0.248	mg/L	2	11/27/23 20:34	EPA300.0		AWG
Total Dissolved Solids*	**990**	10.0		mg/L	1	11/20/23 17:41	EPA160.1		JDA
Total Organic Carbon*	**2.40**	0.500	0.175	mg/L	1	11/27/23 21:09	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/28/23 18:18	EPA200.7		AES
Calcium*	**2.29**	0.200	0.124	mg/L	2	11/28/23 18:18	EPA200.7		AES
Hardness as CaCO3	**9.05**	1.32	0.598	mg/L	2	11/28/23 18:18	2340 B		AES
Iron*	<0.100	0.100	0.030	mg/L	2	11/28/23 18:18	EPA200.7		AES
Magnesium*	**0.808**	0.200	0.070	mg/L	2	11/28/23 18:18	EPA200.7		AES
Potassium*	<2.00	2.00	0.208	mg/L	2	11/28/23 18:18	EPA200.7		AES
Silica (Si02)	**8.05**	2.14	0.326	mg/L	2	11/28/23 18:18	Calculation		AES
Silicon	**3.76**	1.00	0.152	mg/L	2	11/28/23 18:18	EPA200.7		AES
Sodium*	**386**	2.00	0.818	mg/L	2	11/28/23 18:18	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0108**	0.0010	0.0007	mg/L	2	11/27/23 12:28	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 12:28	EPA200.8		AES
Copper*	**0.0090**	0.0010	0.0008	mg/L	2	11/27/23 12:28	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 12:28	EPA200.8		AES
Manganese*	**0.0155**	0.0010	0.0003	mg/L	2	11/27/23 12:28	EPA200.8		AES
Molybdenum*	**0.0019**	0.0010	0.0004	mg/L	2	11/27/23 12:28	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0007	mg/L	2	11/27/23 12:28	EPA200.8		AES
Uranium	**0.0063**	0.0010	0.00009	mg/L	2	11/27/23 12:28	EPA200.8		AES
Zinc*	**0.0750**	0.0040	0.0009	mg/L	2	11/27/23 12:28	EPA200.8		AES

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Veronica J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 14:45

MW-5-M1

2311176-02 (Ground Water)
Sampled Date: 11/14/23 12:32

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	11/27/23 14:15	EPA245.7		CAI

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 14:45

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233443 - General Prep - Wet Chem										
Reference (B233443-SRM1)				Prepared & Analyzed: 11/15/23						
pH	7.08		pH Units	7.00		101	98.57-101.42			
Batch B233463 - General Prep - Wet Chem										
Blank (B233463-BLK1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L							
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B233463-BS1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Total as CaCO3	101	10.0	mg/L	100		101	85-115			
LCS Dup (B233463-BSD1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115	2.00	20	
Reference (B233463-SRM1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Total as CaCO3	73.0	10.0	mg/L	72.7		100	85-115			
Batch B233467 - General Prep - Wet Chem										
Blank (B233467-BLK1)				Prepared: 11/17/23 Analyzed: 11/20/23						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B233467-SRM1)				Prepared: 11/17/23 Analyzed: 11/20/23						
Total Dissolved Solids	380	10.0	mg/L	400		95.0	85-115			
Batch B233511 - IC- Ion Chromatograph										
Blank (B233511-BLK1)				Prepared & Analyzed: 11/27/23						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B233511-BS1)				Prepared & Analyzed: 11/27/23						
Chloride	24.9	1.00	mg/L	25.0		99.6	90-110			
Fluoride	2.41	0.100	mg/L	2.50		96.6	90-110			
Sulfate	24.1	1.00	mg/L	25.0		96.5	90-110			
LCS Dup (B233511-BSD1)				Prepared & Analyzed: 11/27/23						

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 14:45

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233511 - IC- Ion Chromatograph (Continued)										
LCS Dup (B233511-BSD1) (Continued)				Prepared & Analyzed: 11/27/23						
Chloride	24.9	1.00	mg/L	25.0		99.5	90-110	0.100	20	
Fluoride	2.44	0.100	mg/L	2.50		97.6	90-110	1.03	20	
Sulfate	24.2	1.00	mg/L	25.0		97.0	90-110	0.476	20	
Batch B233512 - Lachat										
Blank (B233512-BLK1)				Prepared: 11/27/23 Analyzed: 11/28/23						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B233512-BS1)				Prepared: 11/27/23 Analyzed: 11/28/23						
Nitrate/Nitrite as N	1.05	0.020	mg/L as N	1.00		105	90-110			
LCS Dup (B233512-BSD1)				Prepared: 11/27/23 Analyzed: 11/28/23						
Nitrate/Nitrite as N	1.06	0.020	mg/L as N	1.00		106	90-110	0.379	20	
Batch B233530 - General Prep - Wet Chem										
Blank (B233530-BLK1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B233530-BS1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	9.66	0.500	mg/L	10.0		96.6	85-115			
LCS Dup (B233530-BSD1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	9.81	0.500	mg/L	10.0		98.1	85-115	1.53	20	

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 14:45

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233535 - Dissolved ICP										
Blank (B233535-BLK1)				Prepared: 11/27/23 Analyzed: 11/28/23						
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 (B233535-BS1)				Prepared: 11/27/23 Analyzed: 11/28/23						
Aluminum	4.12	0.050	mg/L	4.00		103	85-115			
Calcium	3.92	0.100	mg/L	4.00		97.9	85-115			
Iron	3.93	0.050	mg/L	4.00		98.2	85-115			
Magnesium	20.5	0.100	mg/L	20.0		102	85-115			
Potassium	7.83	1.00	mg/L	8.00		97.9	85-115			
Silicon	4.25	0.500	mg/L	4.00		106	85-115			
Sodium	3.30	1.00	mg/L	3.24		102	85-115			
LCS Dup (B233535-BSD1)				Prepared: 11/27/23 Analyzed: 11/28/23						
Aluminum	4.12	0.050	mg/L	4.00		103	85-115	0.0157	20	
Calcium	3.93	0.100	mg/L	4.00		98.3	85-115	0.384	20	
Iron	3.95	0.050	mg/L	4.00		98.9	85-115	0.637	20	
Magnesium	20.5	0.100	mg/L	20.0		102	85-115	0.0544	20	
Potassium	7.84	1.00	mg/L	8.00		98.0	85-115	0.102	20	
Silicon	4.24	0.500	mg/L	4.00		106	85-115	0.200	20	
Sodium	3.24	1.00	mg/L	3.24		100	85-115	1.79	20	

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 14:45

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233491 - Dissolved ICPMS										
Blank (B233491-BLK1)				Prepared: 11/21/23 Analyzed: 11/27/23						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0005	mg/L							
Copper	ND	0.0005	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 (B233491-BS1)				Prepared: 11/21/23 Analyzed: 11/27/23						
Arsenic	0.0512	0.0005	mg/L	0.0500		102	85-115			
Cadmium	0.0511	0.0005	mg/L	0.0500		102	85-115			
Copper	0.0504	0.0005	mg/L	0.0500		101	85-115			
Lead	0.0497	0.0005	mg/L	0.0500		99.4	85-115			
Manganese	0.0520	0.0005	mg/L	0.0500		104	85-115			
Molybdenum	0.0500	0.0005	mg/L	0.0500		100	85-115			
Selenium	0.253	0.0010	mg/L	0.250		101	85-115			
Uranium	0.0522	0.0005	mg/L	0.0500		104	85-115			
Zinc	0.0492	0.0020	mg/L	0.0500		98.3	85-115			
LCS Dup (B233491-BSD1)				Prepared: 11/21/23 Analyzed: 11/27/23						
Arsenic	0.0524	0.0005	mg/L	0.0500		105	85-115	2.43	20	
Cadmium	0.0509	0.0005	mg/L	0.0500		102	85-115	0.460	20	
Copper	0.0502	0.0005	mg/L	0.0500		100	85-115	0.367	20	
Lead	0.0496	0.0005	mg/L	0.0500		99.1	85-115	0.296	20	
Manganese	0.0521	0.0005	mg/L	0.0500		104	85-115	0.154	20	
Molybdenum	0.0504	0.0005	mg/L	0.0500		101	85-115	0.852	20	
Selenium	0.254	0.0010	mg/L	0.250		102	85-115	0.537	20	
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115	1.07	20	
Zinc	0.0496	0.0020	mg/L	0.0500		99.2	85-115	0.839	20	

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 14:45

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233450 - EPA 245.7										
Blank (B233450-BLK1)				Prepared: 11/16/23 Analyzed: 11/27/23						
Mercury	ND	100	ng/L							
LCS (B233450-BS1)				Prepared: 11/16/23 Analyzed: 11/27/23						
Mercury	1750	100	ng/L	2000		87.7	76-113			
LCS Dup (B233450-BSD1)				Prepared: 11/16/23 Analyzed: 11/27/23						
Mercury	1720	100	ng/L	2000		86.2	76-113	1.76	20	

Notes and Definitions

Q8	Sample(s) not received on ice.
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 J Wells

Veronica Wells, Project Manager

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75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST
FORM-006
COC - Revision 6.0

Company or Client: GCC Energy
Address: 6473 CR 120
City: Hesperus **State:** CO **Zip:** 81326
Phone #: 970.385.4528
Contact Person: Tom Bird for billing, Landon Beck for logistical or technical
Email Report to: Tom@haygulchservices.com; LBECK@resourcehydrogeologic.com
Project Name(optional):
Sampler Name (Print): BRANDON WADDELL

Bill to (if different):
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Email:

ANALYSIS REQUEST

	Sample Name or Location	Collected Date	Collected Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCC GW Baseline	GCC S&S Baseline	GCC SW Baseline						
2311-176 01	MW-1-A	11.14.23	11:19								1	2		4			X								
02	MW-5-M1	11.14.23	12:32								1	2		4			X								

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 receive by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequental 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: 11.14.23 Time: 16:30	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:

ADDITIONAL REMARKS:
Report to State? (Circle) Yes **No**
a-8
Laser #2

Temperature at receipt:	CHECKED BY	On Ice	No Ice
14.1°C	MPN		X

† GAL cannot always accept verbal changes. Please fax or email written change requests.
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Just Click Printing Form #17-0301

Project Information

Printed: 11/14/2023 4:31 pm

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: GCC GW Baseline
Client PM: Tom Bird
Comments: All Metals Are Field Filtered. Send Out PRESERVED bottles per Landon. 11-01-18

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

Analytical Laboratories

SAMPLE CONDITION RECEIPT FORM

Client Name: G.C.C. ENERGY **Work Order #** 2311-176

Courier: ☐Fed Ex ☐UPS ☐USPS ☑Client ☐Kangaroo

Custody Seals on Box/Cooler Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☐ No

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

Type of Ice: ☐ Wet ☐ Blue ☑ None

Cooler Temp: Observed Temp: 14.1 °C Correction Factor: Ø °C Final Temp: 14.1 °C

*Temp should be above freezing to 6°C

Date/Initials of person examining contents: 11/14/23 SZ

Labeled by initials: _____
(if different than above)

Chain of Custody Present:	☑Yes ☐No	1.
Chain of Custody Filled Out:	☑Yes ☐No	2.
Chain of Custody Relinquished:	☑Yes ☐No	3.
Sampler Name and Signature on COC:	☑Yes ☐No	4.
Samples arrived within hold time:	☑Yes ☐No	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No	6. pH
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume:	☑Yes ☐No	8.
Correct Containers Used:	☑Yes ☐No	9.
Containers Intact:	☑Yes ☐No	10.
Dissolved Testing Needed: Field Filtered: ☑Yes ☐No	☑Yes ☐No	11.
Sample Labels match COC: -Includes Date/Time/ID Matrix:	☑Yes ☐No WT SL OT	12.
Trip Blank Present: Trip Blank Custody Seals Present:	☐Yes ☑No ☐N/A ☐Yes ☐No ☑N/A	13.

Client Notification/Resolution:

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

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06 December 2023

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326

RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 11/16/23 15:57. 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,

Jeremy D Allen
Laboratory Director

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: T104704514-23-18

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: T104704398-23-16

Table of Contents

Samples in Report	3
Sample Results	4
Quality Assurance Results	20
Notes and Definitions	24
Chain of Custody & Attachments	25

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-6-LM	2311227-01	Water	11/16/23 11:08	11/16/23 15:57	
MW-4-MI	2311227-02	Water	11/16/23 12:11	11/16/23 15:57	
MW-4-A	2311227-03	Water	11/16/23 12:52	11/16/23 15:57	
MW-4-C	2311227-04	Water	11/16/23 13:27	11/16/23 15:57	
MW-99	2311227-05	Water	11/16/23 13:11	11/16/23 15:57	
MW-3-MI	2311227-06	Water	11/16/23 14:10	11/16/23 15:57	
MW-3-A	2311227-07	Water	11/16/23 14:41	11/16/23 15:57	
MW-3-C	2311227-08	Water	11/16/23 15:10	11/16/23 15:57	

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Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-6-LM

2311227-01 (Ground Water)
Sampled Date: 11/16/23 11:08

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**355**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**355**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Cation/Anion Balance	**2.60**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**6.09**	2.00	0.111	mg/L	2	11/28/23 19:11	EPA300.0		AWG
Fluoride*	**0.240**	0.200	0.0194	mg/L	2	11/28/23 19:11	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:28	EPA353.2		AWG
pH*	**7.76**			pH Units	1	11/17/23 11:30	EPA150.1		AES
pH Temperature, degrees C	**20.6**			pH Units	1	11/17/23 11:30	EPA150.1		AES
Sulfate*	**534**	5.00	0.620	mg/L	5	11/28/23 19:31	EPA300.0		AWG
Total Dissolved Solids*	**1060**	10.0		mg/L	1	11/22/23 16:06	EPA160.1		AES
Total Organic Carbon*	**0.764**	0.500	0.175	mg/L	1	11/23/23 00:18	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/28/23 19:06	EPA200.7		AES
Calcium*	**99.1**	0.200	0.124	mg/L	2	11/28/23 19:06	EPA200.7		AES
Hardness as CaCO3	**621**	1.32	0.598	mg/L	2	11/28/23 19:06	2340 B		AES
Iron*	<0.100	0.100	0.030	mg/L	2	11/28/23 19:06	EPA200.7		AES
Magnesium*	**90.6**	0.200	0.070	mg/L	2	11/28/23 19:06	EPA200.7		AES
Potassium*	**3.34**	2.00	0.208	mg/L	2	11/28/23 19:06	EPA200.7		AES
Silica (Si02)	**17.2**	2.14	0.326	mg/L	2	11/28/23 19:06	Calculation		AES
Silicon	**8.06**	1.00	0.152	mg/L	2	11/28/23 19:06	EPA200.7		AES
Sodium*	**132**	2.00	0.818	mg/L	2	11/28/23 19:06	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0040**	0.0010	0.0007	mg/L	2	11/27/23 13:08	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 13:08	EPA200.8		AES
Copper*	**0.0032**	0.0010	0.0008	mg/L	2	11/27/23 13:08	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 13:08	EPA200.8		AES
Manganese*	**0.0727**	0.0010	0.0003	mg/L	2	11/27/23 13:08	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0004	mg/L	2	11/27/23 13:08	EPA200.8		AES
Selenium*	**0.0031**	0.0020	0.0007	mg/L	2	11/27/23 13:08	EPA200.8		AES
Uranium	**0.0020**	0.0010	0.00009	mg/L	2	11/27/23 13:08	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 13:08	EPA200.8		AES

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Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-6-LM

2311227-01 (Ground Water)
Sampled Date: 11/16/23 11:08

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 11:44	EPA245.7		CAI

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-4-MI

2311227-02 (Ground Water)
Sampled Date: 11/16/23 12:11

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**985**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	**40.0**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**945**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Cation/Anion Balance	**-2.78**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**3.62**	2.00	0.111	mg/L	2	11/28/23 20:31	EPA300.0		AWG
Fluoride*	**4.83**	0.200	0.0194	mg/L	2	11/28/23 20:31	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:34	EPA353.2		AWG
pH*	**8.59**			pH Units	1	11/17/23 11:30	EPA150.1		AES
pH Temperature, degrees C	**20.1**			pH Units	1	11/17/23 11:30	EPA150.1		AES
Sulfate*	**8.16**	2.00	0.248	mg/L	2	11/28/23 20:31	EPA300.0		AWG
Total Dissolved Solids*	**1050**	10.0		mg/L	1	11/22/23 16:08	EPA160.1		AES
Total Organic Carbon*	**4.05**	0.500	0.175	mg/L	1	11/23/23 02:14	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/28/23 19:11	EPA200.7		AES
Calcium*	**0.982**	0.200	0.124	mg/L	2	11/28/23 19:11	EPA200.7		AES
Hardness as CaCO3	**3.91**	1.32	0.598	mg/L	2	11/28/23 19:11	2340 B		AES
Iron*	<0.100	0.100	0.030	mg/L	2	11/28/23 19:11	EPA200.7		AES
Magnesium*	**0.354**	0.200	0.070	mg/L	2	11/28/23 19:11	EPA200.7		AES
Potassium*	<2.00	2.00	0.208	mg/L	2	11/28/23 19:11	EPA200.7		AES
Silica (Si02)	**8.64**	2.14	0.326	mg/L	2	11/28/23 19:11	Calculation		AES
Silicon	**4.04**	1.00	0.152	mg/L	2	11/28/23 19:11	EPA200.7		AES
Sodium*	**424**	2.00	0.818	mg/L	2	11/28/23 19:11	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0101**	0.0010	0.0007	mg/L	2	11/27/23 13:10	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 13:10	EPA200.8		AES
Copper*	**0.0086**	0.0010	0.0008	mg/L	2	11/27/23 13:10	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 13:10	EPA200.8		AES
Manganese*	**0.0074**	0.0010	0.0003	mg/L	2	11/27/23 13:10	EPA200.8		AES
Molybdenum*	**0.0050**	0.0010	0.0004	mg/L	2	11/27/23 13:10	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0007	mg/L	2	11/27/23 13:10	EPA200.8		AES
Uranium	**0.0070**	0.0010	0.00009	mg/L	2	11/27/23 13:10	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 13:10	EPA200.8		AES

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Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-4-MI

2311227-02 (Ground Water)
Sampled Date: 11/16/23 12:11

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 11:52	EPA245.7		CAI

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Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-4-A

2311227-03 (Ground Water)
Sampled Date: 11/16/23 12:52

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**515**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**515**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Cation/Anion Balance	**0.500**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**10.3**	5.00	0.278	mg/L	5	11/28/23 21:11	EPA300.0		AWG
Fluoride*	<0.500	0.500	0.0486	mg/L	5	11/28/23 21:11	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:35	EPA353.2		AWG
pH*	**8.30**			pH Units	1	11/17/23 11:30	EPA150.1		AES
pH Temperature, degrees C	**21.2**			pH Units	1	11/17/23 11:30	EPA150.1		AES
Sulfate*	**583**	5.00	0.620	mg/L	5	11/28/23 21:11	EPA300.0		AWG
Total Dissolved Solids*	**1400**	10.0		mg/L	1	11/22/23 16:10	EPA160.1		AES
Total Organic Carbon*	**2.86**	1.00	0.350	mg/L	2	11/27/23 15:04	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.220	mg/L	5	11/28/23 19:16	EPA200.7		AES
Calcium*	**1.75**	0.500	0.309	mg/L	5	11/28/23 19:16	EPA200.7		AES
Hardness as CaCO3	**7.47**	3.31	1.49	mg/L	5	11/28/23 19:16	2340 B		AES
Iron*	<0.250	0.250	0.076	mg/L	5	11/28/23 19:16	EPA200.7		AES
Magnesium*	**0.751**	0.500	0.176	mg/L	5	11/28/23 19:16	EPA200.7		AES
Potassium*	<5.00	5.00	0.519	mg/L	5	11/28/23 19:15	EPA200.7		AES
Silica (Si02)	**9.58**	5.35	0.814	mg/L	5	11/28/23 19:16	Calculation		AES
Silicon	**4.48**	2.50	0.381	mg/L	5	11/28/23 19:16	EPA200.7		AES
Sodium*	**509**	5.00	2.05	mg/L	5	11/28/23 19:15	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0018	mg/L	5	11/27/23 13:11	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	11/27/23 13:11	EPA200.8		AES
Copper*	**0.0108**	0.0025	0.0021	mg/L	5	11/27/23 13:11	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0002	mg/L	5	11/27/23 13:11	EPA200.8		AES
Manganese*	**0.0029**	0.0025	0.0009	mg/L	5	11/27/23 13:11	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0009	mg/L	5	11/27/23 13:11	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0018	mg/L	5	11/27/23 13:11	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0002	mg/L	5	11/27/23 13:11	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0024	mg/L	5	11/27/23 13:11	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-4-A

2311227-03 (Ground Water)
Sampled Date: 11/16/23 12:52

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 11:54	EPA245.7		CAI

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Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-4-C

2311227-04 (Ground Water)
Sampled Date: 11/16/23 13:27

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**2460**	10.0	6.06	mg/L	20	11/17/23 15:20	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	20	11/17/23 15:20	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	**40.0**	10.0	6.06	mg/L	20	11/17/23 15:20	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**2420**	10.0	6.06	mg/L	20	11/17/23 15:20	2320 B		IDB
Cation/Anion Balance	**-4.36**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**586**	10.0	0.555	mg/L	10	11/28/23 21:51	EPA300.0		AWG
Fluoride*	**2.02**	1.00	0.0971	mg/L	10	11/28/23 21:51	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:36	EPA353.2		AWG
pH*	**8.13**			pH Units	1	11/17/23 11:30	EPA150.1		AES
pH Temperature, degrees C	**21.3**			pH Units	1	11/17/23 11:30	EPA150.1		AES
Sulfate*	<10.0	10.0	1.24	mg/L	10	11/28/23 21:51	EPA300.0		AWG
Total Dissolved Solids*	**3560**	20.0		mg/L	2	11/22/23 16:12	EPA160.1		AES
Total Organic Carbon*	**19.6**	2.50	0.874	mg/L	5	11/23/23 03:11	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.500	0.500	0.440	mg/L	10	11/28/23 19:24	EPA200.7		AES
Calcium*	**5.15**	1.00	0.618	mg/L	10	11/28/23 19:24	EPA200.7		AES
Hardness as CaCO3	**22.1**	6.62	2.99	mg/L	10	11/28/23 19:24	2340 B		AES
Iron*	**0.604**	0.500	0.151	mg/L	10	11/28/23 19:24	EPA200.7		AES
Magnesium*	**2.23**	1.00	0.351	mg/L	10	11/28/23 19:24	EPA200.7		AES
Potassium*	<10.0	10.0	1.04	mg/L	10	11/28/23 19:23	EPA200.7		AES
Silica (Si02)	<10.7	10.7	1.63	mg/L	10	11/28/23 19:24	Calculation		AES
Silicon	<5.00	5.00	0.761	mg/L	10	11/28/23 19:24	EPA200.7		AES
Sodium*	**1360**	10.0	4.09	mg/L	10	11/28/23 19:23	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0179**	0.0050	0.0037	mg/L	10	11/27/23 13:16	EPA200.8		AES
Cadmium*	<0.0050	0.0050	0.0003	mg/L	10	11/27/23 13:16	EPA200.8		AES
Copper*	**0.0292**	0.0050	0.0042	mg/L	10	11/27/23 13:16	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0004	mg/L	10	11/27/23 13:16	EPA200.8		AES
Manganese*	<0.0050	0.0050	0.0017	mg/L	10	11/27/23 13:16	EPA200.8		AES
Molybdenum*	<0.0050	0.0050	0.0018	mg/L	10	11/27/23 13:16	EPA200.8		AES
Selenium*	**0.0216**	0.0100	0.0037	mg/L	10	11/27/23 13:16	EPA200.8		AES
Uranium	<0.0050	0.0050	0.0004	mg/L	10	11/27/23 13:16	EPA200.8		AES
Zinc*	<0.0200	0.0200	0.0047	mg/L	10	11/27/23 13:16	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-4-C

2311227-04 (Ground Water)
Sampled Date: 11/16/23 13:27

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 11:57	EPA245.7		CAI

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-99

2311227-05 (Ground Water)
Sampled Date: 11/16/23 13:11

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**980**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	**50.0**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**930**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Cation/Anion Balance	**-2.07**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**3.66**	2.00	0.111	mg/L	2	11/28/23 22:31	EPA300.0		AWG
Fluoride*	**4.83**	0.200	0.0194	mg/L	2	11/28/23 22:31	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:37	EPA353.2		AWG
pH*	**8.64**			pH Units	1	11/17/23 11:30	EPA150.1		AES
pH Temperature, degrees C	**21.1**			pH Units	1	11/17/23 11:30	EPA150.1		AES
Sulfate*	**8.12**	2.00	0.248	mg/L	2	11/28/23 22:31	EPA300.0		AWG
Total Dissolved Solids*	**1030**	10.0		mg/L	1	11/22/23 16:14	EPA160.1		AES
Total Organic Carbon*	**3.26**	1.00	0.350	mg/L	2	11/27/23 15:25	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/28/23 19:26	EPA200.7		AES
Calcium*	**0.988**	0.200	0.124	mg/L	2	11/28/23 19:26	EPA200.7		AES
Hardness as CaCO3	**3.76**	1.32	0.598	mg/L	2	11/28/23 19:26	2340 B		AES
Iron*	<0.100	0.100	0.030	mg/L	2	11/28/23 19:26	EPA200.7		AES
Magnesium*	**0.313**	0.200	0.070	mg/L	2	11/28/23 19:26	EPA200.7		AES
Potassium*	<2.00	2.00	0.208	mg/L	2	11/28/23 19:26	EPA200.7		AES
Silica (Si02)	**8.64**	2.14	0.326	mg/L	2	11/28/23 19:26	Calculation		AES
Silicon	**4.04**	1.00	0.152	mg/L	2	11/28/23 19:26	EPA200.7		AES
Sodium*	**428**	2.00	0.818	mg/L	2	11/28/23 19:26	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0099**	0.0010	0.0007	mg/L	2	11/27/23 13:17	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 13:17	EPA200.8		AES
Copper*	**0.0081**	0.0010	0.0008	mg/L	2	11/27/23 13:17	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 13:17	EPA200.8		AES
Manganese*	**0.0074**	0.0010	0.0003	mg/L	2	11/27/23 13:17	EPA200.8		AES
Molybdenum*	**0.0050**	0.0010	0.0004	mg/L	2	11/27/23 13:17	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0007	mg/L	2	11/27/23 13:17	EPA200.8		AES
Uranium	**0.0070**	0.0010	0.00009	mg/L	2	11/27/23 13:17	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 13:17	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-99

2311227-05 (Ground Water)
Sampled Date: 11/16/23 13:11

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 11:59	EPA245.7		CAI

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-3-MI

2311227-06 (Ground Water)
Sampled Date: 11/16/23 14:10

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**630**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	**120**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**510**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Cation/Anion Balance	**1.00**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**10.7**	2.00	0.111	mg/L	2	11/28/23 23:11	EPA300.0		AWG
Fluoride*	**0.924**	0.200	0.0194	mg/L	2	11/28/23 23:11	EPA300.0		AWG
Nitrate/Nitrite as N*	**2.42**	0.100	0.014	mg/L as N	5	11/22/23 16:44	EPA353.2		AWG
pH*	**8.85**			pH Units	1	11/17/23 11:30	EPA150.1		AES
pH Temperature, degrees C	**21.6**			pH Units	1	11/17/23 11:30	EPA150.1		AES
Sulfate*	**241**	2.00	0.248	mg/L	2	11/28/23 23:11	EPA300.0		AWG
Total Dissolved Solids*	**1050**	10.0		mg/L	1	11/22/23 16:16	EPA160.1		AES
Total Organic Carbon*	**4.52**	0.500	0.175	mg/L	1	11/23/23 04:00	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/28/23 19:31	EPA200.7		AES
Calcium*	**1.34**	0.200	0.124	mg/L	2	11/28/23 19:31	EPA200.7		AES
Hardness as CaCO3	**5.20**	1.32	0.598	mg/L	2	11/28/23 19:31	2340 B		AES
Iron*	<0.100	0.100	0.030	mg/L	2	11/28/23 19:31	EPA200.7		AES
Magnesium*	**0.449**	0.200	0.070	mg/L	2	11/28/23 19:31	EPA200.7		AES
Potassium*	<2.00	2.00	0.208	mg/L	2	11/28/23 19:31	EPA200.7		AES
Silica (Si02)	**9.17**	2.14	0.326	mg/L	2	11/28/23 19:31	Calculation		AES
Silicon	**4.29**	1.00	0.152	mg/L	2	11/28/23 19:31	EPA200.7		AES
Sodium*	**405**	2.00	0.818	mg/L	2	11/28/23 19:31	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0084**	0.0010	0.0007	mg/L	2	11/27/23 13:19	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 13:19	EPA200.8		AES
Copper*	**0.0081**	0.0010	0.0008	mg/L	2	11/27/23 13:19	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 13:19	EPA200.8		AES
Manganese*	**0.0059**	0.0010	0.0003	mg/L	2	11/27/23 13:19	EPA200.8		AES
Molybdenum*	**0.0139**	0.0010	0.0004	mg/L	2	11/27/23 13:19	EPA200.8		AES
Selenium*	**0.0032**	0.0020	0.0007	mg/L	2	11/27/23 13:19	EPA200.8		AES
Uranium	**0.0026**	0.0010	0.00009	mg/L	2	11/27/23 13:19	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 13:19	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-3-MI

2311227-06 (Ground Water)
Sampled Date: 11/16/23 14:10

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 12:26	EPA245.7		CAI

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Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-3-A

2311227-07 (Ground Water)
Sampled Date: 11/16/23 14:41

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**465**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**455**	10.0	6.06	mg/L	5	11/17/23 15:20	2320 B		IDB
Cation/Anion Balance	**-0.840**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**16.2**	2.00	0.111	mg/L	2	11/29/23 00:31	EPA300.0		AWG
Fluoride*	**0.284**	0.200	0.0194	mg/L	2	11/29/23 00:31	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:40	EPA353.2		AWG
pH*	**8.37**			pH Units	1	11/17/23 11:30	EPA150.1		AES
pH Temperature, degrees C	**21.3**			pH Units	1	11/17/23 11:30	EPA150.1		AES
Sulfate*	**552**	5.00	0.620	mg/L	5	11/29/23 00:51	EPA300.0		AWG
Total Dissolved Solids*	**1290**	10.0		mg/L	1	11/22/23 16:18	EPA160.1		AES
Total Organic Carbon*	**2.93**	0.500	0.175	mg/L	1	11/23/23 04:19	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.150	0.150	0.132	mg/L	3	11/28/23 19:36	EPA200.7		AES
Calcium*	**2.57**	0.300	0.185	mg/L	3	11/28/23 19:36	EPA200.7		AES
Hardness as CaCO3	**9.30**	1.98	0.897	mg/L	3	11/28/23 19:36	2340 B		AES
Iron*	<0.150	0.150	0.045	mg/L	3	11/28/23 19:36	EPA200.7		AES
Magnesium*	**0.702**	0.300	0.105	mg/L	3	11/28/23 19:36	EPA200.7		AES
Potassium*	<3.00	3.00	0.311	mg/L	3	11/28/23 19:36	EPA200.7		AES
Silica (Si02)	**10.9**	3.21	0.488	mg/L	3	11/28/23 19:36	Calculation		AES
Silicon	**5.09**	1.50	0.228	mg/L	3	11/28/23 19:36	EPA200.7		AES
Sodium*	**459**	3.00	1.23	mg/L	3	11/28/23 19:36	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0018	mg/L	5	11/27/23 13:21	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	11/27/23 13:21	EPA200.8		AES
Copper*	**0.0096**	0.0025	0.0021	mg/L	5	11/27/23 13:21	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0002	mg/L	5	11/27/23 13:21	EPA200.8		AES
Manganese*	**0.0091**	0.0025	0.0009	mg/L	5	11/27/23 13:21	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0009	mg/L	5	11/27/23 13:21	EPA200.8		AES
Selenium*	**0.0094**	0.0050	0.0018	mg/L	5	11/27/23 13:21	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0002	mg/L	5	11/27/23 13:21	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0024	mg/L	5	11/27/23 13:21	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-3-A

2311227-07 (Ground Water)
Sampled Date: 11/16/23 14:41

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 12:28	EPA245.7		CAI

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-3-C

2311227-08 (Ground Water)
Sampled Date: 11/16/23 15:10

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**2140**	10.0	6.06	mg/L	20	11/17/23 15:20	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	20	11/17/23 15:20	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	**80.0**	10.0	6.06	mg/L	20	11/17/23 15:20	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**2060**	10.0	6.06	mg/L	20	11/17/23 15:20	2320 B		IDB
Cation/Anion Balance	**-4.19**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**644**	10.0	0.555	mg/L	10	11/29/23 01:11	EPA300.0		AWG
Fluoride*	**2.91**	1.00	0.0971	mg/L	10	11/29/23 01:11	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:41	EPA353.2		AWG
pH*	**8.27**			pH Units	1	11/17/23 11:30	EPA150.1		AES
pH Temperature, degrees C	**21.1**			pH Units	1	11/17/23 11:30	EPA150.1		AES
Sulfate*	<10.0	10.0	1.24	mg/L	10	11/29/23 01:11	EPA300.0		AWG
Total Dissolved Solids*	**3300**	20.0		mg/L	2	11/22/23 16:20	EPA160.1		AES
Total Organic Carbon*	**19.2**	5.00	1.75	mg/L	10	11/27/23 15:45	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.500	0.500	0.440	mg/L	10	11/28/23 19:40	EPA200.7		AES
Calcium*	**3.97**	1.00	0.618	mg/L	10	11/28/23 19:40	EPA200.7		AES
Hardness as CaCO3	**17.7**	6.62	2.99	mg/L	10	11/28/23 19:40	2340 B		AES
Iron*	<0.500	0.500	0.151	mg/L	10	11/28/23 19:40	EPA200.7		AES
Magnesium*	**1.89**	1.00	0.351	mg/L	10	11/28/23 19:40	EPA200.7		AES
Potassium*	<10.0	10.0	1.04	mg/L	10	11/28/23 19:40	EPA200.7		AES
Silica (Si02)	<10.7	10.7	1.63	mg/L	10	11/28/23 19:40	Calculation		AES
Silicon	<5.00	5.00	0.761	mg/L	10	11/28/23 19:40	EPA200.7		AES
Sodium*	**1270**	10.0	4.09	mg/L	10	11/28/23 19:40	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0170**	0.0050	0.0037	mg/L	10	11/27/23 13:22	EPA200.8		AES
Cadmium*	<0.0050	0.0050	0.0003	mg/L	10	11/27/23 13:22	EPA200.8		AES
Copper*	**0.0293**	0.0050	0.0042	mg/L	10	11/27/23 13:22	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0004	mg/L	10	11/27/23 13:22	EPA200.8		AES
Manganese*	<0.0050	0.0050	0.0017	mg/L	10	11/27/23 13:22	EPA200.8		AES
Molybdenum*	**0.0059**	0.0050	0.0018	mg/L	10	11/27/23 13:22	EPA200.8		AES
Selenium*	**0.0282**	0.0100	0.0037	mg/L	10	11/27/23 13:22	EPA200.8		AES
Uranium	<0.0050	0.0050	0.0004	mg/L	10	11/27/23 13:22	EPA200.8		AES
Zinc*	<0.0200	0.0200	0.0047	mg/L	10	11/27/23 13:22	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

MW-3-C

2311227-08 (Ground Water)
Sampled Date: 11/16/23 15:10

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 12:31	EPA245.7		CAI

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233369 - General Prep - Wet Chem										
Blank (B233369-BLK1)				Prepared & Analyzed: 11/22/23						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B233369-BS1)				Prepared & Analyzed: 11/22/23						
Total Organic Carbon	9.62	0.500	mg/L	10.0		96.2	85-115			
LCS Dup (B233369-BSD1)				Prepared & Analyzed: 11/22/23						
Total Organic Carbon	9.54	0.500	mg/L	10.0		95.4	85-115	0.804	20	
Batch B233465 - General Prep - Wet Chem										
Blank (B233465-BLK1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L							
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B233465-BS1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Total as CaCO3	91.0	10.0	mg/L	100		91.0	85-115			
LCS Dup (B233465-BSD1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Total as CaCO3	102	10.0	mg/L	100		102	85-115	11.4	20	
Reference (B233465-SRM1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Total as CaCO3	75.0	10.0	mg/L	72.7		103	85-115			
Batch B233466 - General Prep - Wet Chem										
Reference (B233466-SRM1)				Prepared: 11/17/23 Analyzed: 11/22/23						
pH	7.02		pH Units	7.00		100	98.57-101.42			
Batch B233471 - Lachat										
Blank (B233471-BLK1)				Prepared: 11/20/23 Analyzed: 11/22/23						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B233471-BS1)				Prepared: 11/20/23 Analyzed: 11/22/23						
Nitrate/Nitrite as N	1.01	0.020	mg/L as N	1.00		101	90-110			
LCS Dup (B233471-BSD1)				Prepared: 11/20/23 Analyzed: 11/22/23						
Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00		104	90-110	3.00	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233485 - General Prep - Wet Chem										
Blank (B233485-BLK1)				Prepared: 11/21/23 Analyzed: 11/22/23						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B233485-SRM1)				Prepared: 11/21/23 Analyzed: 11/22/23						
Total Dissolved Solids	360	10.0	mg/L	400		90.0	85-115			
Batch B233552 - IC- Ion Chromatograph										
Blank (B233552-BLK1)				Prepared: 11/28/23 Analyzed: 11/29/23						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B233552-BS1)				Prepared: 11/28/23 Analyzed: 11/29/23						
Chloride	25.3	1.00	mg/L	25.0		101	90-110			
Fluoride	2.54	0.100	mg/L	2.50		102	90-110			
Sulfate	24.7	1.00	mg/L	25.0		98.8	90-110			
LCS Dup (B233552-BSD1)				Prepared: 11/28/23 Analyzed: 11/29/23						
Chloride	25.2	1.00	mg/L	25.0		101	90-110	0.0713	20	
Fluoride	2.55	0.100	mg/L	2.50		102	90-110	0.432	20	
Sulfate	24.7	1.00	mg/L	25.0		98.9	90-110	0.0809	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233535 - Dissolved ICP										
Blank (B233535-BLK1)				Prepared: 11/27/23 Analyzed: 11/28/23						
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 (B233535-BS1)				Prepared: 11/27/23 Analyzed: 11/28/23						
Aluminum	4.12	0.050	mg/L	4.00		103	85-115			
Calcium	3.92	0.100	mg/L	4.00		97.9	85-115			
Iron	3.93	0.050	mg/L	4.00		98.2	85-115			
Magnesium	20.5	0.100	mg/L	20.0		102	85-115			
Potassium	7.83	1.00	mg/L	8.00		97.9	85-115			
Silicon	4.25	0.500	mg/L	4.00		106	85-115			
Sodium	3.30	1.00	mg/L	3.24		102	85-115			
LCS Dup (B233535-BSD1)				Prepared: 11/27/23 Analyzed: 11/28/23						
Aluminum	4.12	0.050	mg/L	4.00		103	85-115	0.0157	20	
Calcium	3.93	0.100	mg/L	4.00		98.3	85-115	0.384	20	
Iron	3.95	0.050	mg/L	4.00		98.9	85-115	0.637	20	
Magnesium	20.5	0.100	mg/L	20.0		102	85-115	0.0544	20	
Potassium	7.84	1.00	mg/L	8.00		98.0	85-115	0.102	20	
Silicon	4.24	0.500	mg/L	4.00		106	85-115	0.200	20	
Sodium	3.24	1.00	mg/L	3.24		100	85-115	1.79	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233529 - Dissolved ICPMS										
Blank (B233529-BLK1)				Prepared & Analyzed: 11/27/23						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0005	mg/L							
Copper	ND	0.0005	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 (B233529-BS1)				Prepared & Analyzed: 11/27/23						
Arsenic	0.0523	0.0005	mg/L	0.0500		105	85-115			
Cadmium	0.0516	0.0005	mg/L	0.0500		103	85-115			
Copper	0.0499	0.0005	mg/L	0.0500		99.8	85-115			
Lead	0.0498	0.0005	mg/L	0.0500		99.6	85-115			
Manganese	0.0531	0.0005	mg/L	0.0500		106	85-115			
Molybdenum	0.0509	0.0005	mg/L	0.0500		102	85-115			
Selenium	0.263	0.0010	mg/L	0.250		105	85-115			
Uranium	0.0537	0.0005	mg/L	0.0500		107	85-115			
Zinc	0.0484	0.0020	mg/L	0.0500		96.9	85-115			
LCS Dup (B233529-BSD1)				Prepared & Analyzed: 11/27/23						
Arsenic	0.0524	0.0005	mg/L	0.0500		105	85-115	0.0608	20	
Cadmium	0.0514	0.0005	mg/L	0.0500		103	85-115	0.431	20	
Copper	0.0510	0.0005	mg/L	0.0500		102	85-115	2.20	20	
Lead	0.0502	0.0005	mg/L	0.0500		100	85-115	0.707	20	
Manganese	0.0530	0.0005	mg/L	0.0500		106	85-115	0.170	20	
Molybdenum	0.0511	0.0005	mg/L	0.0500		102	85-115	0.380	20	
Selenium	0.261	0.0010	mg/L	0.250		104	85-115	0.607	20	
Uranium	0.0530	0.0005	mg/L	0.0500		106	85-115	1.32	20	
Zinc	0.0494	0.0020	mg/L	0.0500		98.8	85-115	2.00	20	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:40

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233526 - EPA 245.7										
Blank (B233526-BLK1)				Prepared: 11/27/23 Analyzed: 12/01/23						
Mercury	ND	100	ng/L							
LCS (B233526-BS1)				Prepared: 11/27/23 Analyzed: 12/01/23						
Mercury	1900	100	ng/L	2000		94.9	76-113			
LCS Dup (B233526-BSD1)				Prepared: 11/27/23 Analyzed: 12/01/23						
Mercury	1830	100	ng/L	2000		91.6	76-113	3.49	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

Jeremy D Allen, Laboratory Director

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Table of Contents

GREEN Analytical Laboratories

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dzufelt@greenanalytical.com
75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST
FORM-006
COC - Revision 6.0

Company or Client: GCC Energy
Address: 6473 CR 120
City: Hesperus State: CO Zip: 81326
Phone #: 970.385.4528
Contact Person: Tom Bird for billing, Landon Beck for logistical or technical
Email Report to: Tom@haygulchservices.com; LBECK@resourcehydrogeologic.com
Project Name(optional):
Sampler Name (Print): BRANDON WADDELL

Bill to (if different):
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Email:

2311-227

	Sample Name or Location	Collected Date	Collected Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCC GW Baseline	GCC S&S Baseline	GCC SW Baseline						
01	MW-6-LM	11-16-23	11:08	✓							1	2		4			X								
02	MW-4-MI	11-16-23	12:11	✓							1	2		4			X								
03	MW-4-A	11-16-23	12:52	✓							1	2		4			X								
04	MW-4-C	11-16-23	13:27	✓							1	2		4			X								
05	MW-99	11-16-23	1:11	✓							1	2		4			X								
06	MW-3-MI	11-16-23	14:10	✓							1	2		4			X								
07	MW-3-A	11-16-23	14:41	✓							1	2		4			X								
08	MW-3-C	11-16-23	15:10	✓							1	2		4			X								

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 receive by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequental 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: 11-16-23 Time: 4:57	Received By:
Relinquished By:	Date: 3:57 Time:	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:

ADDITIONAL REMARKS: Report to State? (Circle) Yes No

laser #2

Temperature at receipt: 9.3°C | CHECKED BY: MRN | On Ice: X | No Ice:

† GAL cannot always accept verbal changes. Please fax or email written change requests.
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Just Click Printing Form #17-0301

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: Tom Bird
Comments: All Metals Are Field Filtered. Send Out PRESERVED bottles per Landon. 11-01-18

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

GAL Analytical Laboratories

SAMPLE CONDITION RECEIPT FORM

Client Name: G.C.C. Dairy **Work Order #** 2311-227

Courier: ☐Fed Ex ☐UPS ☐USPS ☑Client ☐Kangaroo

Custody Seals on Box/Cooler Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☐ No

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

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: Observed Temp: 9.3 °C Correction Factor: Ø °C Final Temp: 9.3 °C

*Temp should be above freezing to 6°C

Date/Initials of person examining contents: 11/16/23 [illegible]

Labeled by initials: _____
(if different than above)

Chain of Custody Present:	☑Yes ☐No	1.
Chain of Custody Filled Out:	☑Yes ☐No	2.
Chain of Custody Relinquished:	☑Yes ☐No	3.
Sampler Name and Signature on COC:	☑Yes ☐No	4.
Samples arrived within hold time:	☑Yes ☐No	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No	6. 24
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume:	☑Yes ☐No	8.
Correct Containers Used:	☑Yes ☐No	9.
Containers Intact:	☑Yes ☐No	10.
Dissolved Testing Needed:	☐Yes ☑No	11.
Field Filtered: ☑Yes ☐No		
Sample Labels match COC: -Includes Date/Time/ID	☑Yes ☐No	12.
Matrix:	WT SL OT	
Trip Blank Present:	☐Yes ☑No ☐N/A	13.
Trip Blank Custody Seals Present:	☐Yes ☐No ☑N/A	

Client Notification/Resolution:

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

30 November 2023

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326

RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 11/13/23 15:45. 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,

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: T104704514-23-18

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: T104704398-23-16

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-8-EAA	2311155-01	Water	11/13/23 12:01	11/13/23 15:45	
MW-8-MI	2311155-02	Water	11/13/23 12:34	11/13/23 15:45	
MW-8-PL	2311155-03	Water	11/13/23 13:12	11/13/23 15:45	
MW-8-LM	2311155-04	Water	11/13/23 13:35	11/13/23 15:45	
MW-7-EAA	2311155-05	Water	11/13/23 14:24	11/13/23 15:45	

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

MW-8-EAA

2311155-01 (Ground Water)
Sampled Date: 11/13/23 12:01

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**415**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**415**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Cation/Anion Balance	**-2.59**	-100	-100	%	1	11/22/23 11:56	Calculation		JDA
Chloride*	**12.2**	2.00	0.111	mg/L	2	11/27/23 14:16	EPA300.0		AWG
Fluoride*	**0.266**	0.200	0.0194	mg/L	2	11/27/23 14:16	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:18	EPA353.2		AWG
pH*	**7.43**			pH Units	1	11/14/23 15:01	EPA150.1		CAI
pH Temperature, degrees C	**19.6**			pH Units	1	11/14/23 15:01	EPA150.1		CAI
Sulfate*	**748**	5.00	0.620	mg/L	5	11/27/23 15:15	EPA300.0		AWG
Total Dissolved Solids*	**1430**	10.0		mg/L	1	11/20/23 17:25	EPA160.1		JDA
Total Organic Carbon*	**3.64**	0.500	0.175	mg/L	1	11/22/23 23:49	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/21/23 14:56	EPA200.7		JDA
Calcium*	**156**	0.200	0.124	mg/L	2	11/21/23 14:55	EPA200.7		JDA
Hardness as CaCO3	**901**	1.32	0.598	mg/L	2	11/21/23 14:55	2340 B		JDA
Iron*	**2.24**	0.100	0.030	mg/L	2	11/21/23 14:56	EPA200.7		JDA
Magnesium*	**125**	0.200	0.070	mg/L	2	11/21/23 14:55	EPA200.7		JDA
Potassium*	**3.24**	2.00	0.208	mg/L	2	11/21/23 14:55	EPA200.7		JDA
Silica (Si02)	**16.5**	2.14	0.326	mg/L	2	11/21/23 14:56	Calculation		JDA
Silicon	**7.72**	1.00	0.152	mg/L	2	11/21/23 14:56	EPA200.7		JDA
Sodium*	**77.4**	2.00	0.818	mg/L	2	11/21/23 14:55	EPA200.7		JDA
Dissolved Metals by ICPMS									
Arsenic*	**0.0020**	0.0010	0.0007	mg/L	2	11/27/23 12:18	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 12:18	EPA200.8		AES
Copper*	**0.0020**	0.0010	0.0008	mg/L	2	11/27/23 12:18	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 12:18	EPA200.8		AES
Manganese*	**4.16**	0.0050	0.0017	mg/L	10	11/27/23 16:30	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0004	mg/L	2	11/27/23 12:18	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0007	mg/L	2	11/27/23 12:18	EPA200.8		AES
Uranium	**0.0019**	0.0010	0.00009	mg/L	2	11/27/23 12:18	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 12:18	EPA200.8		AES

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

MW-8-EAA

2311155-01 (Ground Water)
Sampled Date: 11/13/23 12:01

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	11/27/23 13:55	EPA245.7		CAI

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

MW-8-MI

2311155-02 (Ground Water)
Sampled Date: 11/13/23 12:34

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**560**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**560**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Cation/Anion Balance	**-1.32**	-100	-100	%	1	11/22/23 11:56	Calculation		JDA
Chloride*	**8.35**	2.00	0.111	mg/L	2	11/27/23 15:36	EPA300.0		AWG
Fluoride*	<0.200	0.200	0.0194	mg/L	2	11/27/23 15:36	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:22	EPA353.2		AWG
pH*	**7.66**			pH Units	1	11/14/23 15:01	EPA150.1		CAI
pH Temperature, degrees C	**20.0**			pH Units	1	11/14/23 15:01	EPA150.1		CAI
Sulfate*	**320**	2.00	0.248	mg/L	2	11/27/23 15:36	EPA300.0		AWG
Total Dissolved Solids*	**1050**	10.0		mg/L	1	11/20/23 17:27	EPA160.1		JDA
Total Organic Carbon*	**2.76**	0.500	0.175	mg/L	1	11/27/23 18:25	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/21/23 15:00	EPA200.7		JDA
Calcium*	**66.3**	0.200	0.124	mg/L	2	11/21/23 15:00	EPA200.7		JDA
Hardness as CaCO3	**361**	1.32	0.598	mg/L	2	11/21/23 15:00	2340 B		JDA
Iron*	<0.100	0.100	0.030	mg/L	2	11/21/23 15:00	EPA200.7		JDA
Magnesium*	**47.5**	0.200	0.070	mg/L	2	11/21/23 15:00	EPA200.7		JDA
Potassium*	**5.12**	2.00	0.208	mg/L	2	11/21/23 15:00	EPA200.7		JDA
Silica (Si02)	**13.8**	2.14	0.326	mg/L	2	11/21/23 15:00	Calculation		JDA
Silicon	**6.45**	1.00	0.152	mg/L	2	11/21/23 15:00	EPA200.7		JDA
Sodium*	**215**	2.00	0.818	mg/L	2	11/21/23 15:00	EPA200.7		JDA
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0007	mg/L	2	11/27/23 12:20	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 12:20	EPA200.8		AES
Copper*	**0.0044**	0.0010	0.0008	mg/L	2	11/27/23 12:20	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 12:20	EPA200.8		AES
Manganese*	**0.0562**	0.0010	0.0003	mg/L	2	11/27/23 12:20	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0004	mg/L	2	11/27/23 12:20	EPA200.8		AES
Selenium*	**0.0076**	0.0020	0.0007	mg/L	2	11/27/23 12:20	EPA200.8		AES
Uranium	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 12:20	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 12:20	EPA200.8		AES

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

MW-8-MI

2311155-02 (Ground Water)
Sampled Date: 11/13/23 12:34

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	11/27/23 14:02	EPA245.7		CAI

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

MW-8-PL

2311155-03 (Ground Water)
Sampled Date: 11/13/23 13:12

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**335**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**335**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Cation/Anion Balance	**5.76**	-100	-100	%	1	11/22/23 11:56	Calculation		JDA
Chloride*	**3.58**	1.00	0.0555	mg/L	1	11/27/23 16:15	EPA300.0		AWG
Fluoride*	**0.159**	0.100	0.00971	mg/L	1	11/27/23 16:15	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:23	EPA353.2		AWG
pH*	**7.70**			pH Units	1	11/14/23 15:01	EPA150.1		CAI
pH Temperature, degrees C	**19.9**			pH Units	1	11/14/23 15:01	EPA150.1		CAI
Sulfate*	**104**	1.00	0.124	mg/L	1	11/27/23 16:15	EPA300.0		AWG
Total Dissolved Solids*	**505**	10.0		mg/L	1	11/20/23 17:29	EPA160.1		JDA
Total Organic Carbon*	<1.00	1.00	0.350	mg/L	2	11/28/23 12:31	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.044	mg/L	1	11/21/23 15:05	EPA200.7		JDA
Calcium*	**51.4**	0.100	0.062	mg/L	1	11/21/23 15:05	EPA200.7		JDA
Hardness as CaCO3	**269**	0.662	0.299	mg/L	1	11/21/23 15:05	2340 B		JDA
Iron*	**0.051**	0.050	0.015	mg/L	1	11/21/23 15:05	EPA200.7		JDA
Magnesium*	**34.1**	0.100	0.035	mg/L	1	11/21/23 15:05	EPA200.7		JDA
Potassium*	**1.46**	1.00	0.104	mg/L	1	11/21/23 15:05	EPA200.7		JDA
Silica (Si02)	**20.8**	1.07	0.163	mg/L	1	11/21/23 15:05	Calculation		JDA
Silicon	**9.71**	0.500	0.076	mg/L	1	11/21/23 15:05	EPA200.7		JDA
Sodium*	**75.1**	1.00	0.409	mg/L	1	11/21/23 15:05	EPA200.7		JDA
Dissolved Metals by ICPMS									
Arsenic*	**0.0030**	0.0005	0.0004	mg/L	1	11/27/23 12:21	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.00003	mg/L	1	11/27/23 12:21	EPA200.8		AES
Copper*	**0.0026**	0.0005	0.0004	mg/L	1	11/27/23 12:21	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00004	mg/L	1	11/27/23 12:21	EPA200.8		AES
Manganese*	**0.105**	0.0005	0.0002	mg/L	1	11/27/23 12:21	EPA200.8		AES
Molybdenum*	<0.0005	0.0005	0.0002	mg/L	1	11/27/23 12:21	EPA200.8		AES
Selenium*	<0.0010	0.0010	0.0004	mg/L	1	11/27/23 12:21	EPA200.8		AES
Uranium	<0.0005	0.0005	0.00004	mg/L	1	11/27/23 12:21	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0005	mg/L	1	11/27/23 12:21	EPA200.8		AES

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

MW-8-PL

2311155-03 (Ground Water)
Sampled Date: 11/13/23 13:12

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	11/27/23 14:05	EPA245.7		CAI

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

MW-8-LM

2311155-04 (Ground Water)
Sampled Date: 11/13/23 13:35

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**700**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	**80.0**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**620**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Cation/Anion Balance	**-1.83**	-100	-100	%	1	11/22/23 11:56	Calculation		JDA
Chloride*	**2.75**	2.00	0.111	mg/L	2	11/27/23 16:35	EPA300.0		AWG
Fluoride*	**3.42**	0.200	0.0194	mg/L	2	11/27/23 16:35	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:24	EPA353.2		AWG
pH*	**8.84**			pH Units	1	11/14/23 15:01	EPA150.1		CAI
pH Temperature, degrees C	**19.8**			pH Units	1	11/14/23 15:01	EPA150.1		CAI
Sulfate*	<2.00	2.00	0.248	mg/L	2	11/27/23 16:35	EPA300.0		AWG
Total Dissolved Solids*	**755**	10.0		mg/L	1	11/20/23 17:31	EPA160.1		JDA
Total Organic Carbon*	**1.70**	0.500	0.175	mg/L	1	11/27/23 19:56	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.044	mg/L	1	11/21/23 15:07	EPA200.7		JDA
Calcium*	**1.87**	0.100	0.062	mg/L	1	11/21/23 15:07	EPA200.7		JDA
Hardness as CaCO3	**7.08**	0.662	0.299	mg/L	1	11/21/23 15:07	2340 B		JDA
Iron*	<0.050	0.050	0.015	mg/L	1	11/21/23 15:07	EPA200.7		JDA
Magnesium*	**0.583**	0.100	0.035	mg/L	1	11/21/23 15:07	EPA200.7		JDA
Potassium*	**2.07**	1.00	0.104	mg/L	1	11/21/23 15:07	EPA200.7		JDA
Silica (Si02)	**8.14**	1.07	0.163	mg/L	1	11/21/23 15:07	Calculation		JDA
Silicon	**3.80**	0.500	0.076	mg/L	1	11/21/23 15:07	EPA200.7		JDA
Sodium*	**299**	1.00	0.409	mg/L	1	11/21/23 15:07	EPA200.7		JDA
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0007	mg/L	2	11/27/23 12:24	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 12:24	EPA200.8		AES
Copper*	**0.0068**	0.0010	0.0008	mg/L	2	11/27/23 12:24	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 12:24	EPA200.8		AES
Manganese*	**0.0027**	0.0010	0.0003	mg/L	2	11/27/23 12:24	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0004	mg/L	2	11/27/23 12:24	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0007	mg/L	2	11/27/23 12:24	EPA200.8		AES
Uranium	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 12:24	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 12:24	EPA200.8		AES

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

MW-8-LM

2311155-04 (Ground Water)
Sampled Date: 11/13/23 13:35

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	11/27/23 14:07	EPA245.7		CAI

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

MW-7-EAA

2311155-05 (Ground Water)
Sampled Date: 11/13/23 14:24

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**425**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**425**	10.0	6.06	mg/L	5	11/17/23 09:30	2320 B		IDB
Cation/Anion Balance	**-1.91**	-100	-100	%	1	11/22/23 11:56	Calculation		JDA
Chloride*	**11.9**	2.00	0.111	mg/L	2	11/27/23 16:55	EPA300.0		AWG
Fluoride*	**0.238**	0.200	0.0194	mg/L	2	11/27/23 16:55	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	11/22/23 16:25	EPA353.2		AWG
pH*	**7.16**			pH Units	1	11/14/23 15:01	EPA150.1		CAI
pH Temperature, degrees C	**19.9**			pH Units	1	11/14/23 15:01	EPA150.1		CAI
Sulfate*	**828**	5.00	0.620	mg/L	5	11/27/23 17:15	EPA300.0		AWG
Total Dissolved Solids*	**1560**	10.0		mg/L	1	11/20/23 17:33	EPA160.1		JDA
Total Organic Carbon*	**4.24**	1.00	0.350	mg/L	2	11/28/23 12:53	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.088	mg/L	2	11/21/23 15:12	EPA200.7		JDA
Calcium*	**173**	0.200	0.124	mg/L	2	11/21/23 15:12	EPA200.7		JDA
Hardness as CaCO3	**1010**	1.32	0.598	mg/L	2	11/21/23 15:12	2340 B		JDA
Iron*	**0.251**	0.100	0.030	mg/L	2	11/21/23 15:12	EPA200.7		JDA
Magnesium*	**141**	0.200	0.070	mg/L	2	11/21/23 15:12	EPA200.7		JDA
Potassium*	**3.46**	2.00	0.208	mg/L	2	11/21/23 15:12	EPA200.7		JDA
Silica (Si02)	**16.5**	2.14	0.326	mg/L	2	11/21/23 15:12	Calculation		JDA
Silicon	**7.72**	1.00	0.152	mg/L	2	11/21/23 15:12	EPA200.7		JDA
Sodium*	**77.1**	2.00	0.818	mg/L	2	11/21/23 15:12	EPA200.7		JDA
Dissolved Metals by ICPMS									
Arsenic*	**0.0010**	0.0010	0.0007	mg/L	2	11/27/23 12:25	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00005	mg/L	2	11/27/23 12:25	EPA200.8		AES
Copper*	**0.0018**	0.0010	0.0008	mg/L	2	11/27/23 12:25	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00009	mg/L	2	11/27/23 12:25	EPA200.8		AES
Manganese*	**4.40**	0.0050	0.0017	mg/L	10	11/27/23 16:31	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0004	mg/L	2	11/27/23 12:25	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0007	mg/L	2	11/27/23 12:25	EPA200.8		AES
Uranium	**0.0025**	0.0010	0.00009	mg/L	2	11/27/23 12:25	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0009	mg/L	2	11/27/23 12:25	EPA200.8		AES

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

MW-7-EAA

2311155-05 (Ground Water)
Sampled Date: 11/13/23 14:24

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	11/27/23 14:10	EPA245.7		CAI

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Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233369 - General Prep - Wet Chem										
Blank (B233369-BLK1)				Prepared & Analyzed: 11/22/23						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B233369-BS1)				Prepared & Analyzed: 11/22/23						
Total Organic Carbon	9.62	0.500	mg/L	10.0		96.2	85-115			
LCS Dup (B233369-BSD1)				Prepared & Analyzed: 11/22/23						
Total Organic Carbon	9.54	0.500	mg/L	10.0		95.4	85-115	0.804	20	
Batch B233414 - General Prep - Wet Chem										
Reference (B233414-SRM1)				Prepared & Analyzed: 11/14/23						
pH	6.98		pH Units	7.00		99.7	98.57-101.42			
Batch B233463 - General Prep - Wet Chem										
Blank (B233463-BLK1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L							
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B233463-BS1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Total as CaCO3	101	10.0	mg/L	100		101	85-115			
LCS Dup (B233463-BSD1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115	2.00	20	
Reference (B233463-SRM1)				Prepared & Analyzed: 11/17/23						
Alkalinity, Total as CaCO3	73.0	10.0	mg/L	72.7		100	85-115			
Batch B233467 - General Prep - Wet Chem										
Blank (B233467-BLK1)				Prepared: 11/17/23 Analyzed: 11/20/23						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B233467-SRM1)				Prepared: 11/17/23 Analyzed: 11/20/23						
Total Dissolved Solids	380	10.0	mg/L	400		95.0	85-115			
Batch B233471 - Lachat										
Blank (B233471-BLK1)				Prepared: 11/20/23 Analyzed: 11/22/23						

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233471 - Lachat (Continued)										
Blank (B233471-BLK1) (Continued)				Prepared: 11/20/23 Analyzed: 11/22/23						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B233471-BS1)				Prepared: 11/20/23 Analyzed: 11/22/23						
Nitrate/Nitrite as N	1.01	0.020	mg/L as N	1.00		101	90-110			
LCS Dup (B233471-BSD1)				Prepared: 11/20/23 Analyzed: 11/22/23						
Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00		104	90-110	3.00	20	
Batch B233511 - IC- Ion Chromatograph										
Blank (B233511-BLK1)				Prepared & Analyzed: 11/27/23						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B233511-BS1)				Prepared & Analyzed: 11/27/23						
Chloride	24.9	1.00	mg/L	25.0		99.6	90-110			
Fluoride	2.41	0.100	mg/L	2.50		96.6	90-110			
Sulfate	24.1	1.00	mg/L	25.0		96.5	90-110			
LCS Dup (B233511-BSD1)				Prepared & Analyzed: 11/27/23						
Chloride	24.9	1.00	mg/L	25.0		99.5	90-110	0.100	20	
Fluoride	2.44	0.100	mg/L	2.50		97.6	90-110	1.03	20	
Sulfate	24.2	1.00	mg/L	25.0		97.0	90-110	0.476	20	
Batch B233530 - General Prep - Wet Chem										
Blank (B233530-BLK1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B233530-BS1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	9.66	0.500	mg/L	10.0		96.6	85-115			
LCS Dup (B233530-BSD1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	9.81	0.500	mg/L	10.0		98.1	85-115	1.53	20	

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233489 - Dissolved ICP										
Blank (B233489-BLK1)				Prepared & Analyzed: 11/21/23						
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 (B233489-BS1)				Prepared & Analyzed: 11/21/23						
Aluminum	4.91	0.050	mg/L	5.00		98.2	85-115			
Calcium	4.68	0.100	mg/L	5.00		93.6	85-115			
Iron	4.74	0.050	mg/L	5.00		94.8	85-115			
Magnesium	24.4	0.100	mg/L	25.0		97.4	85-115			
Potassium	9.73	1.00	mg/L	10.0		97.3	85-115			
Silicon	5.01	0.500	mg/L	5.00		100	85-115			
Sodium	3.91	1.00	mg/L	4.05		96.5	85-115			
LCS Dup (B233489-BSD1)				Prepared & Analyzed: 11/21/23						
Aluminum	4.85	0.050	mg/L	5.00		97.0	85-115	1.31	20	
Calcium	4.69	0.100	mg/L	5.00		93.7	85-115	0.125	20	
Iron	4.68	0.050	mg/L	5.00		93.5	85-115	1.36	20	
Magnesium	24.1	0.100	mg/L	25.0		96.6	85-115	0.876	20	
Potassium	9.48	1.00	mg/L	10.0		94.8	85-115	2.68	20	
Silicon	4.96	0.500	mg/L	5.00		99.1	85-115	1.11	20	
Sodium	3.83	1.00	mg/L	4.05		94.7	85-115	1.90	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233491 - Dissolved ICPMS										
Blank (B233491-BLK1)				Prepared: 11/21/23 Analyzed: 11/27/23						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0005	mg/L							
Copper	ND	0.0005	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 (B233491-BS1)				Prepared: 11/21/23 Analyzed: 11/27/23						
Arsenic	0.0512	0.0005	mg/L	0.0500		102	85-115			
Cadmium	0.0511	0.0005	mg/L	0.0500		102	85-115			
Copper	0.0504	0.0005	mg/L	0.0500		101	85-115			
Lead	0.0497	0.0005	mg/L	0.0500		99.4	85-115			
Manganese	0.0520	0.0005	mg/L	0.0500		104	85-115			
Molybdenum	0.0500	0.0005	mg/L	0.0500		100	85-115			
Selenium	0.253	0.0010	mg/L	0.250		101	85-115			
Uranium	0.0522	0.0005	mg/L	0.0500		104	85-115			
Zinc	0.0492	0.0020	mg/L	0.0500		98.3	85-115			
LCS Dup (B233491-BSD1)				Prepared: 11/21/23 Analyzed: 11/27/23						
Arsenic	0.0524	0.0005	mg/L	0.0500		105	85-115	2.43	20	
Cadmium	0.0509	0.0005	mg/L	0.0500		102	85-115	0.460	20	
Copper	0.0502	0.0005	mg/L	0.0500		100	85-115	0.367	20	
Lead	0.0496	0.0005	mg/L	0.0500		99.1	85-115	0.296	20	
Manganese	0.0521	0.0005	mg/L	0.0500		104	85-115	0.154	20	
Molybdenum	0.0504	0.0005	mg/L	0.0500		101	85-115	0.852	20	
Selenium	0.254	0.0010	mg/L	0.250		102	85-115	0.537	20	
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115	1.07	20	
Zinc	0.0496	0.0020	mg/L	0.0500		99.2	85-115	0.839	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	11/30/23 12:48

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233450 - EPA 245.7										
Blank (B233450-BLK1)				Prepared: 11/16/23 Analyzed: 11/27/23						
Mercury	ND	100	ng/L							
LCS (B233450-BS1)				Prepared: 11/16/23 Analyzed: 11/27/23						
Mercury	1750	100	ng/L	2000		87.7	76-113			
LCS Dup (B233450-BSD1)				Prepared: 11/16/23 Analyzed: 11/27/23						
Mercury	1720	100	ng/L	2000		86.2	76-113	1.76	20	

Notes and Definitions

Q8	Sample(s) not received on ice.
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 J Wells

Veronica Wells, Project Manager

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75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC Energy
Address: 6473 CR 120
City: Hesperus **State:** CO **Zip:** 81326
Phone #: 970.385.4528
Contact Person: Tom Bird for billing, Landon Beck for logistical or technical
Email Report to: Tom@haygulchservices.com; LBECK@resourcehydrogeologic.com
Project Name(optional):
Sampler Name (Print): BRANDON WADDELL

Bill to (if different):
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Email:

ANALYSIS REQUEST

	Sample Name or Location	Collected Date	Collected Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCC GW Baseline	GCC S&S Baseline	GCC SW Baseline						
2311-155 01	MW-8-EAA	11-13-23	12:01	✓							1	2		4			X								
02	MW-8-MI	11-13-23	12:34	✓							1	2		4			X								
03	MW-8-PL	11-13-23	13:12	✓							1	2		4			X								
04	MW-8-LM	11-13-23	13:35	✓							1	2		4			X								
05	MW-7-EAA	11-13-23	14:24	✓							1	2		4			X								

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 receive by GAL within 30 days after completion. 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: 11-13-23 Time: 15:45	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:

ADDITIONAL REMARKS: Report to State? (Circle) Yes No

Q-8

laser #2

13.8°C Temperature at receipt: MPN CHECKED BY On Ice ✓ No Ice

† GAL cannot always accept verbal changes. Please fax or email written change requests.
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Just Click Printing Form #17-0301

Project Information

Printed: 11/13/2023 3:44 pm

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: GCC GW Baseline
Client PM: Tom Bird
Comments: All Metals Are Field Filtered. Send Out PRESERVED bottles per Landon. 11-01-18

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

Analytical Laboratories

SAMPLE CONDITION RECEIPT FORM

Client Name: GCC Energy **Work Order #** 2311-155

Courier: ☐Fed Ex ☐UPS ☐USPS ☑Client ☐Kangaroo

Custody Seals on Box/Cooler Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☐ No

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

Type of Ice: ☐ Wet ☐ Blue ☒ None

Cooler Temp: Observed Temp: 13.8 °C Correction Factor: Ø °C Final Temp: 13.8 °C

*Temp should be above freezing to 6°C

Date/Initials of person examining contents: 11/13/23 EZ

Labeled by initials: _____
(if different than above)

Chain of Custody Present:	☑Yes ☐No	1.
Chain of Custody Filled Out:	☑Yes ☐No	2.
Chain of Custody Relinquished:	☑Yes ☐No	3.
Sampler Name and Signature on COC:	☑Yes ☐No	4.
Samples arrived within hold time:	☑Yes ☐No	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No	6. pH
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume:	☑Yes ☐No	8.
Correct Containers Used:	☑Yes ☐No	9.
Containers Intact:	☑Yes ☐No	10.
Dissolved Testing Needed:	☒Yes ☑No VaW 11-14	11.
Field Filtered: ☑Yes ☐No		
Sample Labels match COC: -Includes Date/Time/ID	☑Yes ☐No	12.
Matrix:	WT SL OT	
Trip Blank Present:	☐Yes ☐No ☑N/A	13.
Trip Blank Custody Seals Present:	☐Yes ☐No ☑N/A	

Client Notification/Resolution:

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

FORM-039, Rev 1

75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

06 December 2023

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326

RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 11/17/23 16:19. 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,

Jeremy D Allen
Laboratory Director

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: T104704514-23-18

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: T104704398-23-16

Table of Contents

Samples in Report	3
Sample Results	4
Quality Assurance Results	6
Notes and Definitions	10
Chain of Custody & Attachments	11

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GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
SEEP #1	2311249-01	Water	11/17/23 14:32	11/17/23 16:19	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:44

SEEP #1

2311249-01 (Water)
Sampled Date: 11/17/23 14:32

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**250**	10.0	6.06	mg/L	5	11/21/23 08:40	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/21/23 08:40	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	11/21/23 08:40	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**250**	10.0	6.06	mg/L	5	11/21/23 08:40	2320 B		IDB
Cation/Anion Balance	**-0.520**	-100	-100	%	1	11/30/23 14:25	Calculation		JDA
Chloride*	**23.5**	10.0	0.555	mg/L	10	11/30/23 11:43	EPA300.0		AWG
Fluoride*	<1.00	1.00	0.0971	mg/L	10	11/30/23 11:43	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	12/01/23 15:33	EPA353.2		AES
pH*	**7.66**			pH Units	1	11/17/23 15:38	EPA150.1		AES
pH Temperature, degrees C	**17.8**			pH Units	1	11/17/23 15:38	EPA150.1		AES
SAR	**4.32**			No Unit	1	11/28/23 19:43	Calculation		AES
Sulfate*	**4430**	25.0	3.10	mg/L	25	11/30/23 12:03	EPA300.0		AWG
Total Dissolved Solids*	**6980**	40.0		mg/L	4	11/22/23 18:12	EPA160.1		AES
Total Organic Carbon*	**5.64**	0.500	0.175	mg/L	1	11/27/23 23:38	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.500	0.500	0.440	mg/L	10	11/28/23 19:43	EPA200.7		AES
Calcium*	**514**	1.00	0.618	mg/L	10	11/28/23 19:43	EPA200.7		AES
Hardness as CaCO3	**3470**	6.62	2.99	mg/L	10	11/28/23 19:43	2340 B		AES
Iron*	<0.500	0.500	0.151	mg/L	10	11/28/23 19:43	EPA200.7		AES
Magnesium*	**532**	1.00	0.351	mg/L	10	11/28/23 19:43	EPA200.7		AES
Potassium*	**12.7**	10.0	1.04	mg/L	10	11/28/23 19:43	EPA200.7		AES
Silica (Si02)	**25.1**	10.7	1.63	mg/L	10	11/28/23 19:43	Calculation		AES
Silicon	**11.7**	5.00	0.761	mg/L	10	11/28/23 19:43	EPA200.7		AES
Sodium*	**585**	10.0	4.09	mg/L	10	11/28/23 19:43	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0050	0.0050	0.0037	mg/L	10	11/27/23 13:24	EPA200.8		AES
Cadmium*	<0.0050	0.0050	0.0003	mg/L	10	11/27/23 13:24	EPA200.8		AES
Copper*	**0.0141**	0.0050	0.0042	mg/L	10	11/27/23 13:24	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0004	mg/L	10	11/27/23 13:24	EPA200.8		AES
Manganese*	**0.314**	0.0050	0.0017	mg/L	10	11/27/23 13:24	EPA200.8		AES
Molybdenum*	<0.0050	0.0050	0.0018	mg/L	10	11/27/23 13:24	EPA200.8		AES
Selenium*	<0.0100	0.0100	0.0037	mg/L	10	11/27/23 13:24	EPA200.8		AES
Uranium	<0.0050	0.0050	0.0004	mg/L	10	11/27/23 13:24	EPA200.8		AES
Zinc*	<0.0200	0.0200	0.0047	mg/L	10	11/27/23 13:24	EPA200.8		AES

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:44

SEEP #1

2311249-01 (Water)

Sampled Date: 11/17/23 14:32

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/01/23 12:33	EPA245.7		CAI

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:44

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233472 - General Prep - Wet Chem										
Reference (B233472-SRM1)				Prepared & Analyzed: 11/17/23						
pH	7.02		pH Units	7.00		100	98.57-101.42			
Batch B233483 - General Prep - Wet Chem										
Blank (B233483-BLK1)				Prepared: 11/20/23 Analyzed: 11/21/23						
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L							
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B233483-BS1)				Prepared: 11/20/23 Analyzed: 11/21/23						
Alkalinity, Total as CaCO3	102	10.0	mg/L	100		102	85-115			
LCS Dup (B233483-BSD1)				Prepared: 11/20/23 Analyzed: 11/21/23						
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115	2.99	20	
Reference (B233483-SRM1)				Prepared: 11/20/23 Analyzed: 11/21/23						
Alkalinity, Total as CaCO3	71.0	10.0	mg/L	72.7		97.7	85-115			
Batch B233500 - General Prep - Wet Chem										
Blank (B233500-BLK1)				Prepared & Analyzed: 11/22/23						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B233500-SRM1)				Prepared & Analyzed: 11/22/23						
Total Dissolved Solids	380	10.0	mg/L	400		95.0	85-115			
Batch B233530 - General Prep - Wet Chem										
Blank (B233530-BLK1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B233530-BS1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	9.66	0.500	mg/L	10.0		96.6	85-115			
LCS Dup (B233530-BSD1)				Prepared & Analyzed: 11/27/23						
Total Organic Carbon	9.81	0.500	mg/L	10.0		98.1	85-115	1.53	20	
Batch B233535 - Dissolved ICP										
Blank (B233535-BLK1)				Prepared: 11/27/23 Analyzed: 11/28/23						

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Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:44

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233535 - Dissolved ICP (Continued)										
Blank (B233535-BLK1) (Continued)				Prepared: 11/27/23 Analyzed: 11/28/23						
SAR	0.00		No Unit							
Batch B233557 - IC- Ion Chromatograph										
Blank (B233557-BLK1)				Prepared & Analyzed: 11/29/23						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B233557-BS1)				Prepared & Analyzed: 11/29/23						
Chloride	25.3	1.00	mg/L	25.0		101	90-110			
Fluoride	2.51	0.100	mg/L	2.50		100	90-110			
Sulfate	24.6	1.00	mg/L	25.0		98.6	90-110			
LCS Dup (B233557-BSD1)				Prepared & Analyzed: 11/29/23						
Chloride	25.0	1.00	mg/L	25.0		100	90-110	1.07	20	
Fluoride	2.50	0.100	mg/L	2.50		100	90-110	0.200	20	
Sulfate	24.4	1.00	mg/L	25.0		97.8	90-110	0.831	20	
Batch B233582 - Lachat										
Blank (B233582-BLK1)				Prepared & Analyzed: 12/01/23						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B233582-BS1)				Prepared & Analyzed: 12/01/23						
Nitrate/Nitrite as N	1.06	0.020	mg/L as N	1.00		106	90-110			
LCS Dup (B233582-BSD1)				Prepared & Analyzed: 12/01/23						
Nitrate/Nitrite as N	1.06	0.020	mg/L as N	1.00		106	90-110	0.113	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:44

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233535 - Dissolved ICP										
Blank (B233535-BLK1)				Prepared: 11/27/23 Analyzed: 11/28/23						
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 (B233535-BS1)				Prepared: 11/27/23 Analyzed: 11/28/23						
Aluminum	4.12	0.050	mg/L	4.00		103	85-115			
Calcium	3.92	0.100	mg/L	4.00		97.9	85-115			
Iron	3.93	0.050	mg/L	4.00		98.2	85-115			
Magnesium	20.5	0.100	mg/L	20.0		102	85-115			
Potassium	7.83	1.00	mg/L	8.00		97.9	85-115			
Silicon	4.25	0.500	mg/L	4.00		106	85-115			
Sodium	3.30	1.00	mg/L	3.24		102	85-115			
LCS Dup (B233535-BSD1)				Prepared: 11/27/23 Analyzed: 11/28/23						
Aluminum	4.12	0.050	mg/L	4.00		103	85-115	0.0157	20	
Calcium	3.93	0.100	mg/L	4.00		98.3	85-115	0.384	20	
Iron	3.95	0.050	mg/L	4.00		98.9	85-115	0.637	20	
Magnesium	20.5	0.100	mg/L	20.0		102	85-115	0.0544	20	
Potassium	7.84	1.00	mg/L	8.00		98.0	85-115	0.102	20	
Silicon	4.24	0.500	mg/L	4.00		106	85-115	0.200	20	
Sodium	3.24	1.00	mg/L	3.24		100	85-115	1.79	20	

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Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:44

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233529 - Dissolved ICPMS										
Blank (B233529-BLK1)				Prepared & Analyzed: 11/27/23						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0005	mg/L							
Copper	ND	0.0005	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 (B233529-BS1)				Prepared & Analyzed: 11/27/23						
Arsenic	0.0523	0.0005	mg/L	0.0500		105	85-115			
Cadmium	0.0516	0.0005	mg/L	0.0500		103	85-115			
Copper	0.0499	0.0005	mg/L	0.0500		99.8	85-115			
Lead	0.0498	0.0005	mg/L	0.0500		99.6	85-115			
Manganese	0.0531	0.0005	mg/L	0.0500		106	85-115			
Molybdenum	0.0509	0.0005	mg/L	0.0500		102	85-115			
Selenium	0.263	0.0010	mg/L	0.250		105	85-115			
Uranium	0.0537	0.0005	mg/L	0.0500		107	85-115			
Zinc	0.0484	0.0020	mg/L	0.0500		96.9	85-115			
LCS Dup (B233529-BSD1)				Prepared & Analyzed: 11/27/23						
Arsenic	0.0524	0.0005	mg/L	0.0500		105	85-115	0.0608	20	
Cadmium	0.0514	0.0005	mg/L	0.0500		103	85-115	0.431	20	
Copper	0.0510	0.0005	mg/L	0.0500		102	85-115	2.20	20	
Lead	0.0502	0.0005	mg/L	0.0500		100	85-115	0.707	20	
Manganese	0.0530	0.0005	mg/L	0.0500		106	85-115	0.170	20	
Molybdenum	0.0511	0.0005	mg/L	0.0500		102	85-115	0.380	20	
Selenium	0.261	0.0010	mg/L	0.250		104	85-115	0.607	20	
Uranium	0.0530	0.0005	mg/L	0.0500		106	85-115	1.32	20	
Zinc	0.0494	0.0020	mg/L	0.0500		98.8	85-115	2.00	20	

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Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/06/23 13:44

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233526 - EPA 245.7										
Blank (B233526-BLK1)				Prepared: 11/27/23 Analyzed: 12/01/23						
Mercury	ND	100	ng/L							
LCS (B233526-BS1)				Prepared: 11/27/23 Analyzed: 12/01/23						
Mercury	1900	100	ng/L	2000		94.9	76-113			
LCS Dup (B233526-BSD1)				Prepared: 11/27/23 Analyzed: 12/01/23						
Mercury	1830	100	ng/L	2000		91.6	76-113	3.49	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

Jeremy D Allen, Laboratory Director

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Table of Contents

GAL Green Analytical Laboratories

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75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST
FORM-006
COC - Revision 6.0

Company or Client: GCC Energy
Address: 6473 CR 120
City: Hesperus State: CO Zip: 81326
Phone #: 970.385.4528
Contact Person: Tom Bird for billing, Landon Beck for logistical or technical
Email Report to: Tom@haygulchservices.com; LBECK@resourcehydrogeologic.com
Project Name(optional):
Sampler Name (Print): BRANDON WADDELL

Bill to (if different):
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Email:

2311-249 C1

Sample Name or Location	Collected Date	Collected Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCC GW Baseline	GCC S&S Baseline	GCC SW Baseline						
SEEP #1	11.17.23	14:32								1	2		4				X							

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 receive by GAL within 30 days after completion. 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: 11.17.23 Time: 16:19	Received By:
Relinquished By: MRN 11/20	Date: 16:19 Time:	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:

ADDITIONAL REMARKS:
Report to State? (Circle) Yes No

CASOR # ON ICE

Temperature at receipt: 9.5°C
CHECKED BY: EZ
On Ice: X
No Ice:

† GAL cannot always accept verbal changes. Please fax or email written change requests.
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Just Click Printing Form #17-0301

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 S&S Baseline
Project Number: GCC S&S Baseline
Client PM: Tom Bird
Comments: All Metals Are Field Filtered. Send Out PRESERVED bottles per Landon. 11-01-18

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	
SAR-Calc	
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

Analytical Laboratories

SAMPLE CONDITION RECEIPT FORM

Client Name: G.C.C. Energy **Work Order #** 2311-249

Courier: ☐Fed Ex ☐UPS ☐USPS ☑Client ☐Kangaroo

Custody Seals on Box/Cooler Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☐ No

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

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: Observed Temp 2.5 °C Correction Factor: Ø °C Final Temp: 2.5 °C

*Temp should be above freezing to 6°C

Date/Initials of person examining contents: 11/17/23 ET

Labeled by initials: _____
(if different than above)

Chain of Custody Present:	☑Yes ☐No	1.
Chain of Custody Filled Out:	☑Yes ☐No	2.
Chain of Custody Relinquished:	☑Yes ☐No	3.
Sampler Name and Signature on COC:	☑Yes ☐No	4.
Samples arrived within hold time:	☑Yes ☐No	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No	6. 7H
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume:	☑Yes ☐No	8.
Correct Containers Used:	☑Yes ☐No	9.
Containers Intact:	☑Yes ☐No	10.
Dissolved Testing Needed:	☐Yes ☑No	11.
Field Filtered: ☑Yes ☐No		
Sample Labels match COC: -Includes Date/Time/ID	☑Yes ☐No	12.
Matrix:	WT SL OT	
Trip Blank Present:	☐Yes ☑No ☐N/A	13.
Trip Blank Custody Seals Present:	☐Yes ☐No ☑N/A	

Client Notification/Resolution:

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

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14 December 2023

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326

RE: [none]

Enclosed are the results of analyses for samples received by the laboratory on 12/01/23 13:34. 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,

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: T104704514-23-18

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: T104704398-23-16

Table of Contents

Samples in Report	3
Sample Results	4
Quality Assurance Results	6
Notes and Definitions	10
Qualifier Summary	11
Chain of Custody & Attachments	12

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GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/14/23 10:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Seep #3	2312009-01	Water	11/30/23 07:46	12/01/23 13:34	

Green Analytical Laboratories

Veronica J Wells

Veronica Wells, Project Manager

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GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/14/23 10:50

Seep #3

2312009-01 (Surface Water)
Sampled Date: 11/30/23 07:46

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Total as CaCO3*	**435**	10.0	6.06	mg/L	5	12/11/23 09:00	2320 B		IDB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/11/23 09:00	2320 B		IDB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	6.06	mg/L	5	12/11/23 09:00	2320 B		IDB
Alkalinity, Bicarbonate as CaCO3*	**435**	10.0	6.06	mg/L	5	12/11/23 09:00	2320 B		IDB
Cation/Anion Balance	**-2.10**	-100	-100	%	1	12/07/23 09:28	Calculation		JDA
Chloride*	**8.58**	2.00	0.111	mg/L	2	12/12/23 11:52	EPA300.0		AWG
Fluoride*	**0.314**	0.200	0.0194	mg/L	2	12/12/23 11:52	EPA300.0		AWG
Nitrate/Nitrite as N*	<0.020	0.020	0.003	mg/L as N	1	12/07/23 14:38	EPA353.2		AWG
pH*	**7.89**			pH Units	1	12/01/23 16:50	EPA150.1		CAI
pH Temperature, degrees C	**15.5**			pH Units	1	12/01/23 16:50	EPA150.1		CAI
SAR	**1.29**			No Unit	1	12/05/23 20:04	Calculation		AES
Sulfate*	**552**	5.00	0.620	mg/L	5	12/12/23 12:11	EPA300.0		AWG
Total Dissolved Solids*	**1240**	10.0		mg/L	1	12/04/23 15:55	EPA160.1		IDB/CAI
Total Organic Carbon*	**6.66**	0.500	0.175	mg/L	1	12/05/23 22:12	5310C		AES
Dissolved Metals by ICP									
Aluminum*	<0.150	0.150	0.132	mg/L	3	12/05/23 20:04	EPA200.7		AES
Calcium*	**128**	0.300	0.185	mg/L	3	12/05/23 20:04	EPA200.7		AES
Hardness as CaCO3	**754**	1.98	0.897	mg/L	3	12/05/23 20:04	2340 B		AES
Iron*	**0.155**	0.150	0.045	mg/L	3	12/05/23 20:04	EPA200.7		AES
Magnesium*	**105**	0.300	0.105	mg/L	3	12/05/23 20:04	EPA200.7		AES
Potassium*	**4.89**	3.00	0.311	mg/L	3	12/05/23 20:04	EPA200.7		AES
Silica (Si02)	**13.2**	3.21	0.488	mg/L	3	12/05/23 20:04	Calculation		AES
Silicon	**6.16**	1.50	0.228	mg/L	3	12/05/23 20:04	EPA200.7		AES
Sodium*	**81.1**	3.00	1.23	mg/L	3	12/05/23 20:04	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0015	0.0015	0.0011	mg/L	3	12/04/23 18:13	EPA200.8		AES
Cadmium*	<0.0015	0.0015	0.00008	mg/L	3	12/04/23 18:13	EPA200.8		AES
Copper*	<0.0060	0.0060	0.0013	mg/L	3	12/04/23 18:13	EPA200.8	B3	AES
Lead*	<0.0015	0.0015	0.0001	mg/L	3	12/04/23 18:13	EPA200.8		AES
Manganese*	**0.580**	0.0015	0.0005	mg/L	3	12/04/23 18:13	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0005	mg/L	3	12/04/23 18:13	EPA200.8		AES
Selenium*	<0.0030	0.0030	0.0011	mg/L	3	12/04/23 18:13	EPA200.8		AES
Uranium	**0.0026**	0.0015	0.0001	mg/L	3	12/04/23 18:13	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0014	mg/L	3	12/04/23 18:13	EPA200.8		AES

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Veronica J Wells

Veronica Wells, Project Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/14/23 10:50

Seep #3

2312009-01 (Surface Water)
Sampled Date: 11/30/23 07:46

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	12/06/23 13:13	EPA245.7		CAI

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GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/14/23 10:50

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233591 - Dissolved ICP										
Blank (B233591-BLK1)				Prepared: 12/04/23 Analyzed: 12/05/23						
SAR	0.00		No Unit							
Batch B233596 - General Prep - Wet Chem										
Blank (B233596-BLK1)				Prepared & Analyzed: 12/04/23						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B233596-SRM1)				Prepared & Analyzed: 12/04/23						
Total Dissolved Solids	370	10.0	mg/L	400		92.5	85-115			
Batch B233603 - General Prep - Wet Chem										
Reference (B233603-SRM1)				Prepared & Analyzed: 12/01/23						
pH	7.06		pH Units	7.00		101	98.57-101.42			
Batch B233608 - General Prep - Wet Chem										
Blank (B233608-BLK1)				Prepared & Analyzed: 12/05/23						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B233608-BS1)				Prepared & Analyzed: 12/05/23						
Total Organic Carbon	9.88	0.500	mg/L	10.0		98.8	85-115			
LCS Dup (B233608-BSD1)				Prepared & Analyzed: 12/05/23						
Total Organic Carbon	9.79	0.500	mg/L	10.0		97.9	85-115	0.925	20	
Batch B233626 - Lachat										
Blank (B233626-BLK1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B233626-BS1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110			
LCS Dup (B233626-BSD1)				Prepared: 12/06/23 Analyzed: 12/07/23						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110	0.499	20	
Batch B233687 - General Prep - Wet Chem										
Blank (B233687-BLK1)				Prepared & Analyzed: 12/11/23						
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L							

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GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/14/23 10:50

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233687 - General Prep - Wet Chem (Continued)										
Blank (B233687-BLK1) (Continued)				Prepared & Analyzed: 12/11/23						
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L							
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B233687-BS1)				Prepared & Analyzed: 12/11/23						
Alkalinity, Total as CaCO3	97.0	10.0	mg/L	100		97.0	85-115			
LCS Dup (B233687-BSD1)				Prepared & Analyzed: 12/11/23						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115	1.03	20	
Reference (B233687-SRM1)				Prepared & Analyzed: 12/11/23						
Alkalinity, Total as CaCO3	76.0	10.0	mg/L	72.7		105	85-115			
Batch B233690 - IC- Ion Chromatograph										
Blank (B233690-BLK1)				Prepared: 12/11/23 Analyzed: 12/12/23						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B233690-BS1)				Prepared: 12/11/23 Analyzed: 12/12/23						
Chloride	23.1	1.00	mg/L	25.0		92.5	90-110			
Fluoride	2.40	0.100	mg/L	2.50		95.8	90-110			
Sulfate	22.8	1.00	mg/L	25.0		91.3	90-110			
LCS Dup (B233690-BSD1)				Prepared: 12/11/23 Analyzed: 12/12/23						
Chloride	24.8	1.00	mg/L	25.0		99.4	90-110	7.17	20	
Fluoride	2.53	0.100	mg/L	2.50		101	90-110	5.56	20	
Sulfate	24.5	1.00	mg/L	25.0		97.8	90-110	6.92	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/14/23 10:50

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233591 - Dissolved ICP										
Blank (B233591-BLK1)				Prepared: 12/04/23 Analyzed: 12/05/23						
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 (B233591-BS1)				Prepared: 12/04/23 Analyzed: 12/05/23						
Aluminum	4.12	0.050	mg/L	4.00		103	85-115			
Calcium	3.83	0.100	mg/L	4.00		95.8	85-115			
Iron	3.91	0.050	mg/L	4.00		97.8	85-115			
Magnesium	19.9	0.100	mg/L	20.0		99.5	85-115			
Potassium	8.23	1.00	mg/L	8.00		103	85-115			
Silicon	4.12	0.500	mg/L	4.00		103	85-115			
Sodium	3.37	1.00	mg/L	3.24		104	85-115			
LCS Dup (B233591-BSD1)				Prepared: 12/04/23 Analyzed: 12/05/23						
Aluminum	4.07	0.050	mg/L	4.00		102	85-115	1.19	20	
Calcium	3.80	0.100	mg/L	4.00		95.0	85-115	0.794	20	
Iron	3.83	0.050	mg/L	4.00		95.7	85-115	2.24	20	
Magnesium	19.8	0.100	mg/L	20.0		98.8	85-115	0.718	20	
Potassium	8.18	1.00	mg/L	8.00		102	85-115	0.558	20	
Silicon	4.06	0.500	mg/L	4.00		102	85-115	1.42	20	
Sodium	3.32	1.00	mg/L	3.24		102	85-115	1.50	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/14/23 10:50

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233592 - Dissolved ICPMS										
Blank (B233592-BLK1)				Prepared & Analyzed: 12/04/23						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0005	mg/L							
Copper	0.0010	0.0005	mg/L							B3
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 (B233592-BS1)				Prepared & Analyzed: 12/04/23						
Arsenic	0.0572	0.0005	mg/L	0.0500		114	85-115			
Cadmium	0.0519	0.0005	mg/L	0.0500		104	85-115			
Copper	0.0501	0.0005	mg/L	0.0500		100	85-115			
Lead	0.0502	0.0005	mg/L	0.0500		100	85-115			
Manganese	0.0519	0.0005	mg/L	0.0500		104	85-115			
Molybdenum	0.0498	0.0005	mg/L	0.0500		99.6	85-115			
Selenium	0.280	0.0010	mg/L	0.250		112	85-115			
Uranium	0.0503	0.0005	mg/L	0.0500		101	85-115			
Zinc	0.0493	0.0020	mg/L	0.0500		98.6	85-115			
LCS Dup (B233592-BSD1)				Prepared & Analyzed: 12/04/23						
Arsenic	0.0572	0.0005	mg/L	0.0500		114	85-115	0.0217	20	
Cadmium	0.0515	0.0005	mg/L	0.0500		103	85-115	0.834	20	
Copper	0.0504	0.0005	mg/L	0.0500		101	85-115	0.569	20	
Lead	0.0495	0.0005	mg/L	0.0500		99.1	85-115	1.32	20	
Manganese	0.0522	0.0005	mg/L	0.0500		104	85-115	0.542	20	
Molybdenum	0.0501	0.0005	mg/L	0.0500		100	85-115	0.565	20	
Selenium	0.282	0.0010	mg/L	0.250		113	85-115	0.437	20	
Uranium	0.0497	0.0005	mg/L	0.0500		99.3	85-115	1.18	20	
Zinc	0.0501	0.0020	mg/L	0.0500		100	85-115	1.67	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC S&S Baseline	
6473 CR 120	Project Name / Number: [none]	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	12/14/23 10:50

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B233601 - EPA 245.7										
Blank (B233601-BLK1)				Prepared: 12/04/23 Analyzed: 12/06/23						
Mercury	ND	100	ng/L							
LCS (B233601-BS1)				Prepared: 12/04/23 Analyzed: 12/06/23						
Mercury	1700	100	ng/L	2000		84.9	76-113			
LCS Dup (B233601-BSD1)				Prepared: 12/04/23 Analyzed: 12/06/23						
Mercury	1700	100	ng/L	2000		85.0	76-113	0.123	20	

Notes and Definitions

B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.
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

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GCC Energy, LLC	Project:	GCC S&S Baseline	
6473 CR 120	Project Name / Number:	[none]	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	12/14/23 10:50

Qualifier Summary

LabNumber	Analysis	Analyte	Qualifier	TextBody
2312009-01	Copper Dissolved by ICPMS	Copper	B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.
B233592-BLK1	Copper Dissolved by ICPMS	Copper	B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.

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75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC Energy
Address: 6473 CR 120
City: Hesperus **State:** CO **Zip:** 81326
Phone #: 970.385.4528
Contact Person: Tom Bird for billing, Landon Beck for logistical or technical
Email Report to: Tom@haygulchservices.com; LBECK@resourcehydrogeologic.com
Project Name(optional):
Sampler Name (Print): Brandon Wadden

Bill to (if different):
P.O. #:
Company:
Attn:
Address:
City:
State: Zip:
Phone #:
Email:

ANALYSIS REQUEST

	Sample Name or Location	Collected Date	Collected Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER :	No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCC GW Baseline	GCC S&S Baseline	GCC SW Baseline						
2312.009 01	SEEPS #3	11.30.23	7:46		X						1	2		4				X							

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 receive by GAL within 30 days after completion. 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: 12.1.23 Time: 1:34	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:
Relinquished By:	Date: Time:	Received By:

ADDITIONAL REMARKS:
Report to State? (Circle) Yes No

Laser #2
2.1°C
Temperature at receipt:
VJW
CHECKED BY
On Ice ✓
No Ice

† GAL cannot always accept verbal changes. Please fax or email written change requests.
* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.

Just Click Printing Form #17-0301

Project Information

Printed: 12/01/2023 2:10 pm

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 S&S Baseline
Project Number:
Client PM: Tom Bird
Comments: All Metals Are Field Filtered. Send Out PRESERVED bottles per Landon. 11-01-18

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	
SAR-Calc	
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	

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SAMPLE CONDITION RECEIPT FORM

Client Name: G.C.C. Energy **Work Order #** 2312-009

Courier: ☐Fed Ex ☐UPS ☐USPS ☑Client ☐Kangaroo

Custody Seals on Box/Cooler Present: ☐ Yes ☑ No Seals Intact: ☐ Yes ☐ No

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

Type of Ice: ☑ Wet ☐ Blue ☐ None

Cooler Temp: Observed Temp: 2.1 °C Correction Factor: Ø °C Final Temp: 2.1 °C

*Temp should be above freezing to 6°C

Date/Initials of person examining contents: 12/1/23 SZ

Labeled by initials: _____
(if different than above)

Chain of Custody Present:	☑Yes ☐No	1.
Chain of Custody Filled Out:	☑Yes ☐No	2.
Chain of Custody Relinquished:	☑Yes ☐No	3.
Sampler Name and Signature on COC:	☑Yes ☐No	4.
Samples arrived within hold time:	☑Yes ☐No	5.
Short Hold Time Analysis (<72hr):	☑Yes ☐No	6. pH
Rush Turn Around Time Requested:	☐Yes ☑No	7.
Sufficient Volume:	☑Yes ☐No	8.
Correct Containers Used:	☑Yes ☐No	9.
Containers Intact:	☑Yes ☐No	10.
Dissolved Testing Needed:	☐Yes ☑No	11.
Field Filtered: ☑Yes ☐No		
Sample Labels match COC: -Includes Date/Time/ID	☑Yes ☐No	12.
Matrix:	WT SL OT	
Trip Blank Present:	☐Yes ☐No ☑N/A	13.
Trip Blank Custody Seals Present:	☐Yes ☐No ☑N/A	

Client Notification/Resolution:

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____