11783 Highway 337 S.
PO Box 100, Tijeras, NM 87123
505.286.6026
svance@gcc.com

October 18, 2022

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

Attn: Janet Binns, Environmental Protection Specialist III

Re: GCC Energy, LLC, King II Mine
CDRMS Permit # C-1981-035
Water Monitoring Analysis; King I & King II
3rd Quarter 2022

Ms. Binns:

Please find enclosed a copy of quarterly water analysis reports for the 3rdquarter of 2022 for the following water monitoring locations:

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

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,

11783 Highway 337 S.
PO Box 100, Tijeras, NM 87123
505.286.6026
svance@gcc.com

Sarah Vance
Environmental Manager
GCC Energy, LLC

GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Upgradient

Year		2016										2017					
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4
Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11
Sample Date		3/31	4/22	5/26	6/23	7/20	8/25	9/21	10/19	11/29	12/13	1/26	2/27	3/22	6/28	9/21	11/28
Lab Analysis (Y/N)		Y	N	N	Y	N	N	Y	Y	Y	N	N	N	Y	Y	Y	Y
Field Parameters:																	
Flow Rate	*cfs*	0.70	1.0	1.20	1.60	1.0	1.0	1.10	1.0	NM	1.0	NM	0.82	0.28	2.70	NM	NM
Temperature	*deg C*	9.8	20.9	11.3	21.1	20.8	16.8	14.9	16.4	5.9	7.0	1.5	4.7	10.7	20.2	19.7	8.8
pH	*SU*	7.75	8.27	7.95	8.15	8.24	8.26	8.47	8.19	8.79	8.58	8.2	8.69	8.77	8.88	8.39	7.60
Specific Conductance	*µS/cm*	247	323	197	141	189	207	233	210	258	234	687	455	454	106	549	868
Oxygen Reduction Potential	*mV*	76.4	114.7	97.2	51.6	53.6	82.8	72.5	105.9	92.4	116.3	66.3	-12	-10.6	23.8	86.1	95.10
Dissolved Oxygen	*mg/L*	8.1	6.4	8.0	6.0	6.5	6.9	7.2	4.7	6.7	6.1	10.6	9.0	6.9	4.8	6.7	9.3
Lab Analytical Results:																	
Hardness as CaCO3	*mg/L*	128			80.9			119		152				257	69.2	316	456
pH (Lab)	*SU*	8.17			8.04			8.16		8.19				8.06	8.06	8.22	8.31
Total Dissolved Solids (Lab)	*mg/L*	170			75			165		180				285	65.0	390	650
Total Suspended Solids	*mg/L*	30.0			117			17.0		4.8				2.50	63.5	2.00	5.75
Calcium	*mg/L*	33.5			24			33.0		38.4				53.6	20.8	64.9	86.6
Magnesium	*mg/L*	10.9			5.08			9.01		13.7				29.8	4.21	37.5	58.3
Sodium	*mg/L*	4.46			2.19			3.90		6				10.9	1.97	13.8	27.1
Potassium	*mg/L*	<1			<1			1.35		<1.00				<1.00	1.75	2.15	3.05
Alkalinity, Total	*mg/L*	160			65			98.0		118				185	55.0	177	305
Alkalinity, Bicarbonate	*mg/L*	160			65			94.0		118				185	55.0	161	285
Alkalinity, Carbonate	*mg/L*	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	16.0	20.0
Alkalinity, Hydroxide	*mg/L*	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0
Chloride	*mg/L*	5.77			2.07			4.32		7.92				22.7	1.76	30.8	48.2
Fluoride	*mg/L*	0.213			0.208			0.223		0.208				0.215	0.195	0.265	0.283
Sulfate as SO4	*mg/L*	42.1			17.7			29.0		45.3				87.7	15.0	99.0	179
Total Organic Carbon (TOC)	*mg/L*	1.41			1.6			2.21		1.14				2.49	1.15	1.90	1.99
Oil & Grease	*mg/L*	<5.00			<5.00			<5.00		<5.00				<5.00	<5.00	<5.00	<5.00
Nitrate/Nitrite as N	*mg/L*	<0.02			0.028			<0.020		<0.020				0.053	<0.020	0.045	0.088
Sodium Adsorption Ratio (SAR)	*no unit*	0.17			0.1			0.16		0.21				0.30	0.10	0.34	0.55
Ammonia as N ^	*mg/L*	NA			NA			NA		NA				NA	NA	NA	NA
Ortho-Phosphate as P ^	*mg/L*	NA			NA			NA		NA				NA	NA	NA	NA
Aluminum	*mg/L*	<0.05			<0.05			<0.05		<0.050				<0.050	<0.050	<0.050	<0.050
Arsenic	*mg/L*	<0.0005			<0.0005			<0.0005		<0.0005				0.0005	<0.0005	0.0009	0.0007
Cadmium	*mg/L*	<0.0001			<0.0001			<0.0001		<0.0001				<0.0001	<0.0001	<0.0001	<0.0001
Copper	*mg/L*	0.0006			0.0011			0.0011		0.0005				0.0008	0.0013	0.0006	0.0005
Iron	*mg/L*	<0.05			<0.05			<0.05		<0.050				<0.0500	<0.0500	<0.0500	<0.0500
Lead	*mg/L*	<0.0005			<0.0005			<0.0005		<0.0005				<0.0005	<0.0005	<0.0005	<0.0005
Manganese	*mg/L*	0.0059			0.0035			0.0043		0.0047				0.0070	0.0024	0.0098	0.0049
Mercury (total)	*mg/L*	<0.0002			<0.0002			<0.0002		<0.0002				<0.0002	<0.0002	<0.0002	<0.0002
Mercury (total low-level)	*ng/L*																
Molybdenum	*mg/L*	<0.0005			0.0009			0.0007		0.0008				0.0006	0.0009	0.0012	0.0008
Selenium	*mg/L*	<0.0010			<0.0010			<0.0010		<0.0010				0.0023	<0.0010	<0.0010	0.0010
Silica (Si02)	*mg/L*	7.78			8.23			10.5		9.71				9.04	7.71	9.45	10.1
Silicon	*mg/L*	3.64			3.85			4.89		4.54				4.23	3.60	4.42	4.71
Uranium	*mg/L*	0.0002			0.0001			0.0002		0.0003				0.0003	0.0001	0.0006	0.0009
Zinc	*mg/L*	<0.001			<0.001			<0.001		<0.0010				0.0022	<0.0020	<0.0040	<0.0020
Radium 226 ^	*pCi/L*	<0.4			NA			NA		NA				NA	NA	NA	NA
Radium 228 ^	*pCi/L*	<0.8			NA			NA		NA				NA	NA	NA	NA

Year		2018				2019				2020				2021				2022		
Quarter		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		2	5	8	11	2	5	8	11	2	5	8	12	2	6	9	11	3	6	9
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
Lab Analysis (Y/N)		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
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
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
Specific Conductance	*µS/cm*	1041	304	307	307	752	306	275	682	902	314	528	434	1024	189	280	252	553	832	570
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
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
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
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
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
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
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
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
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
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
Alkalinity, Total	*mg/L*	244	67	111	120	260	390	103	233	315	102	220	137	340	68	98	87.0	162	330	209
Alkalinity, Bicarbonate	*mg/L*	244	67	107	120	260	390	103	233	295	102	220	131	340	68	98	87.0	162	330	209
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
Radium 226 ^	*pCi/L*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radium 228 ^	*pCi/L*	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

Hay Gulch Ditch Downgradient

Year		2016										2017						2018				2019				2020				2021				2022		
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	6	8	12	2	6	9	11	3	6	9
Sample Date		3/31	4/22	5/26	6/23	7/20	8/25	9/21	10/19	11/29	12/13	1/26	2/27	3/22	6/28	9/21	11/28	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
Lab Analysis (Y/N)		Y	N	N	Y	N	N	Y	N	Y	N	N	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																																				
Flow Rate	*cfs*	1.10	1.20	1.10	NM	1.10	1.10	NM	0.80	NM	NM	NM	0.80	0.30	0.30	NM	dry	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	0.060	0.04	0.01
Temperature	*deg C*	11.8	17.6	10.9	21.9	21.3	18.8	16.1	11.8	7.0	6.6	7.2	5.0	12.7	17.6	18.7		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
pH	*SU*	8.57	8.55	8.14	8.14	8.55	8.37	8.3	8.36	8.64	8.06	7.28	8.06	9.00	8.53	8.66		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
Specific Conductance	*µS/cm*	429	530	297	116	308	257	1183	420	421	728	678	987	17	114	164		742	304	356	309	577	202	295	554	882	137	237	478	815	131	184	311	636	150	248
Oxygen Reduction Potential	*mV*	57.5	105.9	33.2	32.5	68.6	38.4	18.7	88.6	117.5	155.2	147.6	-15.5	137.8	185.3	48		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
Dissolved Oxygen	*mg/L*	7.9	7.7	8.7	6.0	6.7	5.6	6.8	7.1	6.5	7.2	7.6	9.8	5.6	6.4	7.1		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
Lab Analytical Results:																																				
Hardness as CaCO3	*mg/L*	226			67.8			480		267				503	59.1	91.4		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
pH (Lab)	*SU*	8.42			8.13			8.25		8.24				8.15	7.98	7.98		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
Total Dissolved Solids (Lab)	*mg/L*	270			55			630		320				615	65.0	80.0		420	220	260	185	390	185	195	355	573	120	135	370	435	175	90	120	410	29.9	89.9
Total Suspended Solids	*mg/L*	27.3			18			4.20		12.4				12.7	3.00	<0.500		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
Calcium	*mg/L*	55.5			21.9			94.7		65.5				112	19.0	29.5		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
Magnesium	*mg/L*	21.1			3.15			59.1		25.2				54.6	2.86	4.31		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
Sodium	*mg/L*	8.69			1.57			16.8		10.7				22.5	1.49	2.37		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
Potassium	*mg/L*	1.49			<1			4.48		1.46				2.33	<1.00	<1.00		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
Alkalinity, Total	*mg/L*	220			59			220		225				320	47.0	85.0		265	112	170	140	150	340	140	194	297	48	110	158	315	52	72	116	282	46.0	73.0
Alkalinity, Bicarbonate	*mg/L*	220			59			140		155				320	47.0	85.0		259	104	170	140	150	340	140	188	283	48	110	154	315	52	72	116	282	46.0	73.0
Alkalinity, Carbonate	*mg/L*	<10			<10			80.0		70				<10.0	<10.0	<10.0		<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
Alkalinity, Hydroxide	*mg/L*	<10			<10			<10		<10.0				<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	*mg/L*	9.40			1.26			97.9		12				31.9	<1.00	1.54		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
Fluoride	*mg/L*	0.244			0.195			0.244		0.227				0.224	0.290	0.227		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
Sulfate as SO4	*mg/L*	68.1			13.5			144		89.5				204	11.3	17.9		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
Total Organic Carbon (TOC)	*mg/L*	1.53			1.4			3.48		1.65				2.31	2.16	0.932		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
Oil & Grease	*mg/L*	<5			<5			<5		<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*	<0.02			0.026			0.027		<0.020				<0.020	<0.020	<0.020		<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
Sodium Adsorption Ratio (SAR)	*no unit*	0.25			0.03			0.33		0.28				0.44	0.08	0.11		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
Ammonia as N ^	*mg/L*	NA			NA			NA		NA				NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	<0.100	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	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	*mg/L*	<0.05			<0.05			<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	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
Arsenic	*mg/L*	0.0005			<0.0005			0.0015		0.0006				0.0006	0.0005	0.0006		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
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	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	*mg/L*	0.0004			0.0016			0.0012		0.0005				0.0004	0.0020	0.0013		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
Iron	*mg/L*	<0.05			<0.05			<0.05		<0.050				<0.050	<0.050	<0.050		<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
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	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese	*mg/L*	0.0039			0.0044			0.0059		0.0063				0.0112	0.0009	0.0010		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
Mercury (total)	*mg/L*	<0.0002			<0.0002			<0.0002		<0.0002				<0.0002	<0.0002	<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<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
Molybdenum	*mg/L*	<0.0005			0.0008			0.0013		0.0007				<0.0005	0.0009	0.0011		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
Selenium	*mg/L*	<0.001			<0.001			0.0026		<0.0010				0.0022	<0.0010	<0.0010		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	<0.001
Silica (Si02)	*mg/L*	8.96			7.48			11.8		10.9				12.2	6.80	8.53		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
Silicon	*mg/L*	4.19			3.5			5.51		5.11				5.70	3.18	3.99		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
Uranium	*mg/L*	0.0004			0.0001			0.0006		0.0006				0.0009	0.0001	0.0002		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
Zinc	*mg/L*	<0.001			0.0021			0.0013		0.0012				<0.0020	<0.0020	<0.0040		<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
Radium 226 ^	*pCi/L*	<0.4			NA			NA		NA				NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radium 228 ^	*pCi/L*	<0.8			NA			NA		NA				NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

Well #1 Upgradient

Year		**2016**										**2017**						**2018**				**2019**				**2020**				**2021**				**2022**		
Quarter		Q1	Q2			Q3			Q4			Q1		Q2	Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	6	8	12	2	5	8	11	3	6	8
Sample Date		3/30	4/27	5/26	6/23	7/19	8/24	9/21	10/24	11/30	12/14	1/18	2/27	3/22	6/28	9/28	11/29	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
Lab Analysis (Y/N)		Y	N	N	Y	N	N	Y	N	Y	N	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***	1.5	7.9	7.1	5.8	7.1	7.4	6.8	7.5	9.3	7.5	7.7	7.5	8.2	7.0	7.1	7.5	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
Total Purged	***gal***	306	522	870	297	280	284	288	300	280	295	298	297	291	286	259	287	268	280	267	305	300	321	327	293	314	300	291	280	302	324	300	400	300	300	400
Depth to Water	***ft bgs***	4.40	5.07	4.60	4.95	5.55	6.30	6.03	5.73	5.69	5.08	4.30	3.80	3.82	4.50	5.51	5.50	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
Temperature	***deg C***	8.8	13.1	11.9	14.2	14.1	12.7	12.5	12.6	10.6	11.3	10.9	10.4	11.2	11.9	11.8	11.6	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
pH	***SU***	7.77	7.57	7.46	7.6	7.69	7.59	7.67	7.77	7.72	7.68	7.6	7.67	7.67	7.59	7.6	7.58	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
Specific Conductance	***µS/cm***	1224	1199	1284	1246	1226	1143	1176	1223	1280	1305	1392	1415	1351	1159	1162	1241	1278	1218	1289	1204	1235	1308	1253	1232	1277	1268	1067	1190	1142	1235	1212	1301	1235	1301	1235
Oxygen Reduction Potential	***mV***	-123.1	-162.2	-142.5	-185.4	-156.6	-196.8	-140.6	-148.9	-152.9	-141.0	-143.6	-125.6	-132.2	-201	-176.9	-213.20	-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
Lab Analytical Results:																																					
Hardness as CaCO3	***mg/L***	230			306			216		271				391	277	215	280	274	275	369	287	252	350	303	263	290	319	255	247	298	313	236	286	271	311	281
pH (Lab)	***SU***	7.73			7.57			7.58		7.59				7.46	7.74	7.66	7.56	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
Total Dissolved Solids (Lab)	***mg/L***	760			745			735		725				775	725	705	790	745	770	835	730	735	860	780	705	700	775	710	690	755	785	750	745	725	790	735
Calcium	***mg/L***	44.0			59.7			42.4		51.7				75.7	54.0	41.6	55.6	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
Magnesium	***mg/L***	29.1			38.2			26.7		34.5				49.1	34.6	27.1	34.4	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
Sodium	***mg/L***	199			196			210		189				167	189	203	195	183	191	154	212	196	172	167	198	183	178	193	196	204	172	177	182	185	172	179
Potassium	***mg/L***	3.00			3.15			3.01		3.01				3.30	3.00	3.09	2.99	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
Alkalinity, Total	***mg/L***	610			660			620		615				640	585	670	625	620	595	630	640	610	615	615	590	600	576	520	605	570	620	600	770	640	650	570
Alkalinity, Bicarbonate	***mg/L***	570			660			620		615				640	585	670	625	620	595	630	640	610	615	615	590	600	576	520	587	570	620	600	770	640	590	570
Alkalinity, Carbonate	***mg/L***	40.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<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
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	<10.0	<10.0
Chloride	***mg/L***	4.33			6.12			4.30		4.44				4.53	4.32	6.21	4.39	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
Fluoride	***mg/L***	0.347			<0.5			0.353		0.337				0.337	0.362	<0.500	0.358	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
Sulfate as SO4	***mg/L***	90.1			108			83.8		117				156	97.4	74.0	101	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
Total Organic Carbon (TOC)	***mg/L***	2.54			3.3			2.80		3.18				3.84	5.82	2.84	3.33	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
Nitrate/Nitrite as N	***mg/L***	<0.020			<0.020			<0.020		<0.200				<0.020	<0.400	<0.400	<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	NA	NA	NA	NA	NA	NA	NA	NA	0.931	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	0.0590	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	<0.100	<0.250	<0.050	<0.150	<0.050	<0.250	<0.050	<0.250	<0.250	<0.050	<0.050	<0.050
Arsenic	***mg/L***	<0.0005			<0.0005			<0.0005		<0.0005				0.0009	<0.0005	<0.0005	<0.0005	0.0005	0.0005	0.0005	<0.0005	0.0005	0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	0.0008	<0.0025	0.0005	<0.0005	<0.0025	<0.0005	0.0006	<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	<0.0001	<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
Copper	***mg/L***	0.0035			0.003			0.0021		0.0041				0.0020	0.0020	0.0030	0.0027	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
Iron	***mg/L***	1.20			1.51			0.946		1.64				2.01	1.34	0.101	1.44	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
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	<0.0010	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005
Manganese	***mg/L***	0.267			0.344			0.221		0.312				0.491	0.315	0.202	0.311	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
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	<0.0050	<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
Molybdenum	***mg/L***	<0.0005			<0.0005			<0.0005		0.0005				<0.0005	<0.0005	<0.0005	<0.0005	<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
Selenium	***mg/L***	<0.001			<0.001			<0.001		<0.0010				0.0245	<0.0010	<0.0010	<0.0010	<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
Silica (Si02)	***mg/L***	13.8			15.2			14.8		12.9				14.2	14.9	14.3	14.7	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
Silicon	***mg/L***	6.45			7.12			6.94		6.05				6.64	6.94	6.68	6.86	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
Uranium	***mg/L***	<0.0001			0.0021			<0.0001		0.0002				0.0002	0.0001	0.0001	0.0001	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
Zinc	***mg/L***	<0.001			<0.001			0.0023		0.0301				<0.0020	<0.0020	<0.0020	<0.0020	<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
Radium 226 ^	***pCi/L***	<0.4			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radium 228 ^	***pCi/L***	<0.8			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

Well #2 Downgradient

Year		2016										2017						2018					2019				2020				2021				2022		
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	8	11	2	5	8	11	2	6	8	12	2	5	8	11	2	5	8
Sample Date		3/30	4/21	5/25	6/23	7/19	8/24	9/20	10/19	11/30	12/14	1/26	2/27	3/22	6/13	9/21	11/28	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
Lab Analysis (Y/N)		Y	N	N	Y	N	N	Y	N	Y	N	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	0.50	0.50	0.50	0.50	0.50	0.50	0.50	NM	7.20	2.00	NM	NM	NM	NM	NM	NM	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
Total Purged	gal	7	6	7	7	6	6	6	6	6	6	8	8	6	8	8	6	6	11	2	6.5	7.5	13	10	9	8	12	8	7	7	12	9	7	12	6	9	19
Depth to Water	ft bgs	3.69	3.17	4.25	1.42	4.17	4.17	5.50	6.4	4.7	5	3.95	2.74	6.35	0.95	4.85	5.68	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
Temperature	deg C	6.3	10.1	13.5	18.4	19.8	14.0	14.1	13.3	10.4	12.4	7.0	4.4	8.4	17.1	12.1	11.7	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
pH	SU	7.58	7.6	7.6	7.64	7.68	7.73	7.53	7.66	7.66	7.71	7.57	7.68	7.78	7.56	7.66	7.52	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
Specific Conductance	µS/cm	899	867	804	600	369	815	877	881	904	872	908	1193	921	633	852	879	887	847	828	895	955	960	1091	1051	1083	1083	1134	1017	1099	964	939	1038	1073	1050	1019	1063
Oxygen Reduction Potential	mV	-9.4	-13.7	-35.7	-66.9	-112.1	-76.3	-88.3	-82	-72.7	-81.1	-66.8	-55.7	-67	-54.3	-53.7	-63.70	-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
Lab Analytical Results:																																					
Hardness as CaCO3	mg/L	444			314			452		432				485	352	378	449	412	415	422	415	465	488	537	513	603	540	575	560	569	624	529	503	521	500	527	551
pH (Lab)	SU	7.63			7.66			7.48		7.55				7.72	7.6	7.51	7.51	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
Total Dissolved Solids (Lab)	mg/L	685			470			525		495				635	415	525	540	515	545	545	575	550	575	695	655	690	695	730	665	685	660	655	685	655	605	645	680
Calcium	mg/L	72.2			54.9			75.9		72.7				81.0	60.9	64.8	78.0	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
Magnesium	mg/L	63.9			43.1			63.8		60.8				68.7	48.5	52.6	61.8	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
Sodium	mg/L	22.2			16.5			19.8		20.7				21.8	16.1	17.0	20.1	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
Potassium	mg/L	2.04			2.1			2.16		2.05				1.94	2.22	1.64	2.19	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
Alkalinity, Total	mg/L	342			280			380		380				375	285	395	375	333	350	380	328	340	395	460	365	348	324	324	345	341	385	375	380	540	372	385	288
Alkalinity, Bicarbonate	mg/L	338			280			380		380				375	285	395	375	333	350	380	328	340	395	460	365	348	324	324	345	333	385	375	380	540	372	385	288
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	<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	<10.0	<10.0	<10.0
Chloride	mg/L	35.8			6.8			27.4		26.2				23.3	7.11	19.0	23.4	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
Fluoride	mg/L	0.230			0.298			0.272		0.256				0.228	0.313	0.263	0.246	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
Sulfate as SO4	mg/L	129			70			114		117				153	75.2	98.4	94.7	104	102	112	111	137	138	196	189	182	199	230	204	219	190	199	186	176	187	160	190
Total Organic Carbon (TOC)	mg/L	3.34			14			2.64		3.4				3.52	3.56	2.61	2.25	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
Nitrate/Nitrite as N	mg/L	0.042			<0.02			<0.02		0.089				<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	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.029
Ammonia as N ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	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	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	0.156			<0.05			<0.05		<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	<0.100	<0.050	<0.250	<0.050	<0.250	<0.050	<0.050	<0.050	<0.050
Arsenic	mg/L	0.0008			0.0015			0.0010		0.0013				0.0009	0.0017	0.0006	0.0011	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
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	<0.0001	<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
Copper	mg/L	0.0004			0.0005			0.0003		0.0051				0.0007	0.0002	0.0004	0.0001	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
Iron	mg/L	0.081			0.085			0.118		<0.050				0.213	<0.050	<0.050	0.074	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
Lead	mg/L	<0.0005			<0.0005			<0.0005		0.0078				<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	<0.0025	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005
Manganese	mg/L	0.497			0.54			0.354		0.359				0.384	0.259	0.307	0.309	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
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	<0.0050	<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
Molybdenum	mg/L	0.0014			0.0022			0.0024		0.0025				0.0021	0.0025	0.0021	0.0020	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
Selenium	mg/L	<0.001			<0.001			<0.001		0.0011				0.0045	<0.001	<0.001	<0.001	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
Silica (Si02)	mg/L	11.6			14.7			12.8		11.9				10.9	15.5	13.0	13.3	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
Silicon	mg/L	5.42			6.89			5.97		5.55				5.12	7.23	6.08	6.20	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
Uranium	mg/L	0.0013			0.0007			0.0015		0.0016				0.0014	0.0008	0.0013	0.0013	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
Zinc	mg/L	0.0034			<0.001			0.0010		0.0311				<0.0020	<0.002	<0.0040	<0.0020	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
Radium 226 ^	pCi/L	<0.4			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radium 228 ^	pCi/L	<0.8			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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

Wiltse Well

Year		2016										2017					
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4
Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11
Sample Date		3/31	4/27	5/25	6/23	7/19	8/24	9/20	10/24	11/29	12/13	1/18	2/27	3/21	6/13	9/28	11/28
Lab Analysis (Y/N)		Y	N	N	Y	N	N	Y	N	Y	N	N	N	Y	Y	Y	Y
Field Parameters:																	
Purge Flow Rate	gpm	150.0	38.5	23.4	18.6	19.9	17.3	15.8	17.0	10.6	18.1	39.5	39.6	39.6	NM	18.3	23.5
Total Purged	gal	5850	4228	4229	3686	2844	2979	2637	2724	2992	2916	3595	3580	3560	2980	2712	2423
Depth to Water	ft bgs	0.35	0.00	0.85	2.15	2.99	2.60	3.32	6.85	1.90	1.95	0.30	0.00	0.00	2.05	3.40	3.40
Temperature	deg C	6.7	8.8	10.4	10.7	11.5	12.1	11.5	11.0	9.1	8.8	7.6	7.2	7.5	10.3	11.3	9.7
pH	SU	7.22	7.32	7.34	7.26	7.26	7.24	7.22	7.22	7.32	7.29	7.2	7.17	7.12	7.41	7.27	7.3
Specific Conductance	µS/cm	2043	1633	1805	1768	1478	1602	1941	1937	2014	2036	2262	2276	2085	1869	2074	2190
Oxygen Reduction Potential	mV	105.6	17.9	20.1	38.5	26.9	20.0	28.6	21.6	13.7	20.9	3.2	18.3	6.0	13.3	19.5	19.2
Lab Analytical Results:																	
Hardness as CaCO3	mg/L	990			1050			1030		963				1040	1060	1140	1150
pH (Lab)	SU	7.22			7.34			7.29		7.36				7.22	7.46	7.30	7.33
Total Dissolved Solids (Lab)	mg/L	1580			1480			1520		1520				1480	1510	1680	1740
Calcium	mg/L	197			208			206		186				205	211	219	226
Magnesium	mg/L	121			128			126		121				128	129	143	142
Sodium	mg/L	95.9			75.2			80.7		82.4				110	87.5	80.7	83.4
Potassium	mg/L	4.64			4.56			4.90		4.42				4.61	4.79	4.62	<5.00
Alkalinity, Total	mg/L	460			500			470		450				410	445	510	475
Alkalinity, Bicarbonate	mg/L	440			500			470		450				410	445	510	475
Alkalinity, Carbonate	mg/L	20.0			<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
Chloride	mg/L	81.0			76.3			62.3		70.1				72.5	72.5	68.7	68.9
Fluoride	mg/L	0.285			<0.5			<0.5		0.3				<0.500	0.332	<0.500	<0.500
Sulfate as SO4	mg/L	671			595			656		676				731	702	779	772
Total Organic Carbon (TOC)	mg/L	3.54			4.1			3.15		3.02				3.40	3.54	3.34	3.26
Nitrate/Nitrite as N	mg/L	0.456			0.891			1.08		0.965				0.492	1.07	1.80	1.94
Ammonia as N ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA
Aluminum	mg/L	<0.05			<0.05			<0.05		<0.050				<0.050	<0.1	<0.050	<0.250
Arsenic	mg/L	<0.0025			<0.0025			0.0005		0.0008				0.0009	0.0006	0.0005	0.0029
Cadmium	mg/L	<0.0005			<0.0005			<0.0005		<0.0001				<0.0001	<0.0001	<0.0001	<0.0005
Copper	mg/L	0.0018			0.0024			0.0020		0.0038				0.0023	0.0019	0.0025	0.0097
Iron	mg/L	0.100			<0.05			0.060		0.136				0.286	0.161	<0.050	<0.250
Lead	mg/L	<0.0025			<0.0025			<0.0025		<0.0005				<0.0005	<0.0005	<0.0005	<0.0025
Manganese	mg/L	0.673			0.857			0.756		0.608				0.440	0.797	0.881	4.50
Mercury (dissolved)	mg/L	<0.0002			<0.0002			<0.0002		<0.0002				<0.0002	<0.0002	<0.0002	<0.0002
Mercury (dissolved low-level)	ng/L																
Molybdenum	mg/L	<0.0025			<0.0025			0.0017		0.0016				0.0016	0.0021	0.0021	0.0093
Selenium	mg/L	<0.0050			<0.0050			0.0013		0.0023				0.0027	0.0019	0.0016	0.0087
Silica (Si02)	mg/L	13.9			16.1			16.4		14.3				14.7	15.5	16.1	13.4
Silicon	mg/L	6.51			7.53			7.67		6.69				6.85	7.22	7.54	6.29
Uranium	mg/L	0.0029			0.0021			0.0023		0.0026				0.0024	0.0021	0.0021	0.0110
Zinc	mg/L	0.0156			0.0364			0.0301		0.0269				0.0194	0.026	0.0208	0.0855
Radium 226 ^	pCi/L	0.7 +/- 0.1			NA			NA		NA				NA	NA	NA	NA
Radium 228 ^	pCi/L	<0.8			NA			NA		NA				NA	NA	NA	NA

Year	2018				2019				2020				2021				2022		
Quarter	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month	2	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	3	6	8
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
Lab Analysis (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																			
Purge Flow Rate	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
Total Purged	2700	2890	2783	2747	3017	3200	3010	3058	3825	3495	3200	3030	2920	3000	1800	2800	2900	2950	3000
Depth to Water	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
Temperature	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
pH	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
Specific Conductance	2232	2144	2072	2167	2170	2151	1964	1970	2171	2017	1450	1984	1739	1789	2012	2038	1965	2039	2285
Oxygen Reduction Potential	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
Lab Analytical Results:																			
Hardness as CaCO3	1090	1160	1130	1180	1150	1080	1080	1060	982	1060	1070	1130	1090	1070	1080	1080	1070	1070	1300
pH (Lab)	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
Total Dissolved Solids (Lab)	1740	1740	1750	1720	1710	1670	1520	1480	1600	1560	1580	1540	1550	1500	1580	1640	1520	1580	1850
Calcium	211	216	221	230	226	214	214	208	191	206	206	215	208	199	206	209	208	206	255
Magnesium	136	150	139	147	143	132	132	132	123	132	136	144	138	140	136	136	133	135	160
Sodium	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
Potassium	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
Alkalinity, Total	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520	505	485	530
Alkalinity, Bicarbonate	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520	505	485	530
Alkalinity, Carbonate	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<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	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<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	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
Fluoride	<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
Sulfate as SO4	832	714	733	741	801	709	627	627	711	633	704	728	683	661	679	697	688	702	818
Total Organic Carbon (TOC)	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
Nitrate/Nitrite as N	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
Ammonia as N ^	NA	NA	NA	NA	NA	NA	NA	<0.100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	NA	NA	NA	NA	NA	NA	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	<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
Arsenic	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
Cadmium	<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
Copper	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
Iron	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
Lead	<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
Manganese	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
Mercury (dissolved)	<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)																		<5.00	<100
Molybdenum	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
Selenium	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
Silica (Si02)	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
Silicon	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
Uranium	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
Zinc	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
Radium 226 ^	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Radium 228 ^	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

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-HGA-4

Year		2016	2017												2018					2019				2020				2021				2022		
Quarter		Q4	Q1			Q2			Q3			Q4			Q1		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	8
Sample Date		12/12	1/26	2/28	3/22	4/27	5/31	6/13	7/27	8/16	9/21	10/27	11/28	12/12	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
Lab Analysis (Y/N)		Y	N	N	Y	N	N	Y	N	N	Y	N	Y	N	N	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	0.5	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	9.40	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
Total Purged	gal	21	21	21	21	21	21	19.5	20	20	21	21	21	24	19	21	21	19	21	24	22	21	21	22	21	20	21	21	21	20	22	21	21	22
Depth to Water	ft bgs	0.73	0.57	0.60	0.83	0.94	2.06	2.53	3.25	2.65	3.31	3.31	1.76	4.31	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
Temperature	deg C	7.3	4.8	6.4	8.1	7.2	9.9	8.4	8.6	8.8	9.0	9.2	9.0	9.3	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
pH	SU	7.29	7.36	7.40	7.41	7.33	7.36	7.40	7.36	7.35	7.33	7.31	7.27	7.27	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
Specific Conductance	µS/cm	1284	1257	1201	1155	1153	1113	1055	1099	1050	1124	1072	1171	1160	1141	1154	1098	1057	1167	1183	1102	1083	1127	1122	1093	1022	1158	975	1093	1108	1160	1197	1102	1198
Oxygen Reduction Potential	mV	-72.1	-86.6	-105.1	-104.4	-74.5	-91.3	-134.7	-137.6	-131.0	-139.5	-77.3	-157.9	-70.1	-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
Lab Analytical Results:																																		
Hardness as CaCO3	mg/L	724			611			616			522		595			561	555	524	625	613	563	544	624	563	528	571	612	630	582	515	627	598	574	653
pH (Lab)	SU	7.30			7.17			7.31			7.25		7.21			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
Total Dissolved Solids (Lab)	mg/L	855			710			715			750		775			740	730	695	770	795	695	695	715	705	685	700	665	685	680	735	790	790	785	745
Calcium	mg/L	147			118			121			102		118			110	108	102	124	122	110	106	123	112	101	111	122	126	114	98.7	125	119	110	130
Magnesium	mg/L	86.7			76.7			76.6			64.9		72.8			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
Sodium	mg/L	19.5			27.4			28.6			24.9		27.2			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
Potassium	mg/L	2.02			2.13			2.11			1.75		2.21			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
Alkalinity, Total	mg/L	545			465			415			465		475			460	425	410	460	455	445	455	432	435	416	485	457	475	465	470	580	470	435	500
Alkalinity, Bicarbonate	mg/L	545			465			415			465		475			460	425	410	460	455	445	455	432	435	416	485	457	475	465	470	580	470	435	500
Alkalinity, Carbonate	mg/L	ND			<10.0			<10.0			<10.0		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<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	ND			<10.0			<10.0			<10.0		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<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	10.9			8.75			7.95			8.96		8.74			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
Fluoride	mg/L	0.577			0.485			0.506			0.517		0.495			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
Sulfate as SO4	mg/L	240			229			192			205		204			222	190	169	201	221	186	212	190	193	181	179	187	191	184	194	199	216	183	215
Total Organic Carbon (TOC)	mg/L	NA			4.54			4.35			4.69		4.79			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
Nitrate/Nitrite as N	mg/L	<0.020			<0.020			<0.020			<0.020		<0.100			<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
Ammonia as N ^	mg/L	NA			NA			NA			NA		NA			NA	NA	NA	NA	NA	NA	NA	0.528	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	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	0.423			<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	<0.100	<0.100	<0.050	<0.050	<0.050	<0.250	<0.250	<0.050	<0.050	<0.050
Arsenic	mg/L	0.0030			0.0029			0.0028			<0.0005		0.0035			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
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	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Copper	mg/L	0.0006			0.0008			0.0002			0.0004		0.0002			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
Iron	mg/L	3.71			7.29			7.32			0.378		7.84			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
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	<0.0010	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese	mg/L	4.07			2.78			2.37			2.03		2.11			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
Mercury (dissolved)	mg/L	ND			<0.0002			<0.0002			<0.0002		<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
Molybdenum	mg/L	0.0013			0.0024			0.0027			0.0028		0.0027			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
Selenium	mg/L	<0.001			0.0030			<0.001			<0.0010		<0.0010			<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
Silica (Si02)	mg/L	22.3			16.8			18			16.5		17.9			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
Silicon	mg/L	10.4			7.86			8.41			7.72		8.35			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
Uranium	mg/L	0.0010			0.0004			0.0004			0.0004		0.0004			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
Zinc	mg/L	0.0039			0.0046			<0.002			<0.0040		<0.0020			<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

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-1-A

Year		2017								2018									2019				2020				2021				2022		
Quarter		Q2	Q3				Q4			Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		6	7	8	9	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9
Sample Date		6/7	7/18	8/23	9/7	9/26	10/26	11/16	12/5	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
Lab Analysis (Y/N)		Y	N	N	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*	NM*	NM	NM	NM	NM	NM	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
Total Purged	gal	12.8	NM*	NM*	NM	NM	2.0	2.0	1.0	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
Depth to Water	ft bgs	215.42	NM*	215.92	215.54	216.33	216.31	216.47	216.58	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
Temperature	deg C	17.7	NM*	NM*	10.7	9.7	9.1	9.1	8.7	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
pH	SU	7.78	NM*	NM*	7.35	7.38	7.29	7.28	7.25	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
Specific Conductance	µS/cm	1362	NM*	NM*	1555	1563	1616	1650	1693	1700	1723	1735	1647	1761		1734	1815	1781	1776	1681	1757	1737	1797	1855	1664	1670	1550	1647	1691	1792	1707	1717	1770
Oxygen Reduction Potential	mV	-34.6	NM*	NM*	-54.7	-46.5	-50.0	-48.3	-49.6	-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
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	124				133		130			159			156			160	174	159	153	148	150	159	165	161	168	168	150	158	157	152	149	146
pH (Lab)	SU	7.74				7.35		7.33			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
Total Dissolved Solids (Lab)	mg/L	975				1080		1120			1100			1150			1040	1130	1160	1150	1150	1140	1190	1150	1150	1170	1250	1150	1190	1150	1140	1140	1150
Calcium	mg/L	24.7				25.8		24.9			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
Magnesium	mg/L	15.1				16.7		16.6			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
Sodium	mg/L	324				329		325			348			327			333	358	357	319	348	333	337	349	348	353	357	314	333	340	321	319	318
Potassium	mg/L	1.98				2.02		<5.00			<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
Alkalinity, Total	mg/L	375				450		380			415			353			385	395	375	355	368	420	360	340	325	366	400	400	370	440	405	425	410
Alkalinity, Bicarbonate	mg/L	375				450		380			415			353			385	395	375	355	368	420	360	340	325	366	400	400	370	440	405	425	410
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
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
Chloride	mg/L	2.75				2.16		<5.00			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
Fluoride	mg/L	0.268				0.245		<0.500			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
Sulfate as SO4	mg/L	427				432		511			518			522			515	511	508	494	537	495	506	532	510	508	553	531	507	458	503	516	532
Total Organic Carbon (TOC)	mg/L	5.03				1.36		1.58			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
Nitrate/Nitrite as N	mg/L	<0.200				<0.400		<0.100			<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
Ammonia as N ^	mg/L	NA				NA		NA			NA			NA			NA	NA	NA	NA	NA	0.387	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	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050				<0.050		<0.250			<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
Arsenic	mg/L	<0.0005				<0.0005		<0.0025			<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
Cadmium	mg/L	<0.0001				<0.0001		<0.0005			<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
Copper	mg/L	0.0043				0.0057		0.0045			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
Iron	mg/L	0.128				0.367		<0.250			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
Lead	mg/L	<0.0005				<0.0005		<0.0025			<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
Manganese	mg/L	0.0260				0.0218		0.0259			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
Mercury (dissolved)	mg/L	<0.0002				<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Mercury (dissolved low-level)	ng/L																															<5.00	<100
Molybdenum	mg/L	0.0007				0.0010		<0.0025			<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	<0.001
Selenium	mg/L	<0.0010				<0.0010		<0.0050			<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	<0.002
Silica (Si02)	mg/L	12.3				11.9		8.27			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
Silicon	mg/L	5.74				5.56		3.87			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
Uranium	mg/L	0.0004				0.0002		<0.0005			<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
Zinc	mg/L	0.0270				0.0088		<0.0100			<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

Notes & Definitions:

*** *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		**2017**							**2018**									**2019**				**2020**				**2021**				**2022**		
Quarter		Q2	Q3			Q4			Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		6	7	8	9	10	11	12	**1**	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9
Sample Date		6/7	7/18	8/23	9/26	10/26	11/16	12/5	**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
Lab Analysis (Y/N)		Y	N	N	N	N	N	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
Field Parameters:																																
Purge Flow Rate	***gpm***	NM	NM*	NM	NM																											
Total Purged	***gal***	19.5	NM*	<0.5	NM																											
Depth to Water	***ft bgs***	259.99	NM*	258.29	258.34																											
Temperature	***deg C***	15.8	NM*	11.8	21.7	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***	8	NM*	7.94	7.86																											
Specific Conductance	***µS/cm***	2032	NM*	2137	2119																											
Oxygen Reduction Potential	***mV***	160.5	NM*	65.7	61.4																											
Lab Analytical Results:																																
Hardness as CaCO3	***mg/L***	231																														
pH (Lab)	***SU***	8.14																														
Total Dissolved Solids (Lab)	***mg/L***	1520																														
Calcium	***mg/L***	46.7																														
Magnesium	***mg/L***	27.9																														
Sodium	***mg/L***	470																														
Potassium	***mg/L***	2.55																														
Alkalinity, Total	***mg/L***	600																														
Alkalinity, Bicarbonate	***mg/L***	600																														
Alkalinity, Carbonate	***mg/L***	<10.0																														
Alkalinity, Hydroxide	***mg/L***	<10.0																														
Chloride	***mg/L***	7.69																														
Fluoride	***mg/L***	1.14																														
Sulfate as SO4	***mg/L***	739																														
Total Organic Carbon (TOC)	***mg/L***	5.14																														
Nitrate/Nitrite as N	***mg/L***	0.103																														
Aluminum	***mg/L***	<0.050																														
Arsenic	***mg/L***	0.0029																														
Cadmium	***mg/L***	<0.0001																														
Copper	***mg/L***	0.0067																														
Iron	***mg/L***	<0.050																														
Lead	***mg/L***	0.0010																														
Manganese	***mg/L***	0.0445																														
Mercury (dissolved)	***mg/L***	<0.0002																														
Mercury (dissolved low-level)	***ng/L***																															
Molybdenum	***mg/L***	0.0796																														
Selenium	***mg/L***	0.0028																														
Silica (Si02)	***mg/L***	11.6																														
Silicon	***mg/L***	5.44																														
Uranium	***mg/L***	0.0505																														
Zinc	***mg/L***	1.52																														

Notes & Definitions:

****** 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		**2017**								**2018**									**2019**				**2020**				**2021**				**2022**		
Quarter		Q2	Q3				Q4			Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		6	7	8	9	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9
Sample Date		6/7	7/18	8/23	9/7	9/26	10/26	11/16	12/5	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
Lab Analysis (Y/N)		Y	N	N	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*	NM*	NM	NM	NM	NM	NM	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
Total Purged	***gal***	5	NM*	NM*	NM	NM	1.00	1.00	1.00	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
Depth to Water	***ft bgs***	216.5	NM*	216.91	216.95	216.59	216.52	216.48	216.52	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	213.98
Temperature	***deg C***	16.0	NM*	NM*	NM	12.9	11.7	10.6	7.0	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
pH	***SU***	7.52	NM*	NM*	NM	7.17	7.16	7.15	7.17	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
Specific Conductance	***µS/cm***	2446	NM*	NM*	NM	2725	2738	2739	2778	2778	2738	2751	2700	2749		2693	2675	2751	2621	3139	3172	3080	3005	3002	2653	2709	2410	2249	2290	2554	2223	2362	2278
Oxygen Reduction Potential	***mV***	74.3	NM*	NM*	NM	77.4	31.7	23.9	13.0	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
Lab Analytical Results:																																		
Hardness as CaCO3	***mg/L***	498				1290		1180			1190			1130			1120	1180	1010	1820	1840	1700	1600	1590	1400	1420	1320	953	975	920	750	766	638
pH (Lab)	***SU***	8.35				7.36		7.34			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
Total Dissolved Solids (Lab)	***mg/L***	2020				2440		2360			2360			2340			2170	2200	1960	2880	2890	2750	2610	2460	2420	2450	2330	1910	1850	1840	1680	1770	1640
Calcium	***mg/L***	96.0				234		216			219			203			203	219	188	340	342	318	301	294	248	265	241	175	178	168	142	137	113
Magnesium	***mg/L***	62.8				172		155			156			150			148	154	131	237	240	219	207	207	189	183	173	126	129	122	95.7	103	86.6
Sodium	***mg/L***	506				242		253			260			239			239	255	265	146	119	119	143	155	168	194	206	196	214	234	229	240	261
Potassium	***mg/L***	11.4				3.81		<5.00			<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
Alkalinity, Total	***mg/L***	530				700		540			570			580			560	410	525	530	518	505	515	490	445	520	580	480	485	640	510	530	570
Alkalinity, Bicarbonate	***mg/L***	530				700		540			570			580			560	410	525	530	518	505	515	490	445	520	580	480	485	640	510	530	570
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
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
Chloride	***mg/L***	24.2				6.97		8.03			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
Fluoride	***mg/L***	1.59				0.864		0.955			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
Sulfate as SO4	***mg/L***	1090				1350		1230			1160			1210			1090	1080	1070	1630	1730	1520	1400	1370	1280	1180	1150	940	872	886	805	908	821
Total Organic Carbon (TOC)	***mg/L***	4.56				2.84		2.12			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
Nitrate/Nitrite as N	***mg/L***	<2.00				<0.400		<0.100			<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
Ammonia as N ^	***mg/L***	NA				NA		NA			NA			NA			NA	NA	NA	NA	NA	0.140	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	<0.100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***	<0.050				<0.050		<0.250			<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
Arsenic	***mg/L***	0.0029				0.0016		<0.0025			<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
Cadmium	***mg/L***	<0.0001				<0.0001		<0.0005			<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
Copper	***mg/L***	0.0088				0.0085		0.0036			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
Iron	***mg/L***	<0.050				<0.050		<0.250			<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
Lead	***mg/L***	<0.0005				<0.0005		<0.0025			<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
Manganese	***mg/L***	0.0744				0.0853		0.0959			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
Mercury (dissolved)	***mg/L***	<0.0002				<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002		
Mercury (dissolved low-level)	***ng/L***																															<5.00	<100
Molybdenum	***mg/L***	0.0164				0.0049		<0.0025			<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	<0.001	<0.0005	<0.001	<0.0025
Selenium	***mg/L***	0.0136				0.0012		<0.0050			<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
Silica (Si02)	***mg/L***	10.6				16.6		13.2			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
Silicon	***mg/L***	4.94				7.77		6.16			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
Uranium	***mg/L***	0.0500				0.0044		0.0028			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
Zinc	***mg/L***	0.0293				0.0294		<0.0100			<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

Notes & Definitions:

****** 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-2-A																															
Year		**2017**							**2018**							**2019**				**2020**				**2021**				**2022**		
Quarter		Q1	Q2	Q3		Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9
Sample Date		3/30	6/7	7/18	8/23	10/30	11/16	12/5	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
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	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	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**

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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-2-MI																															
Year		2017							2018							2019				2020				2021				2022		
Quarter		Q1	Q2	Q3		Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9
Sample Date		3/30	6/7	7/18	8/23	10/30	11/16	12/5	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
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	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	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:

Y/N	**yes or no**
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NA	**not analyzed (lab)**
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GCC Energy Hydrologic Monitoring Data

MW-2-C																															
Year		**2017**							**2018**							**2019**				**2020**				**2021**				**2022**		
Quarter		Q1	Q2	Q3		Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11	3	6	9
Sample Date		3/30	6/7	7/18	8/23	10/30	11/16	12/5	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
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	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	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***																														
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Silicon	***mg/L***																														
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Zinc	***mg/L***																														

Notes & Definitions:

Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
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mg/L	**milligram per liter**
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NM	**not measured (field)**
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GCC Energy Hydrologic Monitoring Data

MW-3-A

Year		2017								2018							2019				2020				2021				2022		
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	9
Sample Date		3/27	6/30	7/18	8/24	9/28	10/27	11/17	12/7	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
Lab Analysis (Y/N)		Y	Y	N	N	Y	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
Field Parameters:																															
Purge Flow Rate	*gpm*	0.50	NM	NM	NM	NM	NM	NM	NM	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
Total Purged	*gal*	30.0	2.0	NM	NM	NM	1.0	1.0	1.0	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
Depth to Water	*ft bgs*	297.35	298.24	297.45	298.24	298.11	298.12	298.01	298.05	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
Temperature	*deg C*	11.7	13.2	19.5	12.6	12.3	12.5	11.7	12.0	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
pH	*SU*	8.82	8.75	8.56	8.67	8.72	8.64	8.61	8.57	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
Specific Conductance	*µS/cm*	2535	2446	2115	2524	2470	2430	2483	2494	2528	2506	2458	2415	2253	2336	2391	2355	2309	NM	2204	2211	2249	2112	2192	1930	1525	2091	2127	2121	2055	2066
Oxygen Reduction Potential	*mV*	-269.0	-101.5	-55.3	-87.4	-142.3	-124.5	-125.6	-146.8	-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
Lab Analytical Results:																															
Hardness as CaCO3	*mg/L*	7.53	12.6			12.6		10.4			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
pH (Lab)	*SU*	8.63	8.69			8.53		8.29			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
Total Dissolved Solids (Lab)	*mg/L*	1630	1670			1630		1690			1680			1670	1600	1540	1500	1530	1520	1510	1500	1460	1380	1460	1410	1350	1420	1360	1220	1400	1320
Calcium	*mg/L*	2.00	3.67			3.63		3.27			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
Magnesium	*mg/L*	0.616	0.823			0.859		0.550			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
Sodium	*mg/L*	566	585			589		551			562			542	562	605	543	525	553	528	520	507	510	505	536	471	462	448	462	473	476
Potassium	*mg/L*	1.72	2.02			2.04		<5.00			<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
Alkalinity, Total	*mg/L*	530	470			500		490			430			480	480	475	540	450	459	420	460	430	440	470	520	530	465	485	495	560	500
Alkalinity, Bicarbonate	*mg/L*	380	470			440		460			360			480	420	385	330	430	423	420	460	400	440	450	520	530	465	435	455	480	500
Alkalinity, Carbonate	*mg/L*	150	<10.0			60.0		30.0			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
Alkalinity, Hydroxide	*mg/L*	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	*mg/L*	16.1	17.4			18.5		16.9			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
Fluoride	*mg/L*	0.464	0.488			0.535		<0.500			<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
Sulfate as SO4	*mg/L*	729	802			840		730			812			756	706	682	716	699	724	633	637	656	624	644	600	601	599	515	584	555	557
Total Organic Carbon (TOC)	*mg/L*	3.52	10.0			7.26		6.07			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
Nitrate/Nitrite as N	*mg/L*	<0.100	<0.100			<0.020		<0.020			<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
Ammonia as N ^	*mg/L*	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.354	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	0.0730	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	*mg/L*	<0.050	<0.050			<0.050		<0.250			<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
Arsenic	*mg/L*	0.0025	<0.0025			<0.0025		<0.0025			<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
Cadmium	*mg/L*	<0.0001	<0.0005			<0.0005		<0.0005			<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
Copper	*mg/L*	0.0061	0.0081			0.0080		0.0079			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
Iron	*mg/L*	<0.050	<0.050			<0.050		<0.250			<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
Lead	*mg/L*	<0.0005	<0.0025			<0.0025		<0.0025			<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
Manganese	*mg/L*	0.0042	0.0251			0.0194		0.0269			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
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	<0.0050	<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
Molybdenum	*mg/L*	0.0005	0.0274			0.0091		0.0078			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
Selenium	*mg/L*	0.0577	<0.0050			<0.0050		<0.0050			<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
Silica (Si02)	*mg/L*	10.1	10.9			11.6		7.66			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
Silicon	*mg/L*	4.70	5.10			5.41		3.58			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
Uranium	*mg/L*	0.0002	0.0040			0.0051		0.0036			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
Zinc	*mg/L*	0.0031	<0.0100			<0.0100		<0.0100			<0.0100			<0.002	<0.002	<0.0040	<0.0040	<0.01	<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

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)
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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		**2017**								**2018**							**2019**				**2020**				**2021**				**2022**		
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	9
Sample Date		3/27	6/30	7/18	8/16	9/28	10/27	11/17	12/7	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
Lab Analysis (Y/N)		Y	Y	N	N	Y	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
Field Parameters:																																
Purge Flow Rate	***gpm***	0.50	NM	NM	NM	NM	NM	NM	NM	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
Total Purged	***gal***	19.0	2.0	NM	NM	NM	1.0	1.0	1.0	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
Depth to Water	***ft bgs***	304.49	241.15	240.46	240.53	240.46	240.44	240.44	240.58	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
Temperature	***deg C***	10.0	12.6	22.0	12.9	11.0	12.1	11.7	11.7	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
pH	***SU***	9.34	8.94	8.46	8.90	8.74	8.90	8.86	8.86	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
Specific Conductance	***µS/cm***	1907	1699	1402	1598	1737	1729	1745	1786	1790	1810	1771	1772	1727	1709	1746	1753	1739	1691	1739	1758	1737	1560	1555	1519	1232	1647	1765	1705	1686	1720
Oxygen Reduction Potential	***mV***	-87.0	-54.5	-26.4	-108.2	-107.3	-113.8	-124.2	-163.1	-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
Lab Analytical Results:																																
Hardness as CaCO3	***mg/L***	4.85	8.73			9.02		7.75			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	983
pH (Lab)	***SU***	8.95	8.75			8.72		8.72			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
Total Dissolved Solids (Lab)	***mg/L***	1550	1120			1140		1080			1170			1210	1110	1120	1120	1170	1010	1130	1130	1130	1060	1160	1120	1110	1180	1130	1070	1140	1080
Calcium	***mg/L***	1.32	2.32			2.34		2.06			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	155*
Magnesium	***mg/L***	0.374	0.714			0.775		0.632			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	145*
Sodium	***mg/L***	420	430			440		411			459			417	446	476	434	419	454	437	437	427	431	431	468	410	403	390	413	415	162
Potassium	***mg/L***	2.15	2.21			1.93		<5.00			<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	4.64
Alkalinity, Total	***mg/L***	740	675			700		660			700			680	730	720	685	755	720	690	705	680	625	770	690	690	705	705	740	740	780
Alkalinity, Bicarbonate	***mg/L***	510	555			600		570			600			500	630	610	485	605	590	610	645	550	465	690	450	550	555	565	580	580	480
Alkalinity, Carbonate	***mg/L***	230	120			100		90.0			100			180	100	110	200	150	130	80.0	60.0	130	160	80	240	140	150	140	160	160	300
Alkalinity, Hydroxide	***mg/L***	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	***mg/L***	8.66	10.1			10.7		10.6			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
Fluoride	***mg/L***	0.952	1.34			1.26		1.26			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
Sulfate as SO4	***mg/L***	165	241			247		254			245			250	226	230	232	229	236	224	227	231	222	110	223	227	228	230	233	213	240
Total Organic Carbon (TOC)	***mg/L***	8.34	14.8			10.9		10.3			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
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	0.034	<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	NA	NA	NA	NA	0.317	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	0.348	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***	<0.050	0.102			<0.050		<0.250			<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	<0.100
Arsenic	***mg/L***	0.0134	0.0167			0.0131		0.0135			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
Cadmium	***mg/L***	<0.0001	<0.0005			<0.0005		<0.0005			<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	<0.001
Copper	***mg/L***	0.0055	0.0058			0.0065		0.0059			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
Iron	***mg/L***	<0.050	<0.100			<0.050		<0.250			<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	<0.100
Lead	***mg/L***	0.0024	<0.0025			<0.0025		<0.0025			<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	<0.002
Manganese	***mg/L***	0.0022	0.0058			0.0033		0.0045			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
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	<0.0050	<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
Molybdenum	***mg/L***	0.0061	0.0211			0.0148		0.0152			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
Selenium	***mg/L***	0.0013	<0.0050			<0.0050		<0.0050			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
Silica (Si02)	***mg/L***	7.97	8.18			9.05		5.35			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	17.7*
Silicon	***mg/L***	3.73	3.82			4.23		2.50			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	8.28*
Uranium	***mg/L***	0.0049	0.0084			0.0140		0.0124			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
Zinc	***mg/L***	0.0405	<0.0100			<0.0100		<0.0100			<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

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-3-C																																
Year		**2017**								**2018**							**2019**				**2020**				**2021**				**2022**		
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	9	11	3	5	8	12	2	5	8	11	2	5	9
Sample Date		3/27	6/30	7/27	8/24	9/28	10/27	11/17	12/7	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
Lab Analysis (Y/N)		Y	Y	N	N	Y	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
Field Parameters:																																
Purge Flow Rate	***gpm***	0.50	NM	NM	NM	NM	NM	NM	NM	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
Total Purged	***gal***	20.0	2.0	NM	NM	NM	1.0	1.0	1.0	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
Depth to Water	***ft bgs***	304.21	296.3	296.93	296.87	297.43	297.46	297.43	297.35	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
Temperature	***deg C***	10.5	12.9	13.1	12.5	11.8	12.7	11.5	11.7	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
pH	***SU***	8.61	8.57	8.51	8.46	8.44	8.48	8.41	8.48	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
Specific Conductance	***µS/cm***	3549	3588	3815	4112	4351	4412	4659	4596	4923	4864	5063	5019	4916	4953	5127	5155	5184	5144	5144	4921	3143	5039	4251	4426	3755	4571	5244	4564	4694	5306
Oxygen Reduction Potential	***mV***	-129.0	-87.2	-137.5	-128.8	-149.9	-198.3	-200.7	-222.2	-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
Lab Analytical Results:																																
Hardness as CaCO3	***mg/L***	14.4	11.8			15.1		14.9			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
pH (Lab)	***SU***	8.5	8.48			8.35		8.28			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
Total Dissolved Solids (Lab)	***mg/L***	2130	2360			3070		3310			3540			3610	3520	3360	3300	3440	3500	3390	3220	3180	3170	3280	3200	3230	3300	3200	3270	3250	3280
Calcium	***mg/L***	3.60	2.87			3.50		3.58			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
Magnesium	***mg/L***	1.31	1.12			1.55		1.44			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
Sodium	***mg/L***	796	890			1100		1130			1200			1350	1220	1460	1270	1100	1360	1300	1280	1240	1250	1250	1360	1220	1220	1170	1200	1260	1360
Potassium	***mg/L***	3.47	3.24			4.01		<5.00			<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
Alkalinity, Total	***mg/L***	1490	1570			1690		1880			1910			1760	1730	2050	2000	2110	2190	2130	2160	2050	1820	2090	2170	2130	2140	2230	2180	2170	2110
Alkalinity, Bicarbonate	***mg/L***	1360	1480			1650		1830			1810			1600	1670	1900	1830	2000	2020	2070	2000	1800	1690	1970	1710	1910	1950	1950	1820	1870	1990
Alkalinity, Carbonate	***mg/L***	130	90.0			40.0		50.0			100			160	60.0	150	170	110	170	60.0	160	250	130	120	460	220	190	280	360	300	120
Alkalinity, Hydroxide	***mg/L***	<10.0	<10.0			<10.0		<10.0			<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
Chloride	***mg/L***	182	330			477		506			549			544	524	561	577	575	620	542	549	555	552	578	574	577	582	462	608	605	613
Fluoride	***mg/L***	4.89	4.94			4.52		4.34			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
Sulfate as SO4	***mg/L***	73.4	73.5			46.4		24.5			<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
Total Organic Carbon (TOC)	***mg/L***	10.6	58.5			219		251			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
Nitrate/Nitrite as N	***mg/L***	<0.020	<0.400			<0.400		<0.020			<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
Ammonia as N ^	***mg/L***	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.500	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	0.212	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***	<0.050	<0.100			<0.050		<0.250			<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
Arsenic	***mg/L***	0.0115	0.0088			0.0098		0.0091			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
Cadmium	***mg/L***	<0.0001	<0.0010			<0.0010		<0.0005			<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
Copper	***mg/L***	0.0109	0.0147			0.0174		0.0160			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
Iron	***mg/L***	<0.050	<0.050			<0.050		<0.250			<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
Lead	***mg/L***	0.0085	<0.0050			<0.0050		<0.0025			<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
Manganese	***mg/L***	0.0091	0.0188			0.0178		0.0202			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
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	<0.0050	<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
Molybdenum	***mg/L***	0.0143	0.0291			0.0241		0.0241			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
Selenium	***mg/L***	0.0233	0.0121			0.0149		0.0240			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
Silica (Si02)	***mg/L***	7.82	8.86			9.16		6.01			<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
Silicon	***mg/L***	3.66	4.14			4.28		2.81			<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
Uranium	***mg/L***	0.0091	0.0102			0.0137		0.0100			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
Zinc	***mg/L***	0.375	<0.0200			<0.0200		<0.0100			<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

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-4-A																																
Year		**2017**								**2018**							**2019**				**2020**				**2021**				**2022**		
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	9
Sample Date		3/29	6/30	7/19	8/23	9/28	10/27	11/17	12/7	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
Lab Analysis (Y/N)		Y	Y	N	N	Y	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
Field Parameters:																																
Purge Flow Rate	***gpm***	NM	NM	NM	NM	NM	NM	NM	NM	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
Total Purged	***gal***	19.0	2.0	1.5	0.5	1.0	1.0	1.0	1.0	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
Depth to Water	***ft bgs***	338.6	334.96	335.59	334.79	334.81	334.86	332.29	334.09	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
Temperature	***deg C***	15.6	16.8	25.5	17.6	11.9	11.6	10.8	10.1	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
pH	***SU***	8.61	8.29	8.55	7.98	8.41	8.32	8.38	8.32	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
Specific Conductance	***µS/cm***	2163	2053	1876	2096	2180	2165	2186	2261	2259	2267	2207	2214	2183	2192	2246	2205	2237	2201	2211	2271	2273	2165	2249	2052	1618	2205	2268	2294	2244	2236
Oxygen Reduction Potential	***mV***	28.6	54.0	60.2	61.7	-8.6	-27.0	-12.3	-51.8	-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
Lab Analytical Results:																																
Hardness as CaCO3	***mg/L***	9.16	9.85			7.77		7.11			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
pH (Lab)	***SU***	8.2	8.40			8.36		8.40			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
Total Dissolved Solids (Lab)	***mg/L***	1470	1470			1450		1500			1490			1470	1430	1350	1450	1410	1540	1490	1500	1480	1460	1560	1370	1430	1510	1470	1400	1540	1480
Calcium	***mg/L***	2.23	2.43			1.76		1.87			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
Magnesium	***mg/L***	0.871	0.916			0.823		0.591			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
Sodium	***mg/L***	515	537			513		511			507			528	531	568	535	515	548	529	551	498	533	531	565	507	411	488	504	523	520
Potassium	***mg/L***	1.57	1.75			1.63		<5.00			<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
Alkalinity, Total	***mg/L***	635	560			630		590			530			560	575	575	545	565	575	544	560	585	605	538	620	590	580	670	535	605	590
Alkalinity, Bicarbonate	***mg/L***	635	560			590		560			490			560	555	575	505	544	535	528	560	545	565	530	620	530	580	670	485	455	590
Alkalinity, Carbonate	***mg/L***	<10.0	<10.0			40.0		30.0			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
Alkalinity, Hydroxide	***mg/L***	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	***mg/L***	9.56	9.66			10.3		10.3			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
Fluoride	***mg/L***	<0.400	<0.400			<0.500		<0.500			<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
Sulfate as SO4	***mg/L***	594	588			783		594			579			561	522	450	567	584	615	559	557	580	542	607	561	577	593	551	581	525	580
Total Organic Carbon (TOC)	***mg/L***	6.63	11.7			3.52		3.27			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
Nitrate/Nitrite as N	***mg/L***	0.035	<0.020			<0.020		<0.020			<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
Ammonia as N ^	***mg/L***	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.312	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	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***	<0.050	<0.050			<0.050		<0.250			<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
Arsenic	***mg/L***	0.0016	<0.0025			<0.0025		<0.0025			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
Cadmium	***mg/L***	<0.0001	<0.0005			<0.0005		<0.0005			<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
Copper	***mg/L***	0.0053	0.0093			0.0076		0.0073			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
Iron	***mg/L***	<0.050	<0.050			<0.050		<0.250			<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
Lead	***mg/L***	0.0014	<0.0025			<0.0025		<0.0025			<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
Manganese	***mg/L***	0.0044	0.0063			0.0044		0.0040			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
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	<0.0050	<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
Molybdenum	***mg/L***	0.0009	0.0275			<0.0025		<0.0025			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
Selenium	***mg/L***	0.0016	<0.0050			<0.0050		<0.0050			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
Silica (Si02)	***mg/L***	10.2	10.6			9.99		6.85			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
Silicon	***mg/L***	4.75	4.97			4.67		3.20			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
Uranium	***mg/L***	0.0016	<0.0005			<0.0005		0.0005			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
Zinc	***mg/L***	0.269	0.0319			<0.0100		<0.0100			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

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-4-MI																																
Year		**2017**								**2018**							**2019**				**2020**				**2021**				**2022**		
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	2	5	9
Sample Date		3/30	6/16	7/27	8/23	9/28	10/27	11/17	12/7	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
Lab Analysis (Y/N)		Y	Y	N	N	Y	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
Field Parameters:																																
Purge Flow Rate	***gpm***	NM	NM	NM	NM	NM	NM	NM	NM	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
Total Purged	***gal***	0.5	6.5	NM	NM	1.0	1.0	1.0	1.0	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
Depth to Water	***ft bgs***	378.2	330.15	330.94	330.85	330.81	330.8	330.74	330.67	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
Temperature	***deg C***	15.0	14.6	12.9	12.5	11.4	10.7	11.3	11.4	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
pH	***SU***	9.08	8.91	8.78	8.79	8.76	8.76	8.73	8.67	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
Specific Conductance	***µS/cm***	1581	1668	1731	1708	1784	1794	1804	1833	1848	1856	1841	1816	1739	1756	1808	1716	1800	1830	1776	1795	1794	1730	1777	1605	1258	1711	1761	1745	1727	1718
Oxygen Reduction Potential	***mV***	155.2	64.7	9.8	35.2	-29.6	-37.3	-111.5	-89.2	-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
Lab Analytical Results:																																
Hardness as CaCO3	***mg/L***	5.43	8.71			7.07		4.20			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
pH (Lab)	***SU***	8.83	8.59			8.63		8.51			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
Total Dissolved Solids (Lab)	***mg/L***	1160	1170			1180		1180			1220			1140	1120	1100	1130	1130	1140	1120	1110	1110	1070	1170	1130	1100	1130	1090	1100	1140	1070
Calcium	***mg/L***	1.53	2.32			1.88		1.68			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
Magnesium	***mg/L***	0.392	0.707			0.579		<0.500			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
Sodium	***mg/L***	408	458			449		452			447			471	470	500	462	458	496	477	441	460	459	458	476	431	427	418	430	443	448
Potassium	***mg/L***	1.46	<2.00			1.73		<5.00			<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
Alkalinity, Total	***mg/L***	965	915			1100		985			965			955	968	995	510	890	970	978	985	1030	1020	1010	990	1020	985	1140	935	1020	1180
Alkalinity, Bicarbonate	***mg/L***	775	825			880		885			875			865	896	885	420	650	880	886	895	935	940	965	910	900	865	1020	825	870	1040
Alkalinity, Carbonate	***mg/L***	190	90.0			220		100			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
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
Chloride	***mg/L***	2.18	7.50			8.78		9.11			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
Fluoride	***mg/L***	4.72	5.02			5.09		5.10			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
Sulfate as SO4	***mg/L***	17.4	64.7			76.6		77.5			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
Total Organic Carbon (TOC)	***mg/L***	2.64	6.49			8.58		9.53			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
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	0.040	<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	NA	NA	NA	NA	0.240	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	0.280	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***	<0.050	<0.100			<0.050		<0.250			<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
Arsenic	***mg/L***	0.0099	0.0220			0.0131		0.0122			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
Cadmium	***mg/L***	<0.0001	<0.0001			<0.0005		<0.0005			<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
Copper	***mg/L***	0.0059	0.0058			0.0071		0.0070			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
Iron	***mg/L***	<0.050	<0.100			<0.050		<0.250			<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
Lead	***mg/L***	0.0010	<0.0005			<0.0025		<0.0025			<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
Manganese	***mg/L***	0.0020	0.0066			0.0081		0.0124			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
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	<0.0050	<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
Molybdenum	***mg/L***	0.0020	0.0160			0.0127		0.0134			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
Selenium	***mg/L***	<0.0010	0.0012			<0.0050		<0.0050			<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
Silica (Si02)	***mg/L***	7.27	8.01			8.80		<5.35			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
Silicon	***mg/L***	3.40	3.75			4.11		2.50			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
Uranium	***mg/L***	0.0043	0.0126			0.0184		0.0169			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
Zinc	***mg/L***	0.113	0.0697			<0.0100		<0.0100			<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

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*

GCC Energy Hydrologic Monitoring Data

MW-4-C																																
Year		**2017**								**2018**							**2019**				**2020**				**2021**				**2022**		
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	2	5	9
Sample Date		3/30	6/16	7/27	8/23	9/28	10/27	11/17	12/7	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
Lab Analysis (Y/N)		Y	Y	N	N	Y	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
Field Parameters:																																
Purge Flow Rate	***gpm***	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.2
Total Purged	***gal***	7.0	1.5	NM	NM	1.0	1.0	1.0	1.0	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
Depth to Water	***ft bgs***	328.33	314.05	309.87	306.86	303.96	303.80	302.47	304.80	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
Temperature	***deg C***	13.3	17.4	12.7	12.0	13.9	11.8	11.2	11.0	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
pH	***SU***	8.33	7.62	7.68	7.70	7.69	7.75	7.72	7.79	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
Specific Conductance	***µS/cm***	3792	5944	5997	5885	5813	5721	5782	5604	5834	5903	5628	5792	5592	5583	5775	5710	5712	5930	5636	5729	5636	5429	5665	5106	4047	5454	5687	5698	5645	5589
Oxygen Reduction Potential	***mV***	57.3	20.3	-101.5	-111.2	-103.7	-117.4	-109.0	-120.1	-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
Lab Analytical Results:																																
Hardness as CaCO3	***mg/L***	46.3	55.9			38.9		30.0			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
pH (Lab)	***SU***	7.61	7.77			7.79		7.98			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
Total Dissolved Solids (Lab)	***mg/L***	3230	4050			3750		3780			3730			3660	3650	3590	3580	3590	3610	3610	3580	3570	3510	3610	3720	3540	3600	3630	3520	3580	3670
Calcium	***mg/L***	13.6	13.7			9.15		7.45			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
Magnesium	***mg/L***	2.99	5.26			3.90		2.76			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
Sodium	***mg/L***	908	1510			1490		1400			1410			1400	1410	1590	1410	1370	1440	1430	1440	1390	1400	1400	1520	1310	1340	1270	1360	1350	1530
Potassium	***mg/L***	4.38	5.71			6.07		<10.0			<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
Alkalinity, Total	***mg/L***	1250	2360			2780		2680			2600			2410	2480	2450	2470	2550	2500	2470	2480	2460	2500	2950	2470	2500	2410	2630	2360	2500	2430
Alkalinity, Bicarbonate	***mg/L***	1250	2360			2780		2640			2600			2330	2480	2450	2470	2350	2390	2410	2420	2340	2390	2880	2430	2360	2290	2410	2180	2300	2430
Alkalinity, Carbonate	***mg/L***	<10.0	<10.0			<10.0		40.0			<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
Alkalinity, Hydroxide	***mg/L***	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	***mg/L***	181	550			587		608			592			573	533	590	575	554	580	525	528	555	543	565	557	553	572	561	562	563	570
Fluoride	***mg/L***	1.29	2.04			2.17		2.43			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
Sulfate as SO4	***mg/L***	534	487			70.2		26.0			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
Total Organic Carbon (TOC)	***mg/L***	30	6.42			5.08		3.64			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
Nitrate/Nitrite as N	***mg/L***	<2.00	<0.500			<0.400		<0.100			<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
Ammonia as N ^	***mg/L***	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.424	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	0.182	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	***mg/L***	<0.050	<0.050			<0.050		<0.500			<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
Arsenic	***mg/L***	0.0059	0.0119			0.0128		0.0152			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
Cadmium	***mg/L***	<0.0001	<0.0010			<0.0010		<0.0010			<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
Copper	***mg/L***	0.0125	0.0243			0.0221		0.0208			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
Iron	***mg/L***	<0.050	<0.050			<0.050		<0.500			<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
Lead	***mg/L***	<0.0005	<0.0050			<0.0050		<0.0050			<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
Manganese	***mg/L***	0.0269	0.0772			0.0554		0.0571			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
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	<0.0050	<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
Molybdenum	***mg/L***	0.0526	0.115			0.0138		0.0106			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
Selenium	***mg/L***	0.0248	0.0231			0.0214		0.0269			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
Silica (Si02)	***mg/L***	9.85	12.6			12.9		<10.7			<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
Silicon	***mg/L***	4.61	5.88			6.02		<5.00			<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
Uranium	***mg/L***	0.0297	0.121			0.0984		0.0545			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
Zinc	***mg/L***	0.0156	0.0265			<0.0200		<0.0200			<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

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*

GCC Energy Hydrologic Monitoring Data

MW-6-A																							
Year		**2018**	**2019**										**2020**				**2021**				**2022**		
Quarter		Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		12	1	2	3	4	5	6	7	8	9	11	2	5	8	11	2	5	8	11	2	5	8
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
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
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
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**		
Quarter		Q4	Q1			Q2				Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		12	1	2	3	4	5	5	6	7	8	9	11	2	5	8	11	2	5	8	11	2	5	8
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
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
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
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		
Quarter		Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		12	1	2	3	4	5	6	7	8	9	11	2	5	8	11	2	5	8	11	2	5	8
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
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
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
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**		
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	2	5	8
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
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
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
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
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
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
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
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
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
Lab Analytical Results:																								
Hardness as CaCO3	***mg/L***	2260		1270			431			621			843	1060	965	1130	1160	1120	1010	1280	1130	1030	954	971
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
Total Dissolved Solids (Lab)	***mg/L***	5100		2840			875			1150			1630	1840	1840	2040	2020	1990	1830	2290	2050	1990	1840	1870
Calcium	***mg/L***	367		216			75.9			103			136	173	150	179	184	176	154	201	174	159	145	152
Magnesium	***mg/L***	325		177			58.7			88.3			122	153	143	165	171	166	152	189	170	154	144	143
Sodium	***mg/L***	459		248			129			153			172	203	188	194	194	188	169	177	166	162	158	163
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
Alkalinity, Total	***mg/L***	205		315			371			381			355	320	353	335	329	336	346	330	380	365	365	337
Alkalinity, Bicarbonate	***mg/L***	205		315			371			381			355	320	353	335	329	336	346	330	380	365	365	337
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
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
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
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
Sulfate as SO4	***mg/L***	3050		1790			338			492			830	951	904	1260	1170	1020	978	1300	1100	555	931	1010
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			1.99	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

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**		
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9
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
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
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
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
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
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
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
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
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
Lab Analytical Results:																								
Hardness as CaCO3	***mg/L***	936		1030			982			997			1020	963	1020	1080	939	1090	958	986	957	1040	958	916
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
Total Dissolved Solids (Lab)	***mg/L***	1460		1480			1490			1480			1530	1520	1430	1480	1450	1590	1460	1510	1580	1500	1500	1490
Calcium	***mg/L***	170		179			171			173			162	165	175	183	157	186	167	167	164	173	166	154
Magnesium	***mg/L***	124		142			135			137			144	134	142	150	133	152	131	138	133	149	132	129
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
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
Alkalinity, Total	***mg/L***	380		367			405			392			350	357	355	268	430	420	395	340	440	425	425	400
Alkalinity, Bicarbonate	***mg/L***	380		367			405			392			425	357	355	268	430	420	395	340	440	425	425	400
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
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
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
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
Sulfate as SO4	***mg/L***	732		736			733			844			746	774	803	767	742	757	746	796	751	755	743	759
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			0.178	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

Notes & Definitions:

^	**one-time analysis**
Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
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GCC Energy Hydrologic Monitoring Data

MW-8-EAA																								
Year		**2018**	**2019**											**2020**				**2021**				**2022**		
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9
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
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
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
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
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
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
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
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
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
Lab Analytical Results:																								
Hardness as CaCO3	***mg/L***	870		861			864			883			867	861	907	937	810	914	838	859	859	937	867	831
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
Total Dissolved Solids (Lab)	***mg/L***	1220		1290			1240			1280			1380	1290	1260	1280	1310	1400	1320	1320	1340	1380	1330	1360
Calcium	***mg/L***	152		151			148			154			143	149	153	160	134	156	146	146	149	158	150	143
Magnesium	***mg/L***	119		118			120			121			124	119	127	130	115	127	115	120	118	131	119	115
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
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
Alkalinity, Total	***mg/L***	400		435			450			431			445	404	385	288	480	450	445	385	490	460	465	480
Alkalinity, Bicarbonate	***mg/L***	400		435			450			431			445	404	385	288	480	450	445	385	490	460	465	480
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
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
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
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
Sulfate as SO4	***mg/L***	533		559			606			643			577	602	625	605	582	609	595	615	599	608	597	627
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
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
Ammonia as N ^	***mg/L***	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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	<0.01

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**		
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9
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
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
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
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
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
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
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
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
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
Lab Analytical Results:																								
Hardness as CaCO3	***mg/L***	167		249			273			253			267	254	309	355	339	376	288	377	317	406	378	374
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
Total Dissolved Solids (Lab)	***mg/L***	1050		1030			1100			1110			1050	1060	1040	1010	1040	1060	1040	1000	1100	1050	1040	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
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
Sodium	***mg/L***	344		312			289			289			275	269	272	260	232	237	256	229	238	226	220	213
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
Alkalinity, Total	***mg/L***	500		565			560			573			585	543	545	448	590	590	575	570	605	590	590	500
Alkalinity, Bicarbonate	***mg/L***	500		565			560			573			585	543	545	448	590	590	575	570	605	590	590	500
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
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
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
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
Sulfate as SO4	***mg/L***	347		353			343			366			317	314	316	335	319	326	314	324	312	325	322	352
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			1.31	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

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**		
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9
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
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
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
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
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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	***mg/L***	1420		770			780			785			780	840	730	740	700	795	720	740	760	740	795	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
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
Sodium	***mg/L***	382		341			317			306			305	309	315	337	304	319	315	308	291	316	298	298
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
Alkalinity, Total	***mg/L***	615		720			745			731			745	685	630	675	780	730	755	750	770	780	765	760
Alkalinity, Bicarbonate	***mg/L***	535		610			645			645			685	595	530	585	680	630	645	650	620	640	655	580
Alkalinity, Carbonate	***mg/L***	80.0		110			100			86.0			60.0	90	100	90	100	100	110	100	150	140	110	180
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
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
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
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
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			0.282	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

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**		
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	3	6	9
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
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
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
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
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
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
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
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
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
Lab Analytical Results:																								
Hardness as CaCO3	***mg/L***	617		644			596			411			294	278	298	292	268	281	283	280	272	292	276	275
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
Total Dissolved Solids (Lab)	***mg/L***	1150		1090			995			705			620	500	490	525	465	525	505	475	465	485	505	500
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
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
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
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
Alkalinity, Total	***mg/L***	370		415			435			393			390	339	340	315	410	370	385	360	385	362	380	356
Alkalinity, Bicarbonate	***mg/L***	370		415			435			393			390	339	340	315	410	370	385	360	385	362	380	340
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
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
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
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
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
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			0.199	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
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
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
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
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
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
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
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
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
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
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
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
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
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
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

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)**
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ng/L	**nanogram per liter**

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25 August 2022

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

RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/10/22 15:15. 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: T104704514-22-14

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: T104704398-22-15

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 Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/25/22 17:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Wiltse Well	2208173-01	Water	08/10/22 13:15	08/10/22 15:15	
MW 99 W	2208173-02	Water	08/10/22 13:30	08/10/22 15:15	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/25/22 17:05

Wiltse Well

2208173-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**530**	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**530**	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Cation/Anion Balance	**0.330**	-100	-100	%	1	08/24/22 10:42	Calculation		JDA
Chloride*	**57.5**	2.00	0.111	mg/L	2	08/18/22 22:10	EPA300.0		AES
Fluoride*	**0.288**	0.200	0.0194	mg/L	2	08/18/22 22:10	EPA300.0		AES
Nitrate/Nitrite as N*	**1.16**	0.020	0.012	mg/L as N	1	08/15/22 14:39	EPA353.2		HTB
pH*	**7.39**			pH Units	1	08/12/22 08:50	EPA150.1		QEB
pH Temperature, degrees C	**20.8**			pH Units	1	08/12/22 08:50	EPA150.1		QEB
Total Dissolved Solids*	**1850**	10.0		mg/L	1	08/15/22 11:45	EPA160.1		AES
Sulfate*	**818**	20.0	2.48	mg/L	20	08/19/22 09:46	EPA300.0		AES
Total Organic Carbon*	**3.72**	0.500	0.175	mg/L	1	08/17/22 13:51	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	08/18/22 16:01	EPA200.7		AES
Calcium*	**255**	0.200	0.047	mg/L	2	08/18/22 16:01	EPA200.7		AES
Hardness as CaCO3	**1300**	1.32	0.371	mg/L	2	08/18/22 16:01	2340 B		AES
Iron*	**0.161**	0.100	0.071	mg/L	2	08/18/22 16:01	EPA200.7		AES
Magnesium*	**160**	0.200	0.062	mg/L	2	08/18/22 16:01	EPA200.7		AES
Potassium*	**4.92**	2.00	0.130	mg/L	2	08/18/22 16:01	EPA200.7		AES
Silica (Si02)	**15.9**	2.14	0.137	mg/L	2	08/18/22 16:01	Calculation		AES
Silicon	**7.43**	1.00	0.064	mg/L	2	08/18/22 16:01	EPA200.7		AES
Sodium*	**77.8**	2.00	0.211	mg/L	2	08/18/22 16:01	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0005	mg/L	2	08/23/22 13:51	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00006	mg/L	2	08/23/22 13:51	EPA200.8		AES
Copper*	**0.0038**	0.0010	0.0002	mg/L	2	08/23/22 13:51	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	08/23/22 13:51	EPA200.8		AES
Manganese*	**0.974**	0.0010	0.0002	mg/L	2	08/23/22 13:51	EPA200.8		AES
Molybdenum*	**0.0019**	0.0010	0.0002	mg/L	2	08/23/22 13:51	EPA200.8		AES
Selenium*	**0.0020**	0.0020	0.0012	mg/L	2	08/23/22 13:51	EPA200.8		AES
Uranium	**0.0034**	0.0010	0.0002	mg/L	2	08/23/22 13:51	EPA200.8		AES
Zinc*	**0.0157**	0.0040	0.0005	mg/L	2	08/23/22 13:51	EPA200.8		AES

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GCC Energy, LLC	Project:	GCC GW Baseline	
6473 CR 120	Project Name / Number:	GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	08/25/22 17:05

Wiltse Well

2208173-01 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	08/16/22 14:24	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/25/22 17:05

MW 99 W

2208173-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**540**	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**540**	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Cation/Anion Balance	**1.02**	-100	-100	%	1	08/24/22 10:42	Calculation		JDA
Chloride*	**57.4**	2.00	0.111	mg/L	2	08/18/22 22:31	EPA300.0		AES
Fluoride*	**0.288**	0.200	0.0194	mg/L	2	08/18/22 22:31	EPA300.0		AES
Nitrate/Nitrite as N*	**1.15**	0.020	0.012	mg/L as N	1	08/15/22 14:40	EPA353.2		HTB
pH*	**7.32**			pH Units	1	08/12/22 08:50	EPA150.1		QEB
pH Temperature, degrees C	**20.9**			pH Units	1	08/12/22 08:50	EPA150.1		QEB
Total Dissolved Solids*	**1840**	10.0		mg/L	1	08/15/22 11:47	EPA160.1		AES
Sulfate*	**814**	20.0	2.48	mg/L	20	08/19/22 10:06	EPA300.0		AES
Total Organic Carbon*	**3.76**	0.500	0.175	mg/L	1	08/17/22 14:43	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	08/18/22 16:10	EPA200.7		AES
Calcium*	**257**	0.200	0.047	mg/L	2	08/18/22 16:10	EPA200.7		AES
Hardness as CaCO3	**1320**	1.32	0.371	mg/L	2	08/18/22 16:10	2340 B		AES
Iron*	**0.141**	0.100	0.071	mg/L	2	08/18/22 16:10	EPA200.7		AES
Magnesium*	**165**	0.200	0.062	mg/L	2	08/18/22 16:10	EPA200.7		AES
Potassium*	**5.04**	2.00	0.130	mg/L	2	08/18/22 16:10	EPA200.7		AES
Silica (Si02)	**16.1**	2.14	0.137	mg/L	2	08/18/22 16:10	Calculation		AES
Silicon	**7.51**	1.00	0.064	mg/L	2	08/18/22 16:10	EPA200.7		AES
Sodium*	**78.1**	2.00	0.211	mg/L	2	08/18/22 16:10	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0005	mg/L	2	08/23/22 13:56	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00006	mg/L	2	08/23/22 13:56	EPA200.8		AES
Copper*	**0.0051**	0.0010	0.0002	mg/L	2	08/23/22 13:56	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	08/23/22 16:23	EPA200.8		AES
Manganese*	**1.00**	0.0010	0.0002	mg/L	2	08/23/22 13:56	EPA200.8		AES
Molybdenum*	**0.0018**	0.0010	0.0002	mg/L	2	08/23/22 13:56	EPA200.8		AES
Selenium*	**0.0020**	0.0020	0.0012	mg/L	2	08/23/22 13:56	EPA200.8		AES
Uranium	**0.0035**	0.0010	0.0002	mg/L	2	08/23/22 13:56	EPA200.8		AES
Zinc*	**0.0169**	0.0040	0.0005	mg/L	2	08/23/22 13:56	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/25/22 17:05

MW 99 W

2208173-02 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	08/16/22 14:27	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/25/22 17:05

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222211 - General Prep - Wet Chem										
Reference (B222211-SRM1)				Prepared & Analyzed: 08/12/22						
pH	7.02		pH Units	7.00		100	98.57-101.42			
Batch B222220 - General Prep - Wet Chem										
Blank (B222220-BLK1)				Prepared & Analyzed: 08/15/22						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B222220-SRM1)				Prepared & Analyzed: 08/15/22						
Total Dissolved Solids	355	10.0	mg/L	380		93.4	85-115			
Batch B222229 - Lachat										
Blank (B222229-BLK1)				Prepared & Analyzed: 08/15/22						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B222229-BS1)				Prepared & Analyzed: 08/15/22						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110			
LCS Dup (B222229-BSD1)				Prepared & Analyzed: 08/15/22						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110	0.246	20	
Batch B222235 - IC- Ion Chromatograph										
Blank (B222235-BLK1)				Prepared: 08/15/22 Analyzed: 08/18/22						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B222235-BS1)				Prepared: 08/15/22 Analyzed: 08/18/22						
Chloride	24.6	1.00	mg/L	25.0		98.5	90-110			
Fluoride	2.42	0.100	mg/L	2.50		96.6	90-110			
Sulfate	24.2	1.00	mg/L	25.0		96.7	90-110			
LCS Dup (B222235-BSD1)				Prepared: 08/15/22 Analyzed: 08/18/22						
Chloride	24.4	1.00	mg/L	25.0		97.7	90-110	0.840	20	
Fluoride	2.40	0.100	mg/L	2.50		95.8	90-110	0.832	20	
Sulfate	24.0	1.00	mg/L	25.0		95.9	90-110	0.806	20	
Batch B222240 - General Prep - Wet Chem										
Blank (B222240-BLK1)				Prepared & Analyzed: 08/17/22						

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/25/22 17:05

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222240 - General Prep - Wet Chem (Continued)										
Blank (B222240-BLK1) (Continued)				Prepared & Analyzed: 08/17/22						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B222240-BS1)				Prepared & Analyzed: 08/17/22						
Total Organic Carbon	9.85	0.500	mg/L	10.0		98.5	85-115			
LCS Dup (B222240-BSD1)				Prepared & Analyzed: 08/17/22						
Total Organic Carbon	10.0	0.500	mg/L	10.0		100	85-115	1.67	20	
Batch B222263 - General Prep - Wet Chem										
Blank (B222263-BLK1)				Prepared & Analyzed: 08/18/22						
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 (B222263-BS1)				Prepared & Analyzed: 08/18/22						
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115			
LCS Dup (B222263-BSD1)				Prepared & Analyzed: 08/18/22						
Alkalinity, Total as CaCO3	103	10.0	mg/L	100		103	85-115	3.96	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/25/22 17:05

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222261 - Dissolved ICP										
Blank (B222261-BLK1)				Prepared & Analyzed: 08/18/22						
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 (B222261-BS1)				Prepared & Analyzed: 08/18/22						
Aluminum	3.92	0.050	mg/L	4.00		98.0	85-115			
Calcium	4.11	0.100	mg/L	4.00		103	85-115			
Iron	4.32	0.050	mg/L	4.00		108	85-115			
Magnesium	20.7	0.100	mg/L	20.0		103	85-115			
Potassium	8.37	1.00	mg/L	8.00		105	85-115			
Silicon	4.19	0.500	mg/L	4.00		105	85-115			
Sodium	3.29	1.00	mg/L	3.24		101	85-115			
LCS Dup (B222261-BSD1)				Prepared & Analyzed: 08/18/22						
Aluminum	3.97	0.050	mg/L	4.00		99.2	85-115	1.20	20	
Calcium	4.11	0.100	mg/L	4.00		103	85-115	0.0153	20	
Iron	4.31	0.050	mg/L	4.00		108	85-115	0.227	20	
Magnesium	20.7	0.100	mg/L	20.0		104	85-115	0.283	20	
Potassium	8.20	1.00	mg/L	8.00		102	85-115	2.06	20	
Silicon	4.18	0.500	mg/L	4.00		105	85-115	0.199	20	
Sodium	3.31	1.00	mg/L	3.24		102	85-115	0.548	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/25/22 17:05

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222272 - Dissolved ICPMS										
Blank (B222272-BLK1)				Prepared: 08/19/22 Analyzed: 08/23/22						
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 (B222272-BS1)				Prepared: 08/19/22 Analyzed: 08/23/22						
Arsenic	0.0510	0.0005	mg/L	0.0500		102	85-115			
Cadmium	0.0518	0.0005	mg/L	0.0500		104	85-115			
Copper	0.0494	0.0005	mg/L	0.0500		98.9	85-115			
Lead	0.0506	0.0005	mg/L	0.0500		101	85-115			
Manganese	0.0497	0.0005	mg/L	0.0500		99.4	85-115			
Molybdenum	0.0518	0.0005	mg/L	0.0500		104	85-115			
Selenium	0.257	0.0010	mg/L	0.250		103	85-115			
Uranium	0.0547	0.0005	mg/L	0.0500		109	85-115			
Zinc	0.0499	0.0020	mg/L	0.0500		99.8	85-115			
LCS Dup (B222272-BSD1)				Prepared: 08/19/22 Analyzed: 08/23/22						
Arsenic	0.0527	0.0005	mg/L	0.0500		105	85-115	3.18	20	
Cadmium	0.0513	0.0005	mg/L	0.0500		103	85-115	1.04	20	
Copper	0.0493	0.0005	mg/L	0.0500		98.5	85-115	0.357	20	
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115	0.312	20	
Manganese	0.0526	0.0005	mg/L	0.0500		105	85-115	5.64	20	
Molybdenum	0.0523	0.0005	mg/L	0.0500		105	85-115	0.976	20	
Selenium	0.261	0.0010	mg/L	0.250		104	85-115	1.62	20	
Uranium	0.0530	0.0005	mg/L	0.0500		106	85-115	3.07	20	
Zinc	0.0506	0.0020	mg/L	0.0500		101	85-115	1.45	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/25/22 17:05

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222233 - EPA 245.7										
Blank (B222233-BLK1)				Prepared: 08/15/22 Analyzed: 08/16/22						
Mercury	ND	100	ng/L							
LCS (B222233-BS1)				Prepared: 08/15/22 Analyzed: 08/16/22						
Mercury	1550	100	ng/L	2000		77.7	76-113			
LCS Dup (B222233-BSD1)				Prepared: 08/15/22 Analyzed: 08/16/22						
Mercury	1580	100	ng/L	2000		79.1	76-113	1.81	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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75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC ENERGY LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81302
Phone #: 970 385 4528
Contact Person: TOM BIRD / TBIRD@HAYGULCHSERVICES.COM
Email Report to: LBECK@RESOURCEHYDROGEOLOGY.COM
Project Name(optional): LANDON BECK
Sampler Name (Print): MARCUS BENALLY

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

ANALYSIS REQUEST

For Lab Use	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 Energy BASELINE GW
2208-173 -01	Wilson Well	8/10/22	1:15	X							1	2		4			X
-02	MW 99W	8/10/22	1:30	X							1	2		4			

PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL within 30 days after completion. 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:	Time:	Received by:
[signature]	8/10/22	3:15	Paige Stillwaugh
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:	CHECKED BY	On Ice	No Ice
17.9 C	DMS	yes	

† 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.

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31 August 2022

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

RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/17/22 15:00. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

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

Sincerely,

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: T104704514-22-14

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: T104704398-22-15

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www.GreenAnalytical.com

GCC Energy, LLC	Project:	GCC GW Baseline	
6473 CR 120	Project Name / Number:	GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	08/31/22 17:11

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Well #1 Upgradient	2208243-01	Water	08/17/22 13:05	08/17/22 15:00	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/31/22 17:11

Well #1 Upgradient

2208243-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**570**	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**570**	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Cation/Anion Balance	**-0.540**	-100	-100	%	1	08/31/22 13:18	Calculation		JDA
Chloride*	**4.75**	1.00	0.0555	mg/L	1	08/24/22 17:55	EPA300.0		AES
Fluoride*	**0.332**	0.100	0.00971	mg/L	1	08/24/22 17:55	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	08/23/22 09:52	EPA353.2		HTB
pH*	**7.46**			pH Units	1	08/18/22 09:55	EPA150.1		LLG
pH Temperature, degrees C	**16.2**			pH Units	1	08/18/22 09:55	EPA150.1		LLG
Total Dissolved Solids*	**735**	10.0		mg/L	1	08/23/22 17:34	EPA160.1		AES
Sulfate*	**103**	1.00	0.124	mg/L	1	08/24/22 17:55	EPA300.0		AES
Total Organic Carbon*	**3.45**	0.500	0.175	mg/L	1	08/18/22 16:40	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.036	mg/L	1	08/24/22 22:12	EPA200.7		AES
Calcium*	**52.1**	0.100	0.024	mg/L	1	08/24/22 22:11	EPA200.7		AES
Hardness as CaCO3	**281**	0.662	0.186	mg/L	1	08/24/22 22:12	2340 B		AES
Iron*	**1.32**	0.050	0.036	mg/L	1	08/24/22 22:12	EPA200.7		AES
Magnesium*	**36.6**	0.100	0.031	mg/L	1	08/24/22 22:12	EPA200.7		AES
Potassium*	**2.94**	1.00	0.065	mg/L	1	08/24/22 22:11	EPA200.7		AES
Silica (Si02)	**13.4**	1.07	0.0683	mg/L	1	08/24/22 22:12	Calculation		AES
Silicon	**6.28**	0.500	0.032	mg/L	1	08/24/22 22:12	EPA200.7		AES
Sodium*	**179**	1.00	0.106	mg/L	1	08/24/22 22:11	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0005	0.0005	0.0002	mg/L	1	08/23/22 14:07	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.00003	mg/L	1	08/23/22 14:07	EPA200.8		AES
Copper*	**0.0069**	0.0005	0.00008	mg/L	1	08/23/22 14:07	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00009	mg/L	1	08/23/22 16:37	EPA200.8		AES
Manganese*	**0.349**	0.0005	0.00009	mg/L	1	08/23/22 14:07	EPA200.8		AES
Molybdenum*	**0.0005**	0.0005	0.00008	mg/L	1	08/23/22 14:07	EPA200.8		AES
Selenium*	**0.0131**	0.0010	0.0006	mg/L	1	08/23/22 14:07	EPA200.8		AES
Uranium	<0.0005	0.0005	0.0001	mg/L	1	08/23/22 14:07	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0003	mg/L	1	08/23/22 14:07	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 Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/31/22 17:11

Well #1 Upgradient

2208243-01 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	08/25/22 11:47	EPA245.7		HTB

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/31/22 17:11

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222258 - General Prep - Wet Chem										
Blank (B222258-BLK1)				Prepared & Analyzed: 08/18/22						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B222258-BS1)				Prepared & Analyzed: 08/18/22						
Total Organic Carbon	9.73	0.500	mg/L	10.0		97.3	85-115			
LCS Dup (B222258-BSD1)				Prepared & Analyzed: 08/18/22						
Total Organic Carbon	9.72	0.500	mg/L	10.0		97.2	85-115	0.0925	20	
Batch B222263 - General Prep - Wet Chem										
Blank (B222263-BLK1)				Prepared & Analyzed: 08/18/22						
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 (B222263-BS1)				Prepared & Analyzed: 08/18/22						
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115			
LCS Dup (B222263-BSD1)				Prepared & Analyzed: 08/18/22						
Alkalinity, Total as CaCO3	103	10.0	mg/L	100		103	85-115	3.96	20	
Batch B222264 - IC- Ion Chromatograph										
Blank (B222264-BLK1)				Prepared: 08/19/22 Analyzed: 08/24/22						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B222264-BS1)				Prepared: 08/19/22 Analyzed: 08/24/22						
Chloride	24.8	1.00	mg/L	25.0		99.0	90-110			
Fluoride	2.45	0.100	mg/L	2.50		97.8	90-110			
Sulfate	24.5	1.00	mg/L	25.0		97.9	90-110			
LCS Dup (B222264-BSD1)				Prepared: 08/19/22 Analyzed: 08/24/22						
Chloride	24.8	1.00	mg/L	25.0		99.2	90-110	0.206	20	
Fluoride	2.45	0.100	mg/L	2.50		98.0	90-110	0.204	20	
Sulfate	24.5	1.00	mg/L	25.0		97.9	90-110	0.0245	20	
Batch B222274 - General Prep - Wet Chem										

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/31/22 17:11

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222274 - General Prep - Wet Chem (Continued)										
Reference (B222274-SRM1)				Prepared & Analyzed: 08/18/22						
pH	7.02		pH Units	7.00		100	98.57-101.42			
Batch B222294 - Lachat										
Blank (B222294-BLK1)				Prepared: 08/22/22 Analyzed: 08/23/22						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B222294-BS1)				Prepared: 08/22/22 Analyzed: 08/23/22						
Nitrate/Nitrite as N	1.03	0.020	mg/L as N	1.00		103	90-110			
LCS Dup (B222294-BSD1)				Prepared: 08/22/22 Analyzed: 08/23/22						
Nitrate/Nitrite as N	1.03	0.020	mg/L as N	1.00		103	90-110	0.0486	20	
Batch B222306 - General Prep - Wet Chem										
Blank (B222306-BLK1)				Prepared & Analyzed: 08/23/22						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B222306-SRM1)				Prepared & Analyzed: 08/23/22						
Total Dissolved Solids	365	10.0	mg/L	380		96.0	85-115			

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/31/22 17:11

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222324 - Dissolved ICP										
Blank (B222324-BLK1)				Prepared & Analyzed: 08/24/22						
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 (B222324-BS1)				Prepared & Analyzed: 08/24/22						
Aluminum	4.02	0.050	mg/L	4.00		100	85-115			
Calcium	3.78	0.100	mg/L	4.00		94.5	85-115			
Iron	3.70	0.050	mg/L	4.00		92.6	85-115			
Magnesium	19.9	0.100	mg/L	20.0		99.3	85-115			
Potassium	7.93	1.00	mg/L	8.00		99.1	85-115			
Silicon	4.04	0.500	mg/L	4.00		101	85-115			
Sodium	3.19	1.00	mg/L	3.24		98.6	85-115			
LCS Dup (B222324-BSD1)				Prepared & Analyzed: 08/24/22						
Aluminum	4.00	0.050	mg/L	4.00		99.9	85-115	0.587	20	
Calcium	3.77	0.100	mg/L	4.00		94.2	85-115	0.312	20	
Iron	3.70	0.050	mg/L	4.00		92.6	85-115	0.0718	20	
Magnesium	19.8	0.100	mg/L	20.0		99.0	85-115	0.267	20	
Potassium	7.75	1.00	mg/L	8.00		96.9	85-115	2.27	20	
Silicon	3.99	0.500	mg/L	4.00		99.9	85-115	1.04	20	
Sodium	3.11	1.00	mg/L	3.24		95.9	85-115	2.78	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/31/22 17:11

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222272 - Dissolved ICPMS										
Blank (B222272-BLK1)				Prepared: 08/19/22 Analyzed: 08/23/22						
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 (B222272-BS1)				Prepared: 08/19/22 Analyzed: 08/23/22						
Arsenic	0.0510	0.0005	mg/L	0.0500		102	85-115			
Cadmium	0.0518	0.0005	mg/L	0.0500		104	85-115			
Copper	0.0494	0.0005	mg/L	0.0500		98.9	85-115			
Lead	0.0506	0.0005	mg/L	0.0500		101	85-115			
Manganese	0.0497	0.0005	mg/L	0.0500		99.4	85-115			
Molybdenum	0.0518	0.0005	mg/L	0.0500		104	85-115			
Selenium	0.257	0.0010	mg/L	0.250		103	85-115			
Uranium	0.0547	0.0005	mg/L	0.0500		109	85-115			
Zinc	0.0499	0.0020	mg/L	0.0500		99.8	85-115			
LCS Dup (B222272-BSD1)				Prepared: 08/19/22 Analyzed: 08/23/22						
Arsenic	0.0527	0.0005	mg/L	0.0500		105	85-115	3.18	20	
Cadmium	0.0513	0.0005	mg/L	0.0500		103	85-115	1.04	20	
Copper	0.0493	0.0005	mg/L	0.0500		98.5	85-115	0.357	20	
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115	0.312	20	
Manganese	0.0526	0.0005	mg/L	0.0500		105	85-115	5.64	20	
Molybdenum	0.0523	0.0005	mg/L	0.0500		105	85-115	0.976	20	
Selenium	0.261	0.0010	mg/L	0.250		104	85-115	1.62	20	
Uranium	0.0530	0.0005	mg/L	0.0500		106	85-115	3.07	20	
Zinc	0.0506	0.0020	mg/L	0.0500		101	85-115	1.45	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/31/22 17:11

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222312 - EPA 245.7										
Blank (B222312-BLK1)				Prepared: 08/23/22 Analyzed: 08/25/22						
Mercury	ND	100	ng/L							
LCS (B222312-BS1)				Prepared: 08/23/22 Analyzed: 08/25/22						
Mercury	1810	100	ng/L	2000		90.6	76-113			
LCS Dup (B222312-BSD1)				Prepared: 08/23/22 Analyzed: 08/25/22						
Mercury	1880	100	ng/L	2000		94.0	76-113	3.70	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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75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC ENERGY LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81326
Phone #: 970 385 4528
Contact Person: TOM BIRD TBIRD@HAYGULCHSERVICES.COM
Email Report to: LANDON BECK
Project Name(optional): ~~LANDO~~
LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MARCUS BENNETT / MICHAEL MCFARLAND

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

For Lab Use	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:	GCCE G.W. BASELINE
2208-243-01	Well #1 Upgradient	8/17/22	1:05	X							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 received 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: 8/17/22 Time: 900	Received by: Linda Gamper
Relinquished by:	Date: Time:	Received by:
Relinquished by:	Date: Time:	Received by:
Relinquished by:	Date: Time:	Received by:

ADDITIONAL REMARKS:
Laser #2

Report to State? (Circle) Yes No

Temperature at receipt: 2488 CHECKED BY: GG 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

75 Suttle Street
Durango, CO 81303
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24 August 2022

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

RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/09/22 15:05. 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: T104704514-22-14

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: T104704398-22-15

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/24/22 13:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Well #2 Downgradient	2208145-01	Water	08/09/22 11:34	08/09/22 15:05	
MW-HGA-4	2208145-02	Water	08/09/22 12:39	08/09/22 15:05	

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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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/24/22 13:24

Well #2 Downgradient

2208145-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**288**	10.0	2.27	mg/L	1	08/18/22 16:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	1	08/18/22 16:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	1	08/18/22 16:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**288**	10.0	2.27	mg/L	1	08/18/22 16:30	2320 B		HTB
Cation/Anion Balance	**5.73**	-100	-100	%	1	08/24/22 10:42	Calculation		JDA
Chloride*	**41.9**	1.00	0.0555	mg/L	1	08/11/22 19:05	EPA300.0		AES
Fluoride*	**0.229**	0.100	0.00971	mg/L	1	08/11/22 19:05	EPA300.0		AES
Nitrate/Nitrite as N*	**0.029**	0.020	0.012	mg/L as N	1	08/15/22 14:19	EPA353.2		HTB
pH*	**7.71**			pH Units	1	08/10/22 15:30	EPA150.1		QEB
pH Temperature, degrees C	**21.1**			pH Units	1	08/10/22 15:30	EPA150.1		QEB
Total Dissolved Solids*	**680**	10.0		mg/L	1	08/15/22 11:35	EPA160.1		AES
Sulfate*	**190**	1.00	0.124	mg/L	1	08/11/22 19:05	EPA300.0		AES
Total Organic Carbon*	**1.68**	0.500	0.175	mg/L	1	08/17/22 12:44	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.036	mg/L	1	08/16/22 17:08	EPA200.7		AES
Calcium*	**84.6**	0.100	0.024	mg/L	1	08/16/22 17:08	EPA200.7		AES
Hardness as CaCO3	**551**	0.662	0.186	mg/L	1	08/16/22 17:08	2340 B		AES
Iron*	**0.054**	0.050	0.036	mg/L	1	08/16/22 17:08	EPA200.7		AES
Magnesium*	**82.5**	0.100	0.031	mg/L	1	08/16/22 17:08	EPA200.7		AES
Potassium*	**2.28**	1.00	0.065	mg/L	1	08/16/22 17:08	EPA200.7		AES
Silica (Si02)	**12.3**	1.07	0.0683	mg/L	1	08/16/22 17:08	Calculation		AES
Silicon	**5.76**	0.500	0.032	mg/L	1	08/16/22 17:08	EPA200.7		AES
Sodium*	**26.1**	1.00	0.106	mg/L	1	08/16/22 17:08	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0009**	0.0005	0.0002	mg/L	1	08/12/22 13:22	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.00003	mg/L	1	08/12/22 13:22	EPA200.8		AES
Copper*	**0.0006**	0.0005	0.00008	mg/L	1	08/12/22 13:22	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00009	mg/L	1	08/12/22 13:22	EPA200.8		AES
Manganese*	**0.397**	0.0005	0.00009	mg/L	1	08/12/22 13:22	EPA200.8		AES
Molybdenum*	**0.0032**	0.0005	0.00008	mg/L	1	08/12/22 13:22	EPA200.8		AES
Selenium*	**0.0013**	0.0010	0.0006	mg/L	1	08/12/22 13:22	EPA200.8		AES
Uranium	**0.0015**	0.0005	0.0001	mg/L	1	08/12/22 13:22	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0003	mg/L	1	08/12/22 13:22	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 Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/24/22 13:24

Well #2 Downgradient

2208145-01 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	08/16/22 12:45	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/24/22 13:24

MW-HGA-4

2208145-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**500**	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**500**	10.0	2.27	mg/L	10	08/18/22 16:30	2320 B		HTB
Cation/Anion Balance	**-0.160**	-100	-100	%	1	08/24/22 10:42	Calculation		JDA
Chloride*	**14.6**	1.00	0.0555	mg/L	1	08/11/22 19:26	EPA300.0		AES
Fluoride*	**0.450**	0.100	0.00971	mg/L	1	08/11/22 19:26	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	08/15/22 14:13	EPA353.2		HTB
pH*	**7.20**			pH Units	1	08/10/22 15:30	EPA150.1		QEB
pH Temperature, degrees C	**19.9**			pH Units	1	08/10/22 15:30	EPA150.1		QEB
Total Dissolved Solids*	**745**	10.0		mg/L	1	08/15/22 11:37	EPA160.1		AES
Sulfate*	**215**	5.00	0.620	mg/L	5	08/12/22 09:01	EPA300.0		AES
Total Organic Carbon*	**4.64**	0.500	0.175	mg/L	1	08/17/22 13:35	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.036	mg/L	1	08/16/22 17:12	EPA200.7		AES
Calcium*	**130**	0.100	0.024	mg/L	1	08/16/22 17:12	EPA200.7		AES
Hardness as CaCO3	**653**	0.662	0.186	mg/L	1	08/16/22 17:12	2340 B		AES
Iron*	**9.73**	0.050	0.036	mg/L	1	08/16/22 17:12	EPA200.7		AES
Magnesium*	**79.9**	0.100	0.031	mg/L	1	08/16/22 17:12	EPA200.7		AES
Potassium*	**2.13**	1.00	0.065	mg/L	1	08/16/22 17:12	EPA200.7		AES
Silica (Si02)	**17.8**	1.07	0.0683	mg/L	1	08/16/22 17:12	Calculation		AES
Silicon	**8.34**	0.500	0.032	mg/L	1	08/16/22 17:12	EPA200.7		AES
Sodium*	**27.1**	1.00	0.106	mg/L	1	08/16/22 17:12	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0034**	0.0005	0.0002	mg/L	1	08/12/22 13:24	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.00003	mg/L	1	08/12/22 13:24	EPA200.8		AES
Copper*	**0.0005**	0.0005	0.00008	mg/L	1	08/12/22 13:24	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00009	mg/L	1	08/12/22 13:24	EPA200.8		AES
Manganese*	**3.00**	0.0050	0.0009	mg/L	10	08/12/22 13:58	EPA200.8		AES
Molybdenum*	**0.0030**	0.0005	0.00008	mg/L	1	08/12/22 13:24	EPA200.8		AES
Selenium*	**0.0010**	0.0010	0.0006	mg/L	1	08/12/22 13:24	EPA200.8		AES
Uranium	<0.0005	0.0005	0.0001	mg/L	1	08/12/22 13:24	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0003	mg/L	1	08/12/22 13:24	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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/24/22 13:24

MW-HGA-4

2208145-02 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	08/16/22 13:56	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/24/22 13:24

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222195 - IC- Ion Chromatograph										
Blank (B222195-BLK1)				Prepared & Analyzed: 08/11/22						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B222195-BS1)				Prepared & Analyzed: 08/11/22						
Chloride	24.7	1.00	mg/L	25.0		98.9	90-110			
Fluoride	2.45	0.100	mg/L	2.50		98.2	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.7	90-110			
LCS Dup (B222195-BSD1)				Prepared & Analyzed: 08/11/22						
Chloride	24.5	1.00	mg/L	25.0		98.1	90-110	0.828	20	
Fluoride	2.43	0.100	mg/L	2.50		97.3	90-110	0.859	20	
Sulfate	24.2	1.00	mg/L	25.0		96.8	90-110	0.991	20	
Batch B222202 - General Prep - Wet Chem										
Reference (B222202-SRM1)				Prepared & Analyzed: 08/10/22						
pH	7.01		pH Units	7.00		100	98.57-101.42			
Batch B222220 - General Prep - Wet Chem										
Blank (B222220-BLK1)				Prepared & Analyzed: 08/15/22						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B222220-SRM1)				Prepared & Analyzed: 08/15/22						
Total Dissolved Solids	355	10.0	mg/L	380		93.4	85-115			
Batch B222229 - Lachat										
Blank (B222229-BLK1)				Prepared & Analyzed: 08/15/22						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B222229-BS1)				Prepared & Analyzed: 08/15/22						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110			
LCS Dup (B222229-BSD1)				Prepared & Analyzed: 08/15/22						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110	0.246	20	
Batch B222240 - General Prep - Wet Chem										
Blank (B222240-BLK1)				Prepared & Analyzed: 08/17/22						

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/24/22 13:24

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222240 - General Prep - Wet Chem (Continued)										
Blank (B222240-BLK1) (Continued)				Prepared & Analyzed: 08/17/22						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B222240-BS1)				Prepared & Analyzed: 08/17/22						
Total Organic Carbon	9.85	0.500	mg/L	10.0		98.5	85-115			
LCS Dup (B222240-BSD1)				Prepared & Analyzed: 08/17/22						
Total Organic Carbon	10.0	0.500	mg/L	10.0		100	85-115	1.67	20	
Batch B222263 - General Prep - Wet Chem										
Blank (B222263-BLK1)				Prepared & Analyzed: 08/18/22						
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 (B222263-BS1)				Prepared & Analyzed: 08/18/22						
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115			
LCS Dup (B222263-BSD1)				Prepared & Analyzed: 08/18/22						
Alkalinity, Total as CaCO3	103	10.0	mg/L	100		103	85-115	3.96	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/24/22 13:24

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222236 - Dissolved ICP										
Blank (B222236-BLK1)				Prepared: 08/15/22 Analyzed: 08/16/22						
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 (B222236-BS1)				Prepared: 08/15/22 Analyzed: 08/16/22						
Aluminum	4.18	0.050	mg/L	4.00		104	85-115			
Calcium	4.11	0.100	mg/L	4.00		103	85-115			
Iron	4.13	0.050	mg/L	4.00		103	85-115			
Magnesium	21.1	0.100	mg/L	20.0		105	85-115			
Potassium	8.27	1.00	mg/L	8.00		103	85-115			
Silicon	4.26	0.500	mg/L	4.00		107	85-115			
Sodium	3.28	1.00	mg/L	3.24		101	85-115			
LCS Dup (B222236-BSD1)				Prepared: 08/15/22 Analyzed: 08/16/22						
Aluminum	4.16	0.050	mg/L	4.00		104	85-115	0.381	20	
Calcium	4.08	0.100	mg/L	4.00		102	85-115	0.592	20	
Iron	4.10	0.050	mg/L	4.00		102	85-115	0.693	20	
Magnesium	20.9	0.100	mg/L	20.0		105	85-115	0.613	20	
Potassium	8.34	1.00	mg/L	8.00		104	85-115	0.894	20	
Silicon	4.23	0.500	mg/L	4.00		106	85-115	0.832	20	
Sodium	3.28	1.00	mg/L	3.24		101	85-115	0.0858	20	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/24/22 13:24

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222206 - Dissolved ICPMS										
Blank (B222206-BLK1)				Prepared & Analyzed: 08/12/22						
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 (B222206-BS1)				Prepared & Analyzed: 08/12/22						
Arsenic	0.0511	0.0005	mg/L	0.0500		102	85-115			
Cadmium	0.0509	0.0005	mg/L	0.0500		102	85-115			
Copper	0.0507	0.0005	mg/L	0.0500		101	85-115			
Lead	0.0491	0.0005	mg/L	0.0500		98.3	85-115			
Manganese	0.0514	0.0005	mg/L	0.0500		103	85-115			
Molybdenum	0.0511	0.0005	mg/L	0.0500		102	85-115			
Selenium	0.252	0.0010	mg/L	0.250		101	85-115			
Uranium	0.0513	0.0005	mg/L	0.0500		103	85-115			
Zinc	0.0508	0.0020	mg/L	0.0500		102	85-115			
LCS Dup (B222206-BSD1)				Prepared & Analyzed: 08/12/22						
Arsenic	0.0500	0.0005	mg/L	0.0500		100	85-115	2.18	20	
Cadmium	0.0504	0.0005	mg/L	0.0500		101	85-115	1.02	20	
Copper	0.0501	0.0005	mg/L	0.0500		100	85-115	1.19	20	
Lead	0.0489	0.0005	mg/L	0.0500		97.9	85-115	0.419	20	
Manganese	0.0510	0.0005	mg/L	0.0500		102	85-115	0.719	20	
Molybdenum	0.0510	0.0005	mg/L	0.0500		102	85-115	0.112	20	
Selenium	0.250	0.0010	mg/L	0.250		99.9	85-115	0.981	20	
Uranium	0.0516	0.0005	mg/L	0.0500		103	85-115	0.677	20	
Zinc	0.0499	0.0020	mg/L	0.0500		99.8	85-115	1.88	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	08/24/22 13:24

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222233 - EPA 245.7										
Blank (B222233-BLK1)				Prepared: 08/15/22 Analyzed: 08/16/22						
Mercury	ND	100	ng/L							
LCS (B222233-BS1)				Prepared: 08/15/22 Analyzed: 08/16/22						
Mercury	1550	100	ng/L	2000		77.7	76-113			
LCS Dup (B222233-BSD1)				Prepared: 08/15/22 Analyzed: 08/16/22						
Mercury	1580	100	ng/L	2000		79.1	76-113	1.81	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

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Jeremy D Allen, Laboratory Director

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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 LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81326
Phone #: 970 385 4528
Contact Person: TOM BIRD / TBIRD@HALGULCHSERVICES.COM
Email Report to: LBELK@RESOURCEHYDROGEOLOGIC.COM
Project Name(optional): LANDON BELK
Sampler Name (Print): MARCUS BENALLY & MICHAEL MCFARLAND

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

ANALYSIS REQUEST: GCCE GW BASELINE

For Lab Use	Sample Name or Location	Collected Date	Collected Time	Matrix (check one): GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	# of containers: No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCCE GW BASELINE
2208-145 -01	MW-#2 Downgradient	8/9/22	11:34	X							1	2		4			X
-02	MW-HGA-4	8/9/22	12:39	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 received 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: 8/9/22 Time: 2:05	Received by: Paige Stillwagen
Relinquished by:	Date: Time:	Received by:
Relinquished by:	Date: Time:	Received by:
Relinquished by:	Date: Time:	Received by:

ADDITIONAL REMARKS:
Laser #2

Report to State? (Circle) Yes No

Temperature at receipt:	CHECKED BY	On Ice	No Ice
7.6°C	DMS	YES	

† 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.

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28 September 2022

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

RE: GCC SW Baseline 2022

Enclosed are the results of analyses for samples received by the laboratory on 09/13/22 15:00. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

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

Sincerely,

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: T104704514-22-15

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: T104704398-22-15

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GCC Energy, LLC	Project:	GCC SW Baseline 2022	
6473 CR 120	Project Name / Number:	GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	09/28/22 13:50

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Haygulch Ditch Downgradient	2209172-01	Water	09/13/22 10:20	09/13/22 15:00	
Haygulch Ditch Upgradient	2209172-02	Water	09/13/22 11:06	09/13/22 15:00	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC SW Baseline 2022	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:50

Haygulch Ditch Downgradient

2209172-01 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**73.0**	10.0	2.27	mg/L	1	09/19/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	1	09/19/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	1	09/19/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**73.0**	10.0	2.27	mg/L	1	09/19/22 16:00	2320 B		HTB
Cation/Anion Balance	**-0.950**	-100	-100	%	1	09/28/22 13:12	Calculation		JDA
Chloride*	**1.69**	1.00	0.0555	mg/L	1	09/22/22 18:55	EPA300.0		AES
Fluoride*	**0.221**	0.100	0.00971	mg/L	1	09/22/22 18:55	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:49	EPA353.2		HTB
Oil & Grease (HEM)	<5.00	5.00	1.16	mg/L	1	09/27/22 16:40	EPA1664 A		JDA
pH*	**7.68**			pH Units	1	09/15/22 11:10	EPA150.1	H5	VJW
pH Temperature, degrees C	**19.3**			pH Units	1	09/15/22 11:10	EPA150.1	H5	VJW
SAR	**0.90**			No Unit	1	09/27/22 18:22	Calculation		AES
Total Dissolved Solids*	**89.9**	10.0		mg/L	1	09/20/22 17:42	EPA160.1		JDA
Total Suspended Solids*	**3.67**	2.50		mg/L	1	09/19/22 12:35	2540 D		JDA
Sulfate*	**26.4**	1.00	0.124	mg/L	1	09/22/22 18:55	EPA300.0		AES
Total Organic Carbon*	**1.13**	0.500	0.175	mg/L	1	09/22/22 15:23	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.036	mg/L	1	09/27/22 18:22	EPA200.7		AES
Calcium*	**30.2**	0.100	0.024	mg/L	1	09/27/22 18:22	EPA200.7		AES
Hardness as CaCO3	**95.9**	0.662	0.186	mg/L	1	09/27/22 18:22	2340 B		AES
Iron*	<0.050	0.050	0.036	mg/L	1	09/27/22 18:22	EPA200.7		AES
Magnesium*	**5.01**	0.100	0.031	mg/L	1	09/27/22 18:22	EPA200.7		AES
Potassium*	<1.00	1.00	0.065	mg/L	1	09/27/22 18:22	EPA200.7		AES
Silica (Si02)	**7.96**	1.07	0.0683	mg/L	1	09/27/22 18:22	Calculation		AES
Silicon	**3.72**	0.500	0.032	mg/L	1	09/27/22 18:22	EPA200.7		AES
Sodium*	**2.04**	1.00	0.106	mg/L	1	09/27/22 18:22	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0007**	0.0005	0.0002	mg/L	1	09/23/22 10:28	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.00003	mg/L	1	09/23/22 10:28	EPA200.8		AES
Copper*	**0.0010**	0.0005	0.00008	mg/L	1	09/23/22 10:28	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00009	mg/L	1	09/23/22 10:28	EPA200.8		AES
Manganese*	**0.0175**	0.0005	0.00009	mg/L	1	09/23/22 10:28	EPA200.8		AES
Molybdenum*	**0.0011**	0.0005	0.00008	mg/L	1	09/23/22 10:28	EPA200.8		AES
Selenium*	<0.0010	0.0010	0.0006	mg/L	1	09/23/22 10:28	EPA200.8		AES

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Jeremy D Allen, Laboratory Director

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www.GreenAnalytical.com

GCC Energy, LLC	Project:	GCC SW Baseline 2022	
6473 CR 120	Project Name / Number:	GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	09/28/22 13:50

Haygulch Ditch Downgradient

2209172-01 (Surface Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Metals by ICPMS									
Uranium	<0.0005	0.0005	0.0001	mg/L	1	09/23/22 10:28	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0003	mg/L	1	09/23/22 10:28	EPA200.8		AES
Total Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	09/22/22 11:42	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC SW Baseline 2022	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:50

Haygulch Ditch Upgradient

2209172-02 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**209**	10.0	2.27	mg/L	1	09/19/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	1	09/19/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	1	09/19/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**209**	10.0	2.27	mg/L	1	09/19/22 16:00	2320 B		HTB
Cation/Anion Balance	**-4.08**	-100	-100	%	1	09/28/22 13:12	Calculation		JDA
Chloride*	**21.9**	1.00	0.0555	mg/L	1	09/22/22 19:57	EPA300.0		AES
Fluoride*	**0.238**	0.100	0.00971	mg/L	1	09/22/22 19:57	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:50	EPA353.2		HTB
Oil & Grease (HEM)	<5.00	5.00	1.16	mg/L	1	09/27/22 16:40	EPA1664 A		JDA
pH*	**7.81**			pH Units	1	09/15/22 11:10	EPA150.1	H5	VJW
pH Temperature, degrees C	**19.2**			pH Units	1	09/15/22 11:10	EPA150.1	H5	VJW
SAR	**0.33**			No Unit	1	09/27/22 18:29	Calculation		AES
Total Dissolved Solids*	**355**	10.0		mg/L	1	09/20/22 17:44	EPA160.1		JDA
Total Suspended Solids*	**45.4**	2.50		mg/L	1	09/19/22 12:35	2540 D		JDA
Sulfate*	**85.1**	1.00	0.124	mg/L	1	09/22/22 19:57	EPA300.0		AES
Total Organic Carbon*	**1.74**	0.500	0.175	mg/L	1	09/22/22 15:56	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.036	mg/L	1	09/27/22 18:29	EPA200.7		AES
Calcium*	**55.0**	0.100	0.024	mg/L	1	09/27/22 18:29	EPA200.7		AES
Hardness as CaCO3	**273**	0.662	0.186	mg/L	1	09/27/22 18:29	2340 B		AES
Iron*	<0.050	0.050	0.036	mg/L	1	09/27/22 18:29	EPA200.7		AES
Magnesium*	**33.1**	0.100	0.031	mg/L	1	09/27/22 18:29	EPA200.7		AES
Potassium*	**2.18**	1.00	0.065	mg/L	1	09/27/22 18:29	EPA200.7		AES
Silica (Si02)	**10.6**	1.07	0.0683	mg/L	1	09/27/22 18:29	Calculation		AES
Silicon	**4.96**	0.500	0.032	mg/L	1	09/27/22 18:29	EPA200.7		AES
Sodium*	**12.4**	1.00	0.106	mg/L	1	09/27/22 18:29	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0007**	0.0005	0.0002	mg/L	1	09/23/22 10:52	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.00003	mg/L	1	09/23/22 10:52	EPA200.8		AES
Copper*	**0.0007**	0.0005	0.00008	mg/L	1	09/23/22 10:52	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00009	mg/L	1	09/23/22 10:52	EPA200.8		AES
Manganese*	**0.0241**	0.0005	0.00009	mg/L	1	09/23/22 10:52	EPA200.8		AES
Molybdenum*	**0.0012**	0.0005	0.00008	mg/L	1	09/23/22 10:52	EPA200.8		AES
Selenium*	<0.0010	0.0010	0.0006	mg/L	1	09/23/22 10:52	EPA200.8		AES

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC SW Baseline 2022	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:50

Haygulch Ditch Upgradient

2209172-02 (Surface Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Metals by ICPMS									
Uranium	**0.0006**	0.0005	0.0001	mg/L	1	09/23/22 10:52	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0003	mg/L	1	09/23/22 10:52	EPA200.8		AES
Total Mercury by CVAFS									
Mercury	<100	100	24.8	ng/L	1	09/22/22 11:45	EPA245.7		HTB

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Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC SW Baseline 2022	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:50

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222556 - General Prep - Wet Chem										
Blank (B222556-BLK1)				Prepared & Analyzed: 09/19/22						
Total Suspended Solids	ND	2.50	mg/L							
Reference (B222556-SRM1)				Prepared & Analyzed: 09/19/22						
Total Suspended Solids	101	2.50	mg/L	100		101	85-115			
Batch B222566 - General Prep - Wet Chem										
Blank (B222566-BLK1)				Prepared & Analyzed: 09/19/22						
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 (B222566-BS1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	103	10.0	mg/L	100		103	85-115			
LCS Dup (B222566-BSD1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	102	10.0	mg/L	100		102	85-115	0.976	20	
Batch B222573 - General Prep - Wet Chem										
Reference (B222573-SRM1)				Prepared & Analyzed: 09/15/22						
pH	7.00		pH Units	7.00		100	98.57-101.42			
Batch B222576 - Lachat										
Blank (B222576-BLK1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B222576-BS1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	1.07	0.020	mg/L as N	1.00		107	90-110			
LCS Dup (B222576-BSD1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	1.06	0.020	mg/L as N	1.00		106	90-110	1.20	20	
Batch B222579 - General Prep - Wet Chem										
Blank (B222579-BLK1)				Prepared & Analyzed: 09/20/22						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B222579-SRM1)				Prepared & Analyzed: 09/20/22						

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GCC Energy, LLC	Project: GCC SW Baseline 2022	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:50

General Chemistry - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222579 - General Prep - Wet Chem (Continued)										
Reference (B222579-SRM1) (Continued)				Prepared & Analyzed: 09/20/22						
Total Dissolved Solids	425	10.0	mg/L	450		94.4	85-115			
Batch B222592 - Dissolved ICP										
Blank (B222592-BLK1)				Prepared: 09/21/22 Analyzed: 09/27/22						
SAR	0.00		No Unit							
Batch B222606 - IC- Ion Chromatograph										
Blank (B222606-BLK1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B222606-BS1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Chloride	24.9	1.00	mg/L	25.0		99.4	90-110			
Fluoride	2.48	0.100	mg/L	2.50		99.2	90-110			
Sulfate	24.6	1.00	mg/L	25.0		98.3	90-110			
LCS Dup (B222606-BSD1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Chloride	25.0	1.00	mg/L	25.0		100	90-110	0.646	20	
Fluoride	2.50	0.100	mg/L	2.50		99.9	90-110	0.723	20	
Sulfate	24.7	1.00	mg/L	25.0		98.9	90-110	0.690	20	
Batch B222612 - General Prep - Wet Chem										
Blank (B222612-BLK1)				Prepared & Analyzed: 09/22/22						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B222612-BS1)				Prepared & Analyzed: 09/22/22						
Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115			
LCS Dup (B222612-BSD1)				Prepared & Analyzed: 09/22/22						
Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115	0.00	20	
Batch B222626 - General Prep - Wet Chem										
Blank (B222626-BLK1)				Prepared & Analyzed: 09/22/22						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (B222626-BS1)				Prepared & Analyzed: 09/22/22						
Oil & Grease (HEM)	43.6	5.00	mg/L	46.6		93.6	85-115			
LCS Dup (B222626-BSD1)				Prepared & Analyzed: 09/22/22						

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GCC Energy, LLC	Project: GCC SW Baseline 2022	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:50

General Chemistry - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222626 - General Prep - Wet Chem (Continued)										
LCS Dup (B222626-BSD1) (Continued)				Prepared & Analyzed: 09/22/22						
Oil & Grease (HEM)	44.3	5.00	mg/L	46.6		95.1	85-115	1.59	20	

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222592 - Dissolved ICP										
Blank (B222592-BLK1)				Prepared: 09/21/22 Analyzed: 09/27/22						
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 (B222592-BS1)				Prepared: 09/21/22 Analyzed: 09/27/22						
Aluminum	3.99	0.050	mg/L	4.00		99.7	85-115			
Calcium	3.86	0.100	mg/L	4.00		96.5	85-115			
Iron	3.89	0.050	mg/L	4.00		97.3	85-115			
Magnesium	19.9	0.100	mg/L	20.0		99.3	85-115			
Potassium	7.91	1.00	mg/L	8.00		98.8	85-115			
Silicon	4.10	0.500	mg/L	4.00		102	85-115			
Sodium	3.06	1.00	mg/L	3.24		94.5	85-115			
LCS Dup (B222592-BSD1)				Prepared: 09/21/22 Analyzed: 09/27/22						
Aluminum	4.07	0.050	mg/L	4.00		102	85-115	2.09	20	
Calcium	3.95	0.100	mg/L	4.00		98.7	85-115	2.29	20	
Iron	4.02	0.050	mg/L	4.00		100	85-115	3.21	20	
Magnesium	20.2	0.100	mg/L	20.0		101	85-115	1.96	20	
Potassium	8.14	1.00	mg/L	8.00		102	85-115	2.96	20	
Silicon	4.17	0.500	mg/L	4.00		104	85-115	1.75	20	
Sodium	3.12	1.00	mg/L	3.24		96.4	85-115	2.03	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC SW Baseline 2022	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:50

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222617 - Dissolved ICPMS										
Blank (B222617-BLK1)				Prepared: 09/22/22 Analyzed: 09/23/22						
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 (B222617-BS1)				Prepared: 09/22/22 Analyzed: 09/23/22						
Arsenic	0.0505	0.0005	mg/L	0.0500		101	85-115			
Cadmium	0.0508	0.0005	mg/L	0.0500		102	85-115			
Copper	0.0491	0.0005	mg/L	0.0500		98.2	85-115			
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115			
Manganese	0.0519	0.0005	mg/L	0.0500		104	85-115			
Molybdenum	0.0508	0.0005	mg/L	0.0500		102	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.7	85-115			
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0510	0.0020	mg/L	0.0500		102	85-115			
LCS Dup (B222617-BSD1)				Prepared: 09/22/22 Analyzed: 09/23/22						
Arsenic	0.0515	0.0005	mg/L	0.0500		103	85-115	1.92	20	
Cadmium	0.0507	0.0005	mg/L	0.0500		101	85-115	0.332	20	
Copper	0.0488	0.0005	mg/L	0.0500		97.6	85-115	0.640	20	
Lead	0.0509	0.0005	mg/L	0.0500		102	85-115	0.671	20	
Manganese	0.0516	0.0005	mg/L	0.0500		103	85-115	0.434	20	
Molybdenum	0.0514	0.0005	mg/L	0.0500		103	85-115	1.02	20	
Selenium	0.257	0.0010	mg/L	0.250		103	85-115	3.08	20	
Uranium	0.0534	0.0005	mg/L	0.0500		107	85-115	1.12	20	
Zinc	0.0508	0.0020	mg/L	0.0500		102	85-115	0.382	20	
Batch B222618 - Dissolved ICPMS										
Blank (B222618-BLK1)				Prepared: 09/22/22 Analyzed: 09/23/22						
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							

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GCC Energy, LLC	Project: GCC SW Baseline 2022	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:50

Dissolved Metals by ICPMS - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222618 - Dissolved ICPMS (Continued)										
Blank (B222618-BLK1) (Continued)				Prepared: 09/22/22 Analyzed: 09/23/22						
Selenium	ND	0.0010	mg/L							
Uranium	ND	0.0005	mg/L							
Zinc	ND	0.0020	mg/L							
LCS (B222618-BS1)				Prepared: 09/22/22 Analyzed: 09/23/22						
Arsenic	0.0516	0.0005	mg/L	0.0500		103	85-115			
Cadmium	0.0507	0.0005	mg/L	0.0500		101	85-115			
Copper	0.0491	0.0005	mg/L	0.0500		98.3	85-115			
Lead	0.0513	0.0005	mg/L	0.0500		103	85-115			
Manganese	0.0529	0.0005	mg/L	0.0500		106	85-115			
Molybdenum	0.0517	0.0005	mg/L	0.0500		103	85-115			
Selenium	0.257	0.0010	mg/L	0.250		103	85-115			
Uranium	0.0546	0.0005	mg/L	0.0500		109	85-115			
Zinc	0.0509	0.0020	mg/L	0.0500		102	85-115			
LCS Dup (B222618-BSD1)				Prepared: 09/22/22 Analyzed: 09/23/22						
Arsenic	0.0517	0.0005	mg/L	0.0500		103	85-115	0.130	20	
Cadmium	0.0508	0.0005	mg/L	0.0500		102	85-115	0.0483	20	
Copper	0.0482	0.0005	mg/L	0.0500		96.4	85-115	1.93	20	
Lead	0.0510	0.0005	mg/L	0.0500		102	85-115	0.525	20	
Manganese	0.0511	0.0005	mg/L	0.0500		102	85-115	3.37	20	
Molybdenum	0.0516	0.0005	mg/L	0.0500		103	85-115	0.306	20	
Selenium	0.257	0.0010	mg/L	0.250		103	85-115	0.261	20	
Uranium	0.0540	0.0005	mg/L	0.0500		108	85-115	1.00	20	
Zinc	0.0494	0.0020	mg/L	0.0500		98.7	85-115	3.05	20	

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Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC SW Baseline 2022	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:50

Total Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222607 - EPA 245.7										
Blank (B222607-BLK1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Mercury	ND	100	ng/L							
LCS (B222607-BS1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Mercury	1800	100	ng/L	2000		90.0	76-113			
LCS Dup (B222607-BSD1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Mercury	1730	100	ng/L	2000		86.3	76-113	4.20	20	

Notes and Definitions

H5	Sample was analyzed within 2-hours of its 24 or 48 hour hold-time limit.
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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Jeremy D Allen, Laboratory Director

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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 LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81326
Phone #: 970 385 4529
Contact Person: TOM BIRD TBIRD@HAYGULCHSERVICES.COM
Email Report to: LANDON BECK
Project Name(optional): ~~LANDI~~
LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MARCUS BENNETT / MICHAEL MCFARLAND

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

ANALYSIS REQUEST: GCC E Surface water G.W. BASELINE

For Lab Use	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 E Surface water G.W. BASELINE
2209-172 -01	Haygulch Ditch Downgradient	9/13/22	10:20		X						2	~~3~~	2	4			X
-02	Haygulch Ditch Upgradient	9/13/22	11:06		X												X

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Relinquished by:	Date:	Time:	Received by:
Marcus Bennett	9/13/22	5:00	[illegible]

ADDITIONAL REMARKS:
Laser #2

Report to State? (Circle) Yes No

Temperature at receipt: 5.9°C
CHECKED BY: VJW
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.

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27 September 2022

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

RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 09/12/22 15:15. 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: T104704514-22-15

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: T104704398-22-15

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GCC Energy, LLC	Project:	GCC GW Baseline	
6473 CR 120	Project Name / Number:	GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	09/27/22 10:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1-A	2209134-01	Water	09/12/22 10:50	09/12/22 15:15	
MW-1-C	2209134-02	Water	09/12/22 11:32	09/12/22 15:15	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:59

MW-1-A

2209134-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**410**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**410**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Cation/Anion Balance	**-7.05**	-100	-100	%	1	09/27/22 08:38	Calculation		JDA
Chloride*	**2.59**	2.00	0.111	mg/L	2	09/22/22 12:17	EPA300.0		AES
Fluoride*	**0.254**	0.200	0.0194	mg/L	2	09/22/22 12:17	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:26	EPA353.2		HTB
pH*	**7.36**			pH Units	1	09/14/22 09:00	EPA150.1		LLG
pH Temperature, degrees C	**19.6**			pH Units	1	09/14/22 09:00	EPA150.1		LLG
Total Dissolved Solids*	**1150**	10.0		mg/L	1	09/19/22 12:11	EPA160.1		JDA
Sulfate*	**532**	20.0	2.48	mg/L	20	09/22/22 12:38	EPA300.0		AES
Total Organic Carbon*	**1.39**	0.500	0.175	mg/L	1	09/22/22 13:58	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/21/22 14:31	EPA200.7		AES
Calcium*	**27.4**	0.200	0.047	mg/L	2	09/21/22 14:31	EPA200.7		AES
Hardness as CaCO3	**146**	1.32	0.371	mg/L	2	09/21/22 14:31	2340 B		AES
Iron*	**0.451**	0.100	0.071	mg/L	2	09/21/22 14:31	EPA200.7		AES
Magnesium*	**18.7**	0.200	0.062	mg/L	2	09/21/22 14:31	EPA200.7		AES
Potassium*	**2.12**	2.00	0.130	mg/L	2	09/21/22 14:31	EPA200.7		AES
Silica (Si02)	**10.4**	2.14	0.137	mg/L	2	09/21/22 14:31	Calculation		AES
Silicon	**4.85**	1.00	0.064	mg/L	2	09/21/22 14:31	EPA200.7		AES
Sodium*	**318**	2.00	0.211	mg/L	2	09/21/22 14:31	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0005	mg/L	2	09/23/22 10:22	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00006	mg/L	2	09/23/22 10:22	EPA200.8		AES
Copper*	**0.0096**	0.0010	0.0002	mg/L	2	09/23/22 10:22	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	09/23/22 10:22	EPA200.8		AES
Manganese*	**0.0359**	0.0010	0.0002	mg/L	2	09/23/22 10:22	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0002	mg/L	2	09/23/22 10:22	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0012	mg/L	2	09/23/22 10:22	EPA200.8		AES
Uranium	<0.0010	0.0010	0.0002	mg/L	2	09/23/22 10:22	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0005	mg/L	2	09/23/22 10:22	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:59

MW-1-A

2209134-01 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/16/22 12:04	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:59

MW-1-C

2209134-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**570**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**570**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Cation/Anion Balance	**-8.51**	-100	-100	%	1	09/27/22 08:38	Calculation		JDA
Chloride*	**5.59**	2.00	0.111	mg/L	2	09/22/22 12:59	EPA300.0		AES
Fluoride*	**1.24**	0.200	0.0194	mg/L	2	09/22/22 12:59	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:27	EPA353.2		HTB
pH*	**7.40**			pH Units	1	09/14/22 09:00	EPA150.1		LLG
pH Temperature, degrees C	**18.9**			pH Units	1	09/14/22 09:00	EPA150.1		LLG
Total Dissolved Solids*	**1640**	10.0		mg/L	1	09/19/22 12:13	EPA160.1		JDA
Sulfate*	**821**	20.0	2.48	mg/L	20	09/22/22 13:20	EPA300.0		AES
Total Organic Carbon*	**1.74**	0.500	0.175	mg/L	1	09/22/22 14:14	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.180	mg/L	5	09/21/22 14:36	EPA200.7		AES
Calcium*	**113**	0.500	0.118	mg/L	5	09/21/22 14:35	EPA200.7		AES
Hardness as CaCO3	**638**	3.31	0.928	mg/L	5	09/21/22 14:36	2340 B		AES
Iron*	**0.679**	0.250	0.178	mg/L	5	09/21/22 14:36	EPA200.7		AES
Magnesium*	**86.6**	0.500	0.154	mg/L	5	09/21/22 14:36	EPA200.7		AES
Potassium*	<5.00	5.00	0.325	mg/L	5	09/21/22 14:35	EPA200.7		AES
Silica (Si02)	**11.7**	5.35	0.341	mg/L	5	09/21/22 14:36	Calculation		AES
Silicon	**5.47**	2.50	0.160	mg/L	5	09/21/22 14:36	EPA200.7		AES
Sodium*	**261**	5.00	0.528	mg/L	5	09/21/22 14:35	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0028**	0.0025	0.0012	mg/L	5	09/23/22 10:23	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	09/23/22 10:23	EPA200.8		AES
Copper*	**0.0104**	0.0025	0.0004	mg/L	5	09/23/22 10:23	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 10:23	EPA200.8		AES
Manganese*	**0.0304**	0.0025	0.0005	mg/L	5	09/23/22 10:23	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 10:23	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0030	mg/L	5	09/23/22 10:23	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	09/23/22 10:23	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0014	mg/L	5	09/23/22 10:23	EPA200.8		AES

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www.GreenAnalytical.com

GCC Energy, LLC	Project:	GCC GW Baseline	
6473 CR 120	Project Name / Number:	GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	09/27/22 10:59

MW-1-C

2209134-02 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/16/22 12:06	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:59

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222554 - General Prep - Wet Chem										
Blank (B222554-BLK1)				Prepared & Analyzed: 09/19/22						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B222554-SRM1)				Prepared & Analyzed: 09/19/22						
Total Dissolved Solids	475	10.0	mg/L	450		106	85-115			
Batch B222566 - General Prep - Wet Chem										
Blank (B222566-BLK1)				Prepared & Analyzed: 09/19/22						
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 (B222566-BS1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	103	10.0	mg/L	100		103	85-115			
LCS Dup (B222566-BSD1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	102	10.0	mg/L	100		102	85-115	0.976	20	
Batch B222572 - General Prep - Wet Chem										
Reference (B222572-SRM1)				Prepared & Analyzed: 09/14/22						
pH	7.05		pH Units	7.00		101	98.57-101.42			
Batch B222576 - Lachat										
Blank (B222576-BLK1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B222576-BS1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	1.07	0.020	mg/L as N	1.00		107	90-110			
LCS Dup (B222576-BSD1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	1.06	0.020	mg/L as N	1.00		106	90-110	1.20	20	
Batch B222606 - IC- Ion Chromatograph										
Blank (B222606-BLK1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:59

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222606 - IC- Ion Chromatograph (Continued)										
LCS (B222606-BS1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Chloride	24.9	1.00	mg/L	25.0		99.4	90-110			
Fluoride	2.48	0.100	mg/L	2.50		99.2	90-110			
Sulfate	24.6	1.00	mg/L	25.0		98.3	90-110			
LCS Dup (B222606-BSD1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Chloride	25.0	1.00	mg/L	25.0		100	90-110	0.646	20	
Fluoride	2.50	0.100	mg/L	2.50		99.9	90-110	0.723	20	
Sulfate	24.7	1.00	mg/L	25.0		98.9	90-110	0.690	20	
Batch B222612 - General Prep - Wet Chem										
Blank (B222612-BLK1)				Prepared & Analyzed: 09/22/22						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B222612-BS1)				Prepared & Analyzed: 09/22/22						
Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115			
LCS Dup (B222612-BSD1)				Prepared & Analyzed: 09/22/22						
Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115	0.00	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:59

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222591 - Dissolved ICP										
Blank (B222591-BLK1)				Prepared & Analyzed: 09/21/22						
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 (B222591-BS1)				Prepared & Analyzed: 09/21/22						
Aluminum	3.89	0.050	mg/L	4.00		97.3	85-115			
Calcium	3.73	0.100	mg/L	4.00		93.3	85-115			
Iron	3.80	0.050	mg/L	4.00		95.0	85-115			
Magnesium	19.5	0.100	mg/L	20.0		97.4	85-115			
Potassium	8.14	1.00	mg/L	8.00		102	85-115			
Silicon	3.99	0.500	mg/L	4.00		99.6	85-115			
Sodium	3.21	1.00	mg/L	3.24		99.2	85-115			
LCS Dup (B222591-BSD1)				Prepared & Analyzed: 09/21/22						
Aluminum	3.94	0.050	mg/L	4.00		98.5	85-115	1.21	20	
Calcium	3.82	0.100	mg/L	4.00		95.5	85-115	2.38	20	
Iron	3.89	0.050	mg/L	4.00		97.3	85-115	2.49	20	
Magnesium	19.7	0.100	mg/L	20.0		98.6	85-115	1.22	20	
Potassium	8.11	1.00	mg/L	8.00		101	85-115	0.407	20	
Silicon	4.04	0.500	mg/L	4.00		101	85-115	1.40	20	
Sodium	3.27	1.00	mg/L	3.24		101	85-115	1.79	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:59

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222617 - Dissolved ICPMS										
Blank (B222617-BLK1)				Prepared: 09/22/22 Analyzed: 09/23/22						
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 (B222617-BS1)				Prepared: 09/22/22 Analyzed: 09/23/22						
Arsenic	0.0505	0.0005	mg/L	0.0500		101	85-115			
Cadmium	0.0508	0.0005	mg/L	0.0500		102	85-115			
Copper	0.0491	0.0005	mg/L	0.0500		98.2	85-115			
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115			
Manganese	0.0519	0.0005	mg/L	0.0500		104	85-115			
Molybdenum	0.0508	0.0005	mg/L	0.0500		102	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.7	85-115			
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0510	0.0020	mg/L	0.0500		102	85-115			
LCS Dup (B222617-BSD1)				Prepared: 09/22/22 Analyzed: 09/23/22						
Arsenic	0.0515	0.0005	mg/L	0.0500		103	85-115	1.92	20	
Cadmium	0.0507	0.0005	mg/L	0.0500		101	85-115	0.332	20	
Copper	0.0488	0.0005	mg/L	0.0500		97.6	85-115	0.640	20	
Lead	0.0509	0.0005	mg/L	0.0500		102	85-115	0.671	20	
Manganese	0.0516	0.0005	mg/L	0.0500		103	85-115	0.434	20	
Molybdenum	0.0514	0.0005	mg/L	0.0500		103	85-115	1.02	20	
Selenium	0.257	0.0010	mg/L	0.250		103	85-115	3.08	20	
Uranium	0.0534	0.0005	mg/L	0.0500		107	85-115	1.12	20	
Zinc	0.0508	0.0020	mg/L	0.0500		102	85-115	0.382	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:59

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222526 - EPA 245.7										
Blank (B222526-BLK1)				Prepared: 09/15/22 Analyzed: 09/16/22						
Mercury	ND	100	ng/L							
LCS (B222526-BS1)				Prepared: 09/15/22 Analyzed: 09/16/22						
Mercury	1720	100	ng/L	2000		86.2	76-113			
LCS Dup (B222526-BSD1)				Prepared: 09/15/22 Analyzed: 09/16/22						
Mercury	1760	100	ng/L	2000		88.0	76-113	2.01	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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC ENERGY LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81326
Phone #: 970 385 4528
Contact Person: TOM BIRD TBIRD@HAYGULCHSERVICES.COM
Email Report to: LANDON BECK
Project Name(optional): ~~LANDI~~
LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MARCUS BENNETT / MICHAEL MCFARLAND

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

For Lab Use	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:	GCCE G.W. BASELINE
2209-134	1 per LB 9/13/22 LG																
-01	MW-8-a	9/12/22	10:50	X							1	2		4			X
-02	MW-8-c	9/12/22	11:32	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 received 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:	Time:	Received by:
[signature]	9/12/22	5:15	[signature]
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

LG

Temperature at receipt: 10.5°C CHECKED BY [signature] 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.

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21 September 2022

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

RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 09/06/22 15:00. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

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

Sincerely,

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: T104704514-22-15

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: T104704398-22-15

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/21/22 15:59

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-3-MI	2209063-01	Water	09/06/22 10:15	09/06/22 15:00	
MW-3-A	2209063-02	Water	09/06/22 11:07	09/06/22 15:00	
MW-3-C	2209063-03	Water	09/06/22 12:05	09/06/22 15:00	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/21/22 15:59

MW-3-MI

2209063-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**480**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	**300**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**780**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Cation/Anion Balance	**12.3**	-100	-100	%	1	09/21/22 11:17	Calculation		JDA
Chloride*	**11.2**	2.00	0.111	mg/L	2	09/15/22 20:44	EPA300.0		AES
Fluoride*	**1.11**	0.200	0.0194	mg/L	2	09/15/22 20:44	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/12/22 10:12	EPA353.2		HTB
pH*	**8.76**			pH Units	1	09/07/22 09:30	EPA150.1		QEB
pH Temperature, degrees C	**19.7**			pH Units	1	09/07/22 09:30	EPA150.1		QEB
Total Dissolved Solids*	**1080**	10.0		mg/L	1	09/09/22 12:51	EPA160.1		AES
Sulfate*	**240**	2.00	0.248	mg/L	2	09/15/22 20:44	EPA300.0		AES
Total Organic Carbon*	**5.06**	0.500	0.175	mg/L	1	09/12/22 17:30	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/12/22 14:25	EPA200.7		AES
Calcium*	**155**	0.200	0.047	mg/L	2	09/12/22 14:25	EPA200.7		AES
Hardness as CaCO3	**983**	1.32	0.371	mg/L	2	09/12/22 14:25	2340 B		AES
Iron*	<0.100	0.100	0.071	mg/L	2	09/12/22 14:25	EPA200.7		AES
Magnesium*	**145**	0.200	0.062	mg/L	2	09/12/22 14:25	EPA200.7		AES
Potassium*	**4.64**	2.00	0.130	mg/L	2	09/12/22 14:25	EPA200.7		AES
Silica (Si02)	**17.7**	2.14	0.137	mg/L	2	09/12/22 14:25	Calculation		AES
Silicon	**8.28**	1.00	0.064	mg/L	2	09/12/22 14:25	EPA200.7		AES
Sodium*	**162**	2.00	0.211	mg/L	2	09/12/22 14:25	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0084**	0.0010	0.0005	mg/L	2	09/12/22 12:56	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00006	mg/L	2	09/12/22 12:56	EPA200.8		AES
Copper*	**0.0170**	0.0010	0.0002	mg/L	2	09/12/22 12:56	EPA200.8		AES
Lead*	<0.0020	0.0020	0.0003	mg/L	4	09/12/22 14:21	EPA200.8		AES
Manganese*	**0.0047**	0.0010	0.0002	mg/L	2	09/12/22 12:56	EPA200.8		AES
Molybdenum*	**0.0150**	0.0010	0.0002	mg/L	2	09/12/22 12:56	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0012	mg/L	2	09/12/22 12:56	EPA200.8		AES
Uranium	**0.0034**	0.0010	0.0002	mg/L	2	09/12/22 12:56	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0005	mg/L	2	09/12/22 12:56	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 Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/21/22 15:59

MW-3-MI

2209063-01 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/12/22 15:46	EPA245.7		HTB

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/21/22 15:59

MW-3-A

2209063-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**500**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**500**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Cation/Anion Balance	**-2.63**	-100	-100	%	1	09/21/22 11:17	Calculation		JDA
Chloride*	**15.9**	2.00	0.111	mg/L	2	09/15/22 21:26	EPA300.0		AES
Fluoride*	**0.362**	0.200	0.0194	mg/L	2	09/15/22 21:26	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/12/22 10:18	EPA353.2		HTB
pH*	**8.09**			pH Units	1	09/07/22 09:30	EPA150.1		QEB
pH Temperature, degrees C	**19.2**			pH Units	1	09/07/22 09:30	EPA150.1		QEB
Total Dissolved Solids*	**1320**	10.0		mg/L	1	09/09/22 12:53	EPA160.1		AES
Sulfate*	**557**	20.0	2.48	mg/L	20	09/15/22 21:47	EPA300.0		AES
Total Organic Carbon*	**3.02**	0.500	0.175	mg/L	1	09/12/22 17:47	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/12/22 14:29	EPA200.7		AES
Calcium*	**2.59**	0.200	0.047	mg/L	2	09/12/22 14:29	EPA200.7		AES
Hardness as CaCO3	**9.33**	1.32	0.371	mg/L	2	09/12/22 14:29	2340 B		AES
Iron*	<0.100	0.100	0.071	mg/L	2	09/12/22 14:29	EPA200.7		AES
Magnesium*	**0.694**	0.200	0.062	mg/L	2	09/12/22 14:29	EPA200.7		AES
Potassium*	<2.00	2.00	0.130	mg/L	2	09/12/22 14:29	EPA200.7		AES
Silica (Si02)	**11.1**	2.14	0.137	mg/L	2	09/12/22 14:29	Calculation		AES
Silicon	**5.19**	1.00	0.064	mg/L	2	09/12/22 14:29	EPA200.7		AES
Sodium*	**476**	2.00	0.211	mg/L	2	09/12/22 14:29	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0005	mg/L	2	09/12/22 12:57	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00006	mg/L	2	09/12/22 12:57	EPA200.8		AES
Copper*	**0.0189**	0.0010	0.0002	mg/L	2	09/12/22 12:57	EPA200.8		AES
Lead*	<0.0020	0.0020	0.0003	mg/L	4	09/12/22 14:23	EPA200.8		AES
Manganese*	**0.0097**	0.0010	0.0002	mg/L	2	09/12/22 12:57	EPA200.8		AES
Molybdenum*	**0.0017**	0.0010	0.0002	mg/L	2	09/12/22 12:57	EPA200.8		AES
Selenium*	**0.0106**	0.0020	0.0012	mg/L	2	09/12/22 12:57	EPA200.8		AES
Uranium	<0.0010	0.0010	0.0002	mg/L	2	09/12/22 12:57	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0005	mg/L	2	09/12/22 12:57	EPA200.8		AES

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:	GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	09/21/22 15:59

MW-3-A

2209063-02 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/12/22 16:10	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/21/22 15:59

MW-3-C

2209063-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**1990**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	**120**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**2110**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Cation/Anion Balance	**-0.0400**	-100	-100	%	1	09/21/22 11:17	Calculation		JDA
Chloride*	**613**	5.00	0.278	mg/L	5	09/15/22 22:08	EPA300.0		AES
Fluoride*	**3.51**	0.500	0.0486	mg/L	5	09/15/22 22:08	EPA300.0		AES
Nitrate/Nitrite as N*	<0.100	0.100	0.059	mg/L as N	5	09/12/22 10:19	EPA353.2		HTB
pH*	**8.18**			pH Units	1	09/07/22 09:30	EPA150.1		QEB
pH Temperature, degrees C	**19.1**			pH Units	1	09/07/22 09:30	EPA150.1		QEB
Total Dissolved Solids*	**3280**	20.0		mg/L	2	09/09/22 12:55	EPA160.1		AES
Sulfate*	<5.00	5.00	0.620	mg/L	5	09/15/22 22:08	EPA300.0		AES
Total Organic Carbon*	**16.1**	0.500	0.175	mg/L	1	09/12/22 18:09	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.180	mg/L	5	09/12/22 14:33	EPA200.7		AES
Calcium*	**4.49**	0.500	0.118	mg/L	5	09/12/22 14:33	EPA200.7		AES
Hardness as CaCO3	**20.4**	3.31	0.928	mg/L	5	09/12/22 14:33	2340 B		AES
Iron*	**0.427**	0.250	0.178	mg/L	5	09/12/22 14:33	EPA200.7		AES
Magnesium*	**2.23**	0.500	0.154	mg/L	5	09/12/22 14:33	EPA200.7		AES
Potassium*	<5.00	5.00	0.325	mg/L	5	09/12/22 14:33	EPA200.7		AES
Silica (Si02)	**8.75**	5.35	0.341	mg/L	5	09/12/22 14:33	Calculation		AES
Silicon	**4.09**	2.50	0.160	mg/L	5	09/12/22 14:33	EPA200.7		AES
Sodium*	**1360**	5.00	0.528	mg/L	5	09/12/22 14:33	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0151**	0.0025	0.0012	mg/L	5	09/12/22 12:59	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	09/12/22 12:59	EPA200.8		AES
Copper*	**0.0555**	0.0025	0.0004	mg/L	5	09/12/22 12:59	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0009	mg/L	10	09/12/22 14:24	EPA200.8		AES
Manganese*	**0.0025**	0.0025	0.0005	mg/L	5	09/12/22 12:59	EPA200.8		AES
Molybdenum*	**0.0058**	0.0025	0.0004	mg/L	5	09/12/22 12:59	EPA200.8		AES
Selenium*	**0.0247**	0.0050	0.0030	mg/L	5	09/12/22 12:59	EPA200.8		AES
Uranium	**0.0025**	0.0025	0.0005	mg/L	5	09/12/22 12:59	EPA200.8		AES
Zinc*	**0.0385**	0.0100	0.0014	mg/L	5	09/12/22 12:59	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 Baseline	
6473 CR 120	Project Name / Number:	GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	09/21/22 15:59

MW-3-C

2209063-03 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<500	500	124	ng/L	5	09/12/22 16:13	EPA245.7		HTB

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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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/21/22 15:59

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222449 - General Prep - Wet Chem										
Reference (B222449-SRM1)				Prepared & Analyzed: 09/07/22						
pH	6.97		pH Units	7.00		99.6	98.57-101.42			
Batch B222469 - General Prep - Wet Chem										
Blank (B222469-BLK1)				Prepared & Analyzed: 09/09/22						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B222469-SRM1)				Prepared & Analyzed: 09/09/22						
Total Dissolved Solids	445	10.0	mg/L	450		98.9	85-115			
Batch B222477 - Lachat										
Blank (B222477-BLK1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B222477-BS1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110			
LCS Dup (B222477-BSD1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110	0.0588	20	
Batch B222483 - General Prep - Wet Chem										
Blank (B222483-BLK1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B222483-BS1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	9.97	0.500	mg/L	10.0		99.7	85-115			
LCS Dup (B222483-BSD1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	9.97	0.500	mg/L	10.0		99.7	85-115	0.0100	20	
Batch B222490 - IC- Ion Chromatograph										
Blank (B222490-BLK1)				Prepared: 09/12/22 Analyzed: 09/15/22						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B222490-BS1)				Prepared: 09/12/22 Analyzed: 09/15/22						
Chloride	24.8	1.00	mg/L	25.0		99.2	90-110			

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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/21/22 15:59

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222490 - IC- Ion Chromatograph (Continued)										
LCS (B222490-BS1) (Continued)				Prepared: 09/12/22 Analyzed: 09/15/22						
Fluoride	2.44	0.100	mg/L	2.50		97.7	90-110			
Sulfate	24.3	1.00	mg/L	25.0		97.1	90-110			
LCS Dup (B222490-BSD1)				Prepared: 09/12/22 Analyzed: 09/15/22						
Chloride	24.8	1.00	mg/L	25.0		99.1	90-110	0.186	20	
Fluoride	2.44	0.100	mg/L	2.50		97.6	90-110	0.0410	20	
Sulfate	24.3	1.00	mg/L	25.0		97.1	90-110	0.0165	20	
Batch B222565 - General Prep - Wet Chem										
Blank (B222565-BLK1)				Prepared & Analyzed: 09/19/22						
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 (B222565-BS1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115			
LCS Dup (B222565-BSD1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	100	10.0	mg/L	100		100	85-115	2.02	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/21/22 15:59

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222487 - Dissolved ICP										
Blank (B222487-BLK1)				Prepared & Analyzed: 09/12/22						
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 (B222487-BS1)				Prepared & Analyzed: 09/12/22						
Aluminum	4.04	0.050	mg/L	4.00		101	85-115			
Calcium	4.05	0.100	mg/L	4.00		101	85-115			
Iron	4.09	0.050	mg/L	4.00		102	85-115			
Magnesium	20.6	0.100	mg/L	20.0		103	85-115			
Potassium	8.10	1.00	mg/L	8.00		101	85-115			
Silicon	4.15	0.500	mg/L	4.00		104	85-115			
Sodium	3.62	1.00	mg/L	3.24		112	85-115			
LCS Dup (B222487-BSD1)				Prepared & Analyzed: 09/12/22						
Aluminum	3.99	0.050	mg/L	4.00		99.9	85-115	1.10	20	
Calcium	4.03	0.100	mg/L	4.00		101	85-115	0.454	20	
Iron	4.09	0.050	mg/L	4.00		102	85-115	0.132	20	
Magnesium	20.5	0.100	mg/L	20.0		102	85-115	0.842	20	
Potassium	8.21	1.00	mg/L	8.00		103	85-115	1.29	20	
Silicon	4.12	0.500	mg/L	4.00		103	85-115	0.840	20	
Sodium	3.59	1.00	mg/L	3.24		111	85-115	0.755	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/21/22 15:59

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222481 - Dissolved ICPMS										
Blank (B222481-BLK1)				Prepared & Analyzed: 09/12/22						
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 (B222481-BS1)				Prepared & Analyzed: 09/12/22						
Arsenic	0.0516	0.0005	mg/L	0.0500		103	85-115			
Cadmium	0.0505	0.0005	mg/L	0.0500		101	85-115			
Copper	0.0483	0.0005	mg/L	0.0500		96.7	85-115			
Lead	0.0489	0.0005	mg/L	0.0500		97.7	85-115			
Manganese	0.0529	0.0005	mg/L	0.0500		106	85-115			
Molybdenum	0.0507	0.0005	mg/L	0.0500		101	85-115			
Selenium	0.258	0.0010	mg/L	0.250		103	85-115			
Uranium	0.0531	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0508	0.0020	mg/L	0.0500		102	85-115			
LCS Dup (B222481-BSD1)				Prepared & Analyzed: 09/12/22						
Arsenic	0.0508	0.0005	mg/L	0.0500		102	85-115	1.46	20	
Cadmium	0.0502	0.0005	mg/L	0.0500		100	85-115	0.580	20	
Copper	0.0478	0.0005	mg/L	0.0500		95.5	85-115	1.20	20	
Lead	0.0482	0.0005	mg/L	0.0500		96.4	85-115	1.40	20	
Manganese	0.0516	0.0005	mg/L	0.0500		103	85-115	2.42	20	
Molybdenum	0.0502	0.0005	mg/L	0.0500		100	85-115	1.05	20	
Selenium	0.255	0.0010	mg/L	0.250		102	85-115	0.837	20	
Uranium	0.0530	0.0005	mg/L	0.0500		106	85-115	0.219	20	
Zinc	0.0506	0.0020	mg/L	0.0500		101	85-115	0.433	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/21/22 15:59

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222462 - EPA 245.7										
Blank (B222462-BLK1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Mercury	ND	100	ng/L							
LCS (B222462-BS1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Mercury	1630	100	ng/L	2000		81.4	76-113			
LCS Dup (B222462-BSD1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Mercury	1620	100	ng/L	2000		81.0	76-113	0.498	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

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Jeremy D Allen, Laboratory Director

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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 LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81326
Phone #: 970 385 4528
Contact Person: TOM BIRD TBIRD@HAYGULCHSERVICES.COM
Email Report to: LANDON BECK
Project Name(optional): ~~LANDON~~
LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MARCUS BENNETT / MICHAEL MCFARLAND

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

ANALYSIS REQUEST

For Lab Use	Sample Name or Location	Collected Date	Collected Time	Matrix (check one): GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	# of containers: No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCCE G.W. BASELINE
2209-063 -01	MW 3 M1	9/6/22	10:15	Y							1	2		4			X
-02	MW 3 A	9/6/22	11:07	Y							1	2		4			X
-03	MW 3 C	9/6/22	12:05	Y							1	2		4			X

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Relinquished by:	Date: 9/6/22 Time: 3:00	Received by: NQ Wells
Relinquished by:	Date: Time:	Received by:
Relinquished by:	Date: Time:	Received by:
Relinquished by:	Date: Time:	Received by:

ADDITIONAL REMARKS: Laser #2

Report to State? (Circle) Yes No

Temperature at receipt: 28.0 °C | CHECKED BY: VJW | 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.

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Durango, CO 81303
970.247.4220 Phone
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19 September 2022

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

RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 09/01/22 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,

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: T104704514-22-15

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: T104704398-22-15

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-4-MI	2209034-01	Water	09/01/22 10:52	09/01/22 15:45	
MW-4-A	2209034-02	Water	09/01/22 11:49	09/01/22 15:45	
MW-4-C	2209034-03	Water	09/01/22 12:44	09/01/22 15:45	

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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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

MW-4-MI

2209034-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**1040**	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	**140**	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**1180**	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Cation/Anion Balance	**-10.6**	-100	-100	%	1	09/19/22 12:51	Calculation		JDA
Chloride*	**4.29**	2.00	0.111	mg/L	2	09/15/22 17:36	EPA300.0		AES
Fluoride*	**5.42**	0.200	0.0194	mg/L	2	09/15/22 17:36	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/12/22 09:55	EPA353.2		HTB
pH*	**8.68**			pH Units	1	09/02/22 15:00	EPA150.1		QEB
pH Temperature, degrees C	**18.4**			pH Units	1	09/02/22 15:00	EPA150.1		QEB
Total Dissolved Solids*	**1070**	10.0		mg/L	1	09/07/22 18:04	EPA160.1		AES
Sulfate*	**12.7**	2.00	0.248	mg/L	2	09/15/22 17:36	EPA300.0		AES
Total Organic Carbon*	**4.73**	0.500	0.175	mg/L	1	09/12/22 14:20	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/12/22 14:12	EPA200.7		AES
Calcium*	**1.13**	0.200	0.047	mg/L	2	09/12/22 14:12	EPA200.7		AES
Hardness as CaCO3	**4.59**	1.32	0.371	mg/L	2	09/12/22 14:12	2340 B		AES
Iron*	<0.100	0.100	0.071	mg/L	2	09/12/22 14:12	EPA200.7		AES
Magnesium*	**0.431**	0.200	0.062	mg/L	2	09/12/22 14:12	EPA200.7		AES
Potassium*	<2.00	2.00	0.130	mg/L	2	09/12/22 14:12	EPA200.7		AES
Silica (Si02)	**8.76**	2.14	0.137	mg/L	2	09/12/22 14:12	Calculation		AES
Silicon	**4.09**	1.00	0.064	mg/L	2	09/12/22 14:12	EPA200.7		AES
Sodium*	**448**	2.00	0.211	mg/L	2	09/12/22 14:12	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0094**	0.0010	0.0005	mg/L	2	09/12/22 12:48	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00006	mg/L	2	09/12/22 12:48	EPA200.8		AES
Copper*	**0.0177**	0.0010	0.0002	mg/L	2	09/12/22 12:48	EPA200.8		AES
Lead*	<0.0020	0.0020	0.0003	mg/L	4	09/12/22 14:17	EPA200.8		AES
Manganese*	**0.0078**	0.0010	0.0002	mg/L	2	09/12/22 12:48	EPA200.8		AES
Molybdenum*	**0.0064**	0.0010	0.0002	mg/L	2	09/12/22 12:48	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0012	mg/L	2	09/12/22 12:48	EPA200.8		AES
Uranium	**0.0084**	0.0010	0.0002	mg/L	2	09/12/22 12:48	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0005	mg/L	2	09/12/22 12:48	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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

MW-4-MI

2209034-01 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/12/22 15:33	EPA245.7		HTB

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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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

MW-4-A

2209034-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**590**	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**590**	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Cation/Anion Balance	**-2.83**	-100	-100	%	1	09/19/22 12:51	Calculation		JDA
Chloride*	**9.89**	2.00	0.111	mg/L	2	09/15/22 18:18	EPA300.0		AES
Fluoride*	<0.200	0.200	0.0194	mg/L	2	09/15/22 18:18	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/12/22 09:59	EPA353.2		HTB
pH*	**8.50**			pH Units	1	09/02/22 15:00	EPA150.1		QEB
pH Temperature, degrees C	**18.3**			pH Units	1	09/02/22 15:00	EPA150.1		QEB
Total Dissolved Solids*	**1480**	10.0		mg/L	1	09/07/22 18:06	EPA160.1		AES
Sulfate*	**580**	20.0	2.48	mg/L	20	09/15/22 18:39	EPA300.0		AES
Total Organic Carbon*	**3.40**	0.500	0.175	mg/L	1	09/12/22 14:37	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/12/22 14:16	EPA200.7		AES
Calcium*	**1.95**	0.200	0.047	mg/L	2	09/12/22 14:16	EPA200.7		AES
Hardness as CaCO3	**8.44**	1.32	0.371	mg/L	2	09/12/22 14:16	2340 B		AES
Iron*	<0.100	0.100	0.071	mg/L	2	09/12/22 14:16	EPA200.7		AES
Magnesium*	**0.868**	0.200	0.062	mg/L	2	09/12/22 14:16	EPA200.7		AES
Potassium*	<2.00	2.00	0.130	mg/L	2	09/12/22 14:16	EPA200.7		AES
Silica (Si02)	**10.3**	2.14	0.137	mg/L	2	09/12/22 14:16	Calculation		AES
Silicon	**4.80**	1.00	0.064	mg/L	2	09/12/22 14:16	EPA200.7		AES
Sodium*	**520**	2.00	0.211	mg/L	2	09/12/22 14:16	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0010	0.0010	0.0005	mg/L	2	09/12/22 12:50	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00006	mg/L	2	09/12/22 12:50	EPA200.8		AES
Copper*	**0.0215**	0.0010	0.0002	mg/L	2	09/12/22 12:50	EPA200.8		AES
Lead*	<0.0020	0.0020	0.0003	mg/L	4	09/12/22 14:18	EPA200.8		AES
Manganese*	**0.0035**	0.0010	0.0002	mg/L	2	09/12/22 12:50	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0002	mg/L	2	09/12/22 12:50	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0012	mg/L	2	09/12/22 12:50	EPA200.8		AES
Uranium	<0.0010	0.0010	0.0002	mg/L	2	09/12/22 12:50	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0005	mg/L	2	09/12/22 12:50	EPA200.8		AES

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www.GreenAnalytical.com

GCC Energy, LLC	Project:	GCC GW Baseline	
6473 CR 120	Project Name / Number:	GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	09/19/22 13:33

MW-4-A

2209034-02 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/12/22 15:36	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

MW-4-C

2209034-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**2430**	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**2430**	10.0	2.27	mg/L	10	09/09/22 16:00	2320 B		HTB
Cation/Anion Balance	**1.81**	-100	-100	%	1	09/19/22 12:51	Calculation		JDA
Chloride*	**570**	5.00	0.278	mg/L	5	09/15/22 19:00	EPA300.0		AES
Fluoride*	**2.34**	0.500	0.0486	mg/L	5	09/15/22 19:00	EPA300.0		AES
Nitrate/Nitrite as N*	<0.100	0.100	0.059	mg/L as N	5	09/12/22 10:00	EPA353.2		HTB
pH*	**8.19**			pH Units	1	09/02/22 15:00	EPA150.1		QEB
pH Temperature, degrees C	**18.1**			pH Units	1	09/02/22 15:00	EPA150.1		QEB
Total Dissolved Solids*	**3670**	20.0		mg/L	2	09/07/22 18:08	EPA160.1		AES
Sulfate*	<5.00	5.00	0.620	mg/L	5	09/15/22 19:00	EPA300.0		AES
Total Organic Carbon*	**4.39**	0.500	0.175	mg/L	1	09/12/22 15:31	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.180	mg/L	5	09/12/22 14:21	EPA200.7		AES
Calcium*	**6.01**	0.500	0.118	mg/L	5	09/12/22 14:21	EPA200.7		AES
Hardness as CaCO3	**26.0**	3.31	0.928	mg/L	5	09/12/22 14:21	2340 B		AES
Iron*	**0.795**	0.250	0.178	mg/L	5	09/12/22 14:21	EPA200.7		AES
Magnesium*	**2.68**	0.500	0.154	mg/L	5	09/12/22 14:21	EPA200.7		AES
Potassium*	<5.00	5.00	0.325	mg/L	5	09/12/22 14:21	EPA200.7		AES
Silica (Si02)	**10.4**	5.35	0.341	mg/L	5	09/12/22 14:21	Calculation		AES
Silicon	**4.87**	2.50	0.160	mg/L	5	09/12/22 14:21	EPA200.7		AES
Sodium*	**1530**	5.00	0.528	mg/L	5	09/12/22 14:21	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0219**	0.0025	0.0012	mg/L	5	09/12/22 12:51	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	09/12/22 12:51	EPA200.8		AES
Copper*	**0.0618**	0.0025	0.0004	mg/L	5	09/12/22 12:51	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0009	mg/L	10	09/12/22 14:20	EPA200.8		AES
Manganese*	**0.0049**	0.0025	0.0005	mg/L	5	09/12/22 12:51	EPA200.8		AES
Molybdenum*	**0.0036**	0.0025	0.0004	mg/L	5	09/12/22 12:51	EPA200.8		AES
Selenium*	**0.0218**	0.0050	0.0030	mg/L	5	09/12/22 12:51	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	09/12/22 12:51	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0014	mg/L	5	09/12/22 12:51	EPA200.8		AES

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

MW-4-C

2209034-03 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<500	500	124	ng/L	5	09/12/22 15:43	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222411 - General Prep - Wet Chem										
Reference (B222411-SRM1)				Prepared & Analyzed: 09/02/22						
pH	6.99		pH Units	7.00		99.9	98.57-101.42			
Batch B222438 - General Prep - Wet Chem										
Blank (B222438-BLK1)				Prepared & Analyzed: 09/07/22						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B222438-SRM1)				Prepared & Analyzed: 09/07/22						
Total Dissolved Solids	460	10.0	mg/L	450		102	85-115			
Batch B222477 - Lachat										
Blank (B222477-BLK1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B222477-BS1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110			
LCS Dup (B222477-BSD1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110	0.0588	20	
Batch B222479 - General Prep - Wet Chem										
Blank (B222479-BLK1)				Prepared & Analyzed: 09/09/22						
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 (B222479-BS1)				Prepared & Analyzed: 09/09/22						
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115			
LCS Dup (B222479-BSD1)				Prepared & Analyzed: 09/09/22						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115	1.02	20	
Batch B222483 - General Prep - Wet Chem										
Blank (B222483-BLK1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B222483-BS1)				Prepared & Analyzed: 09/12/22						

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222483 - General Prep - Wet Chem (Continued)										
LCS (B222483-BS1) (Continued)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	9.97	0.500	mg/L	10.0		99.7	85-115			
LCS Dup (B222483-BSD1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	9.97	0.500	mg/L	10.0		99.7	85-115	0.0100	20	
Batch B222490 - IC- Ion Chromatograph										
Blank (B222490-BLK1)				Prepared: 09/12/22 Analyzed: 09/15/22						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B222490-BS1)				Prepared: 09/12/22 Analyzed: 09/15/22						
Chloride	24.8	1.00	mg/L	25.0		99.2	90-110			
Fluoride	2.44	0.100	mg/L	2.50		97.7	90-110			
Sulfate	24.3	1.00	mg/L	25.0		97.1	90-110			
LCS Dup (B222490-BSD1)				Prepared: 09/12/22 Analyzed: 09/15/22						
Chloride	24.8	1.00	mg/L	25.0		99.1	90-110	0.186	20	
Fluoride	2.44	0.100	mg/L	2.50		97.6	90-110	0.0410	20	
Sulfate	24.3	1.00	mg/L	25.0		97.1	90-110	0.0165	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222487 - Dissolved ICP										
Blank (B222487-BLK1)				Prepared & Analyzed: 09/12/22						
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 (B222487-BS1)				Prepared & Analyzed: 09/12/22						
Aluminum	4.04	0.050	mg/L	4.00		101	85-115			
Calcium	4.05	0.100	mg/L	4.00		101	85-115			
Iron	4.09	0.050	mg/L	4.00		102	85-115			
Magnesium	20.6	0.100	mg/L	20.0		103	85-115			
Potassium	8.10	1.00	mg/L	8.00		101	85-115			
Silicon	4.15	0.500	mg/L	4.00		104	85-115			
Sodium	3.62	1.00	mg/L	3.24		112	85-115			
LCS Dup (B222487-BSD1)				Prepared & Analyzed: 09/12/22						
Aluminum	3.99	0.050	mg/L	4.00		99.9	85-115	1.10	20	
Calcium	4.03	0.100	mg/L	4.00		101	85-115	0.454	20	
Iron	4.09	0.050	mg/L	4.00		102	85-115	0.132	20	
Magnesium	20.5	0.100	mg/L	20.0		102	85-115	0.842	20	
Potassium	8.21	1.00	mg/L	8.00		103	85-115	1.29	20	
Silicon	4.12	0.500	mg/L	4.00		103	85-115	0.840	20	
Sodium	3.59	1.00	mg/L	3.24		111	85-115	0.755	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222481 - Dissolved ICPMS										
Blank (B222481-BLK1)				Prepared & Analyzed: 09/12/22						
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 (B222481-BS1)				Prepared & Analyzed: 09/12/22						
Arsenic	0.0516	0.0005	mg/L	0.0500		103	85-115			
Cadmium	0.0505	0.0005	mg/L	0.0500		101	85-115			
Copper	0.0483	0.0005	mg/L	0.0500		96.7	85-115			
Lead	0.0489	0.0005	mg/L	0.0500		97.7	85-115			
Manganese	0.0529	0.0005	mg/L	0.0500		106	85-115			
Molybdenum	0.0507	0.0005	mg/L	0.0500		101	85-115			
Selenium	0.258	0.0010	mg/L	0.250		103	85-115			
Uranium	0.0531	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0508	0.0020	mg/L	0.0500		102	85-115			
LCS Dup (B222481-BSD1)				Prepared & Analyzed: 09/12/22						
Arsenic	0.0508	0.0005	mg/L	0.0500		102	85-115	1.46	20	
Cadmium	0.0502	0.0005	mg/L	0.0500		100	85-115	0.580	20	
Copper	0.0478	0.0005	mg/L	0.0500		95.5	85-115	1.20	20	
Lead	0.0482	0.0005	mg/L	0.0500		96.4	85-115	1.40	20	
Manganese	0.0516	0.0005	mg/L	0.0500		103	85-115	2.42	20	
Molybdenum	0.0502	0.0005	mg/L	0.0500		100	85-115	1.05	20	
Selenium	0.255	0.0010	mg/L	0.250		102	85-115	0.837	20	
Uranium	0.0530	0.0005	mg/L	0.0500		106	85-115	0.219	20	
Zinc	0.0506	0.0020	mg/L	0.0500		101	85-115	0.433	20	

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:33

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222462 - EPA 245.7										
Blank (B222462-BLK1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Mercury	ND	100	ng/L							
LCS (B222462-BS1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Mercury	1630	100	ng/L	2000		81.4	76-113			
LCS Dup (B222462-BSD1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Mercury	1620	100	ng/L	2000		81.0	76-113	0.498	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

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC ENERGY LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81326
Phone #: 970 385 4528
Contact Person: TOM BIRD TBIRD@HAYGULCHSERVICES.COM
Email Report to: LANDON BECK
Project Name(optional): ~~LANDI~~
LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MARCUS BENNETT / MICHAEL MCFARLAND

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

ANALYSIS REQUEST: GCCE G.W. BASELINE

For Lab Use	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:	GCCE G.W. BASELINE
2209-034 -01	MW-4-MI	9/1/22	10:52	X							1	2		4			X
-02	MW-4-A	9/1/22	11:49	X							1	2		4			X
-03	MW-4-C	9/1/22	12:44	X							1	2		4			X

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Relinquished by:	Date: 9/1/22 Time: 3:45	Received by: NJ Nelson
Relinquished by:	Date: Time:	Received by:
Relinquished by:	Date: Time:	Received by:
Relinquished by:	Date: Time:	Received by:

ADDITIONAL REMARKS: Laser 2

Report to State? (Circle) Yes No

Temperature at receipt: 20.6 CHECKED BY: VJW 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.

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28 September 2022

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

RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 09/12/22 15:15. 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: T104704514-22-15

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: T104704398-22-15

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www.GreenAnalytical.com

GCC Energy, LLC	Project:	GCC GW Baseline	
6473 CR 120	Project Name / Number:	GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	09/28/22 13:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-5-M1	2209126-01	Water	09/12/22 12:32	09/12/22 15:15	
MW-5-C	2209126-02	Water	09/12/22 13:00	09/12/22 15:15	

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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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:24

MW-5-M1

2209126-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**980**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**980**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Cation/Anion Balance	**-8.00**	-100	-100	%	1	09/28/22 13:12	Calculation		JDA
Chloride*	**5.66**	5.00	0.278	mg/L	5	09/22/22 08:07	EPA300.0		AES
Fluoride*	<0.500	0.500	0.0486	mg/L	5	09/22/22 08:07	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:06	EPA353.2		HTB
pH*	**8.41**			pH Units	1	09/14/22 09:00	EPA150.1		LLG
pH Temperature, degrees C	**19.3**			pH Units	1	09/14/22 09:00	EPA150.1		LLG
Total Dissolved Solids*	**1040**	10.0		mg/L	1	09/19/22 11:59	EPA160.1		JDA
Sulfate*	**7.69**	5.00	0.620	mg/L	5	09/22/22 08:28	EPA300.0		AES
Total Organic Carbon*	**2.51**	0.500	0.175	mg/L	1	09/22/22 11:28	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/21/22 13:58	EPA200.7		AES
Calcium*	**2.13**	0.200	0.047	mg/L	2	09/21/22 13:58	EPA200.7		AES
Hardness as CaCO3	**8.38**	1.32	0.371	mg/L	2	09/21/22 13:58	2340 B		AES
Iron*	<0.100	0.100	0.071	mg/L	2	09/21/22 13:58	EPA200.7		AES
Magnesium*	**0.743**	0.200	0.062	mg/L	2	09/21/22 13:58	EPA200.7		AES
Potassium*	<2.00	2.00	0.130	mg/L	2	09/21/22 13:58	EPA200.7		AES
Silica (Si02)	**7.33**	2.14	0.137	mg/L	2	09/21/22 13:58	Calculation		AES
Silicon	**3.43**	1.00	0.064	mg/L	2	09/21/22 13:58	EPA200.7		AES
Sodium*	**386**	2.00	0.211	mg/L	2	09/21/22 13:58	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0101**	0.0010	0.0005	mg/L	2	09/23/22 10:08	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00006	mg/L	2	09/23/22 10:08	EPA200.8		AES
Copper*	**0.0138**	0.0010	0.0002	mg/L	2	09/23/22 10:08	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	09/23/22 10:08	EPA200.8		AES
Manganese*	**0.0172**	0.0010	0.0002	mg/L	2	09/23/22 10:08	EPA200.8		AES
Molybdenum*	**0.0022**	0.0010	0.0002	mg/L	2	09/23/22 10:08	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0012	mg/L	2	09/23/22 10:08	EPA200.8		AES
Uranium	**0.0066**	0.0010	0.0002	mg/L	2	09/23/22 10:08	EPA200.8		AES
Zinc*	**0.0889**	0.0040	0.0005	mg/L	2	09/23/22 10:08	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 Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:24

MW-5-M1

2209126-01 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/16/22 11:53	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:24

MW-5-C

2209126-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**1680**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**1680**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Cation/Anion Balance	**1.76**	-100	-100	%	1	09/28/22 13:12	Calculation		JDA
Chloride*	**3.75**	2.00	0.111	mg/L	2	09/22/22 08:49	EPA300.0		AES
Fluoride*	**2.42**	0.200	0.0194	mg/L	2	09/22/22 08:49	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:12	EPA353.2		HTB
pH*	**7.85**			pH Units	1	09/14/22 09:00	EPA150.1		LLG
pH Temperature, degrees C	**19.6**			pH Units	1	09/14/22 09:00	EPA150.1		LLG
Total Dissolved Solids*	**2400**	10.0		mg/L	1	09/19/22 12:03	EPA160.1		JDA
Sulfate*	**466**	20.0	2.48	mg/L	20	09/22/22 08:49	EPA300.0		AES
Total Organic Carbon*	**2.39**	0.500	0.175	mg/L	1	09/22/22 11:50	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.180	mg/L	5	09/21/22 14:01	EPA200.7		AES
Calcium*	**8.22**	0.500	0.118	mg/L	5	09/21/22 14:01	EPA200.7		AES
Hardness as CaCO3	**32.6**	3.31	0.928	mg/L	5	09/21/22 14:01	2340 B		AES
Iron*	<0.250	0.250	0.178	mg/L	5	09/21/22 14:01	EPA200.7		AES
Magnesium*	**2.93**	0.500	0.154	mg/L	5	09/21/22 14:01	EPA200.7		AES
Potassium*	<5.00	5.00	0.325	mg/L	5	09/21/22 14:01	EPA200.7		AES
Silica (Si02)	**7.19**	5.35	0.341	mg/L	5	09/21/22 14:01	Calculation		AES
Silicon	**3.36**	2.50	0.160	mg/L	5	09/21/22 14:01	EPA200.7		AES
Sodium*	**1020**	5.00	0.528	mg/L	5	09/21/22 14:01	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0012	mg/L	5	09/23/22 10:09	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	09/23/22 10:09	EPA200.8		AES
Copper*	**0.0355**	0.0025	0.0004	mg/L	5	09/23/22 10:09	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 10:09	EPA200.8		AES
Manganese*	**0.0099**	0.0025	0.0005	mg/L	5	09/23/22 10:09	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 10:09	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0030	mg/L	5	09/23/22 10:09	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	09/23/22 10:09	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0014	mg/L	5	09/23/22 10:09	EPA200.8		AES

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GCC Energy, LLC	Project:	GCC GW Baseline	
6473 CR 120	Project Name / Number:	GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	09/28/22 13:24

MW-5-C

2209126-02 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<500	500	124	ng/L	5	09/16/22 12:01	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:24

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222554 - General Prep - Wet Chem										
Blank (B222554-BLK1)				Prepared & Analyzed: 09/19/22						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B222554-SRM1)				Prepared & Analyzed: 09/19/22						
Total Dissolved Solids	475	10.0	mg/L	450		106	85-115			
Batch B222566 - General Prep - Wet Chem										
Blank (B222566-BLK1)				Prepared & Analyzed: 09/19/22						
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 (B222566-BS1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	103	10.0	mg/L	100		103	85-115			
LCS Dup (B222566-BSD1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	102	10.0	mg/L	100		102	85-115	0.976	20	
Batch B222572 - General Prep - Wet Chem										
Reference (B222572-SRM1)				Prepared & Analyzed: 09/14/22						
pH	7.05		pH Units	7.00		101	98.57-101.42			
Batch B222575 - Lachat										
Blank (B222575-BLK1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B222575-BS1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	1.06	0.020	mg/L as N	1.00		106	90-110			
LCS Dup (B222575-BSD1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00		104	90-110	1.13	20	
Batch B222606 - IC- Ion Chromatograph										
Blank (B222606-BLK1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:24

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222606 - IC- Ion Chromatograph (Continued)										
LCS (B222606-BS1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Chloride	24.9	1.00	mg/L	25.0		99.4	90-110			
Fluoride	2.48	0.100	mg/L	2.50		99.2	90-110			
Sulfate	24.6	1.00	mg/L	25.0		98.3	90-110			
LCS Dup (B222606-BSD1)				Prepared: 09/21/22 Analyzed: 09/22/22						
Chloride	25.0	1.00	mg/L	25.0		100	90-110	0.646	20	
Fluoride	2.50	0.100	mg/L	2.50		99.9	90-110	0.723	20	
Sulfate	24.7	1.00	mg/L	25.0		98.9	90-110	0.690	20	
Batch B222612 - General Prep - Wet Chem										
Blank (B222612-BLK1)				Prepared & Analyzed: 09/22/22						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B222612-BS1)				Prepared & Analyzed: 09/22/22						
Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115			
LCS Dup (B222612-BSD1)				Prepared & Analyzed: 09/22/22						
Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115	0.00	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:24

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222591 - Dissolved ICP										
Blank (B222591-BLK1)				Prepared & Analyzed: 09/21/22						
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 (B222591-BS1)				Prepared & Analyzed: 09/21/22						
Aluminum	3.89	0.050	mg/L	4.00		97.3	85-115			
Calcium	3.73	0.100	mg/L	4.00		93.3	85-115			
Iron	3.80	0.050	mg/L	4.00		95.0	85-115			
Magnesium	19.5	0.100	mg/L	20.0		97.4	85-115			
Potassium	8.14	1.00	mg/L	8.00		102	85-115			
Silicon	3.99	0.500	mg/L	4.00		99.6	85-115			
Sodium	3.21	1.00	mg/L	3.24		99.2	85-115			
LCS Dup (B222591-BSD1)				Prepared & Analyzed: 09/21/22						
Aluminum	3.94	0.050	mg/L	4.00		98.5	85-115	1.21	20	
Calcium	3.82	0.100	mg/L	4.00		95.5	85-115	2.38	20	
Iron	3.89	0.050	mg/L	4.00		97.3	85-115	2.49	20	
Magnesium	19.7	0.100	mg/L	20.0		98.6	85-115	1.22	20	
Potassium	8.11	1.00	mg/L	8.00		101	85-115	0.407	20	
Silicon	4.04	0.500	mg/L	4.00		101	85-115	1.40	20	
Sodium	3.27	1.00	mg/L	3.24		101	85-115	1.79	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:24

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222617 - Dissolved ICPMS										
Blank (B222617-BLK1)				Prepared: 09/22/22 Analyzed: 09/23/22						
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 (B222617-BS1)				Prepared: 09/22/22 Analyzed: 09/23/22						
Arsenic	0.0505	0.0005	mg/L	0.0500		101	85-115			
Cadmium	0.0508	0.0005	mg/L	0.0500		102	85-115			
Copper	0.0491	0.0005	mg/L	0.0500		98.2	85-115			
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115			
Manganese	0.0519	0.0005	mg/L	0.0500		104	85-115			
Molybdenum	0.0508	0.0005	mg/L	0.0500		102	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.7	85-115			
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0510	0.0020	mg/L	0.0500		102	85-115			
LCS Dup (B222617-BSD1)				Prepared: 09/22/22 Analyzed: 09/23/22						
Arsenic	0.0515	0.0005	mg/L	0.0500		103	85-115	1.92	20	
Cadmium	0.0507	0.0005	mg/L	0.0500		101	85-115	0.332	20	
Copper	0.0488	0.0005	mg/L	0.0500		97.6	85-115	0.640	20	
Lead	0.0509	0.0005	mg/L	0.0500		102	85-115	0.671	20	
Manganese	0.0516	0.0005	mg/L	0.0500		103	85-115	0.434	20	
Molybdenum	0.0514	0.0005	mg/L	0.0500		103	85-115	1.02	20	
Selenium	0.257	0.0010	mg/L	0.250		103	85-115	3.08	20	
Uranium	0.0534	0.0005	mg/L	0.0500		107	85-115	1.12	20	
Zinc	0.0508	0.0020	mg/L	0.0500		102	85-115	0.382	20	

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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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/28/22 13:24

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222526 - EPA 245.7										
Blank (B222526-BLK1)				Prepared: 09/15/22 Analyzed: 09/16/22						
Mercury	ND	100	ng/L							
LCS (B222526-BS1)				Prepared: 09/15/22 Analyzed: 09/16/22						
Mercury	1720	100	ng/L	2000		86.2	76-113			
LCS Dup (B222526-BSD1)				Prepared: 09/15/22 Analyzed: 09/16/22						
Mercury	1760	100	ng/L	2000		88.0	76-113	2.01	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

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Jeremy D Allen, Laboratory Director

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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 LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81326
Phone #: 970 385 4528
Contact Person: TOM BIRD TBIRD@HAYGULCHSERVICES.COM
Email Report to: LANDON BECK
Project Name(optional): ~~LANDI~~
LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MARCUS BENNETT / MICHAEL MCFARLAND

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

For Lab Use	Sample Name or Location	Collected Date	Collected Time	Matrix (check one): GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	# of containers: No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	ANALYSIS REQUEST: GCCE G.W. BASELINE
2209-126-																	
-01	MW-5-MI	9/12/22	12:32	X							1	2		4			X
-02	MW-5-C	9/12/22	1:08	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 received 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:	Received by:
[signature]	9/12/22 Time: 3:25	[signature]
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

Cooler #2

Temperature at receipt:	CHECKED BY	On Ice	No Ice
10.5°C	LLG	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.

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19 September 2022

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

RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/31/22 16:00. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

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

Sincerely,

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: T104704514-22-15

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: T104704398-22-15

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www.GreenAnalytical.com

GCC Energy, LLC	Project:	GCC GW Baseline	
6473 CR 120	Project Name / Number:	GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	09/19/22 13:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-6-LM	2209010-01	Water	08/31/22 13:23	08/31/22 16:00	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:31

MW-6-LM

2209010-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**337**	10.0	2.27	mg/L	1	09/09/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	1	09/09/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	1	09/09/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**337**	10.0	2.27	mg/L	1	09/09/22 16:00	2320 B		HTB
Cation/Anion Balance	**-2.75**	-100	-100	%	1	09/19/22 12:51	Calculation		JDA
Chloride*	**10.7**	2.00	0.111	mg/L	2	09/10/22 01:50	EPA300.0		AES
Fluoride*	**0.310**	0.200	0.0194	mg/L	2	09/10/22 01:50	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/12/22 09:29	EPA353.2		HTB
pH*	**7.90**			pH Units	1	09/01/22 13:35	EPA150.1		JDA
pH Temperature, degrees C	**19.9**			pH Units	1	09/01/22 13:35	EPA150.1		JDA
Total Dissolved Solids*	**1870**	10.0		mg/L	1	09/06/22 18:30	EPA160.1		AES
Sulfate*	**1010**	20.0	2.48	mg/L	20	09/10/22 02:11	EPA300.0		AES
Total Organic Carbon*	**2.08**	0.500	0.175	mg/L	1	09/12/22 13:41	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/08/22 18:14	EPA200.7		AES
Calcium*	**152**	0.200	0.047	mg/L	2	09/08/22 18:14	EPA200.7		AES
Hardness as CaCO3	**971**	1.32	0.371	mg/L	2	09/08/22 18:14	2340 B		AES
Iron*	<0.100	0.100	0.071	mg/L	2	09/08/22 18:14	EPA200.7		AES
Magnesium*	**143**	0.200	0.062	mg/L	2	09/08/22 18:14	EPA200.7		AES
Potassium*	**4.84**	2.00	0.130	mg/L	2	09/08/22 18:14	EPA200.7		AES
Silica (Si02)	**17.3**	2.14	0.137	mg/L	2	09/08/22 18:14	Calculation		AES
Silicon	**8.07**	1.00	0.064	mg/L	2	09/08/22 18:14	EPA200.7		AES
Sodium*	**163**	2.00	0.211	mg/L	2	09/08/22 18:14	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0034**	0.0010	0.0005	mg/L	2	09/07/22 12:39	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00006	mg/L	2	09/07/22 12:39	EPA200.8		AES
Copper*	**0.0054**	0.0010	0.0002	mg/L	2	09/07/22 12:39	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	09/07/22 12:39	EPA200.8		AES
Manganese*	**0.174**	0.0010	0.0002	mg/L	2	09/07/22 12:39	EPA200.8		AES
Molybdenum*	**0.0014**	0.0010	0.0002	mg/L	2	09/07/22 12:39	EPA200.8		AES
Selenium*	**0.0028**	0.0020	0.0012	mg/L	2	09/07/22 12:39	EPA200.8		AES
Uranium	**0.0026**	0.0010	0.0002	mg/L	2	09/07/22 12:39	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0005	mg/L	2	09/07/22 12:39	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 Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:31

MW-6-LM

2209010-01 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/12/22 15:31	EPA245.7		HTB

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:31

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222408 - General Prep - Wet Chem										
Reference (B222408-SRM1)				Prepared & Analyzed: 09/01/22						
pH	7.00		pH Units	7.00		100	98.57-101.42			
Batch B222429 - General Prep - Wet Chem										
Blank (B222429-BLK1)				Prepared & Analyzed: 09/06/22						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B222429-SRM1)				Prepared & Analyzed: 09/06/22						
Total Dissolved Solids	450	10.0	mg/L	450		100	85-115			
Batch B222457 - IC- Ion Chromatograph										
Blank (B222457-BLK1)				Prepared: 09/08/22 Analyzed: 09/09/22						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B222457-BS1)				Prepared: 09/08/22 Analyzed: 09/09/22						
Chloride	24.8	1.00	mg/L	25.0		99.3	90-110			
Fluoride	2.44	0.100	mg/L	2.50		97.7	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.6	90-110			
LCS Dup (B222457-BSD1)				Prepared: 09/08/22 Analyzed: 09/09/22						
Chloride	24.6	1.00	mg/L	25.0		98.4	90-110	0.894	20	
Fluoride	2.42	0.100	mg/L	2.50		96.8	90-110	0.905	20	
Sulfate	24.2	1.00	mg/L	25.0		96.7	90-110	0.947	20	
Batch B222476 - Lachat										
Blank (B222476-BLK1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B222476-BS1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Nitrate/Nitrite as N	1.01	0.020	mg/L as N	1.00		101	90-110			
LCS Dup (B222476-BSD1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Nitrate/Nitrite as N	1.01	0.020	mg/L as N	1.00		101	90-110	0.298	20	
Batch B222479 - General Prep - Wet Chem										
Blank (B222479-BLK1)				Prepared & Analyzed: 09/09/22						

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:31

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222479 - General Prep - Wet Chem (Continued)										
Blank (B222479-BLK1) (Continued)				Prepared & Analyzed: 09/09/22						
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 (B222479-BS1)				Prepared & Analyzed: 09/09/22						
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115			
LCS Dup (B222479-BSD1)				Prepared & Analyzed: 09/09/22						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115	1.02	20	
Batch B222483 - General Prep - Wet Chem										
Blank (B222483-BLK1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B222483-BS1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	9.97	0.500	mg/L	10.0		99.7	85-115			
LCS Dup (B222483-BSD1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	9.97	0.500	mg/L	10.0		99.7	85-115	0.0100	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:31

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222458 - Dissolved ICP										
Blank (B222458-BLK1)				Prepared & Analyzed: 09/08/22						
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 (B222458-BS1)				Prepared & Analyzed: 09/08/22						
Aluminum	4.23	0.050	mg/L	4.00		106	85-115			
Calcium	4.09	0.100	mg/L	4.00		102	85-115			
Iron	4.09	0.050	mg/L	4.00		102	85-115			
Magnesium	21.2	0.100	mg/L	20.0		106	85-115			
Potassium	8.66	1.00	mg/L	8.00		108	85-115			
Silicon	4.26	0.500	mg/L	4.00		107	85-115			
Sodium	3.45	1.00	mg/L	3.24		106	85-115			
LCS Dup (B222458-BSD1)				Prepared & Analyzed: 09/08/22						
Aluminum	4.22	0.050	mg/L	4.00		105	85-115	0.418	20	
Calcium	4.06	0.100	mg/L	4.00		102	85-115	0.536	20	
Iron	4.07	0.050	mg/L	4.00		102	85-115	0.402	20	
Magnesium	21.0	0.100	mg/L	20.0		105	85-115	0.860	20	
Potassium	8.64	1.00	mg/L	8.00		108	85-115	0.181	20	
Silicon	4.24	0.500	mg/L	4.00		106	85-115	0.600	20	
Sodium	3.39	1.00	mg/L	3.24		105	85-115	1.56	20	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:31

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222424 - Dissolved ICPMS										
Blank (B222424-BLK1)				Prepared: 09/06/22 Analyzed: 09/07/22						
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 (B222424-BS1)				Prepared: 09/06/22 Analyzed: 09/07/22						
Arsenic	0.0520	0.0005	mg/L	0.0500		104	85-115			
Cadmium	0.0508	0.0005	mg/L	0.0500		102	85-115			
Copper	0.0510	0.0005	mg/L	0.0500		102	85-115			
Lead	0.0498	0.0005	mg/L	0.0500		99.6	85-115			
Manganese	0.0537	0.0005	mg/L	0.0500		107	85-115			
Molybdenum	0.0508	0.0005	mg/L	0.0500		102	85-115			
Selenium	0.259	0.0010	mg/L	0.250		104	85-115			
Uranium	0.0554	0.0005	mg/L	0.0500		111	85-115			
Zinc	0.0515	0.0020	mg/L	0.0500		103	85-115			
LCS Dup (B222424-BSD1)				Prepared: 09/06/22 Analyzed: 09/07/22						
Arsenic	0.0527	0.0005	mg/L	0.0500		105	85-115	1.28	20	
Cadmium	0.0511	0.0005	mg/L	0.0500		102	85-115	0.446	20	
Copper	0.0506	0.0005	mg/L	0.0500		101	85-115	0.781	20	
Lead	0.0496	0.0005	mg/L	0.0500		99.2	85-115	0.379	20	
Manganese	0.0542	0.0005	mg/L	0.0500		108	85-115	0.989	20	
Molybdenum	0.0509	0.0005	mg/L	0.0500		102	85-115	0.195	20	
Selenium	0.259	0.0010	mg/L	0.250		104	85-115	0.119	20	
Uranium	0.0542	0.0005	mg/L	0.0500		108	85-115	2.05	20	
Zinc	0.0508	0.0020	mg/L	0.0500		102	85-115	1.50	20	

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/19/22 13:31

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222462 - EPA 245.7										
Blank (B222462-BLK1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Mercury	ND	100	ng/L							
LCS (B222462-BS1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Mercury	1630	100	ng/L	2000		81.4	76-113			
LCS Dup (B222462-BSD1)				Prepared: 09/09/22 Analyzed: 09/12/22						
Mercury	1620	100	ng/L	2000		81.0	76-113	0.498	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

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Jeremy D Allen, Laboratory Director

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CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC ENERGY LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81326
Phone #: 970 385 4529
Contact Person: TOM BIRD TBIRD@HAYGULCHSERVICES.COM
Email Report to: LANDON BECK
Project Name(optional): ~~LANDS~~
LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MARCUS BENNETT / MICHAEL MCFARLAND

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

ANALYSIS REQUEST: GCCE G.W. BASELINE

For Lab Use	Sample Name or Location	Collected Date	Collected Time	Matrix (check one)	# of containers	ANALYSIS REQUEST
2209-010 -01	MW-6-LM	9/31/22	1:23	GROUNDWATER	1 HNO_3, 2 HCl, 4 H_2SO_4	X
					1 HNO_3, 2 HCl, 4 H_2SO_4	Y

Matrix: GROUNDWATER, SURFACEWATER, WASTEWATER, PRODUCEDWATER, SOIL, DRINKING WATER, OTHER:
# of containers: No preservation (general), HNO_3, HCl, H_2SO_4, Other:, Other:

PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL within 30 days after completion. 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:	Time:	Received by:
[signature]	9/31/22	4:00	[signature]
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:
Relinquished by:	Date:	Time:	Received by:

ADDITIONAL REMARKS:
Laser #2

Report to State? (Circle) Yes No

Temperature at receipt:	CHECKED BY	On Ice	No Ice
12.1°C	LLG	✓	

† 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.

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27 September 2022

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

RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 09/08/22 15:00. The data to follow was performed, in whole or in part, by Green Analytical Laboratories. Any data that was performed by a subcontract laboratory is included within the GAL report, or with an additional report attached.

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

Sincerely,

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: T104704514-22-15

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: T104704398-22-15

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-8-PL	2209118-01	Water	09/08/22 09:15	09/08/22 15:00	
MW-8-LM	2209118-02	Water	09/08/22 09:43	09/08/22 15:00	
MW-8-MI	2209118-03	Water	09/08/22 10:23	09/08/22 15:00	
MW-8-EAA	2209118-04	Water	09/08/22 10:53	09/08/22 15:00	
MW-7-EAA	2209118-05	Water	09/08/22 11:38	09/08/22 15:00	

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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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

MW-8-PL

2209118-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**340**	10.0	2.27	mg/L	1	09/19/22 15:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	**16.0**	10.0	2.27	mg/L	1	09/19/22 15:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	1	09/19/22 15:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**356**	10.0	2.27	mg/L	1	09/19/22 15:30	2320 B		HTB
Cation/Anion Balance	**-3.08**	-100	-100	%	1	09/27/22 08:38	Calculation		JDA
Chloride*	**3.66**	1.00	0.0555	mg/L	1	09/21/22 22:01	EPA300.0		AES
Fluoride*	**0.198**	0.100	0.00971	mg/L	1	09/21/22 22:01	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:00	EPA353.2		HTB
pH*	**7.88**			pH Units	1	09/09/22 10:20	EPA150.1		JDA
pH Temperature, degrees C	**21.4**			pH Units	1	09/09/22 10:20	EPA150.1		JDA
Total Dissolved Solids*	**500**	10.0		mg/L	1	09/14/22 18:00	EPA160.1		JDA
Sulfate*	**106**	1.00	0.124	mg/L	1	09/21/22 22:01	EPA300.0		AES
Total Organic Carbon*	**1.60**	0.500	0.175	mg/L	1	09/12/22 21:50	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.036	mg/L	1	09/21/22 13:20	EPA200.7		AES
Calcium*	**52.4**	0.100	0.024	mg/L	1	09/21/22 13:20	EPA200.7		AES
Hardness as CaCO3	**275**	0.662	0.186	mg/L	1	09/21/22 13:20	2340 B		AES
Iron*	**0.063**	0.050	0.036	mg/L	1	09/21/22 13:20	EPA200.7		AES
Magnesium*	**35.1**	0.100	0.031	mg/L	1	09/21/22 13:20	EPA200.7		AES
Potassium*	**1.53**	1.00	0.065	mg/L	1	09/21/22 13:20	EPA200.7		AES
Silica (Si02)	**20.8**	1.07	0.0683	mg/L	1	09/21/22 13:20	Calculation		AES
Silicon	**9.75**	0.500	0.032	mg/L	1	09/21/22 13:20	EPA200.7		AES
Sodium*	**76.3**	1.00	0.106	mg/L	1	09/21/22 13:20	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0042**	0.0010	0.0005	mg/L	2	09/23/22 09:49	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.00006	mg/L	2	09/23/22 09:49	EPA200.8		AES
Copper*	**0.0014**	0.0010	0.0002	mg/L	2	09/23/22 09:49	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	09/23/22 09:49	EPA200.8		AES
Manganese*	**0.145**	0.0010	0.0002	mg/L	2	09/23/22 09:49	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0002	mg/L	2	09/23/22 09:49	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0012	mg/L	2	09/23/22 09:49	EPA200.8		AES
Uranium	<0.0010	0.0010	0.0002	mg/L	2	09/23/22 09:49	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0005	mg/L	2	09/23/22 09:49	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 Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

MW-8-PL

2209118-01 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/16/22 10:58	EPA245.7		HTB

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

MW-8-LM

2209118-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**580**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	**180**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**760**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Cation/Anion Balance	**-8.21**	-100	-100	%	1	09/27/22 08:38	Calculation		JDA
Chloride*	**2.64**	2.00	0.111	mg/L	2	09/21/22 22:43	EPA300.0		AES
Fluoride*	**3.79**	0.200	0.0194	mg/L	2	09/21/22 22:43	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:01	EPA353.2		HTB
pH*	**8.99**			pH Units	1	09/09/22 10:20	EPA150.1		JDA
pH Temperature, degrees C	**21.1**			pH Units	1	09/09/22 10:20	EPA150.1		JDA
Total Dissolved Solids*	**755**	10.0		mg/L	1	09/14/22 18:02	EPA160.1		JDA
Sulfate*	<2.00	2.00	0.248	mg/L	2	09/21/22 22:43	EPA300.0		AES
Total Organic Carbon*	**1.77**	0.500	0.175	mg/L	1	09/12/22 22:10	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/21/22 13:23	EPA200.7		AES
Calcium*	**1.70**	0.200	0.047	mg/L	2	09/21/22 13:23	EPA200.7		AES
Hardness as CaCO3	**6.43**	1.32	0.371	mg/L	2	09/21/22 13:23	2340 B		AES
Iron*	<0.100	0.100	0.071	mg/L	2	09/21/22 13:23	EPA200.7		AES
Magnesium*	**0.532**	0.200	0.062	mg/L	2	09/21/22 13:23	EPA200.7		AES
Potassium*	<2.00	2.00	0.130	mg/L	2	09/21/22 13:22	EPA200.7		AES
Silica (Si02)	**7.63**	2.14	0.137	mg/L	2	09/21/22 13:23	Calculation		AES
Silicon	**3.56**	1.00	0.064	mg/L	2	09/21/22 13:23	EPA200.7		AES
Sodium*	**298**	2.00	0.211	mg/L	2	09/21/22 13:22	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0012	mg/L	5	09/23/22 09:51	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	09/23/22 09:51	EPA200.8		AES
Copper*	**0.0052**	0.0025	0.0004	mg/L	5	09/23/22 09:51	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 09:51	EPA200.8		AES
Manganese*	<0.0025	0.0025	0.0005	mg/L	5	09/23/22 09:51	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 09:51	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0030	mg/L	5	09/23/22 09:51	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	09/23/22 09:51	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0014	mg/L	5	09/23/22 09:51	EPA200.8		AES

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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

MW-8-LM

2209118-02 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/16/22 11:00	EPA245.7		HTB

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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

MW-8-MI

2209118-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**500**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Alkalinity, Total as CaCO3*	**500**	10.0	2.27	mg/L	10	09/19/22 15:30	2320 B		HTB
Cation/Anion Balance	**-2.03**	-100	-100	%	1	09/27/22 08:38	Calculation		JDA
Chloride*	**8.88**	2.00	0.111	mg/L	2	09/22/22 00:06	EPA300.0		AES
Fluoride*	<0.200	0.200	0.0194	mg/L	2	09/22/22 00:06	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:02	EPA353.2		HTB
pH*	**7.70**			pH Units	1	09/09/22 10:20	EPA150.1		JDA
pH Temperature, degrees C	**21.1**			pH Units	1	09/09/22 10:20	EPA150.1		JDA
Total Dissolved Solids*	**1050**	10.0		mg/L	1	09/14/22 18:04	EPA160.1		JDA
Sulfate*	**352**	2.00	0.248	mg/L	2	09/22/22 00:06	EPA300.0		AES
Total Organic Carbon*	**2.96**	0.500	0.175	mg/L	1	09/12/22 22:27	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/21/22 13:25	EPA200.7		AES
Calcium*	**69.2**	0.200	0.047	mg/L	2	09/21/22 13:25	EPA200.7		AES
Hardness as CaCO3	**374**	1.32	0.371	mg/L	2	09/21/22 13:25	2340 B		AES
Iron*	<0.100	0.100	0.071	mg/L	2	09/21/22 13:25	EPA200.7		AES
Magnesium*	**48.8**	0.200	0.062	mg/L	2	09/21/22 13:25	EPA200.7		AES
Potassium*	**5.59**	2.00	0.130	mg/L	2	09/21/22 13:25	EPA200.7		AES
Silica (Si02)	**13.6**	2.14	0.137	mg/L	2	09/21/22 13:25	Calculation		AES
Silicon	**6.35**	1.00	0.064	mg/L	2	09/21/22 13:25	EPA200.7		AES
Sodium*	**213**	2.00	0.211	mg/L	2	09/21/22 13:25	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0012	mg/L	5	09/23/22 09:52	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	09/23/22 09:52	EPA200.8		AES
Copper*	**0.0038**	0.0025	0.0004	mg/L	5	09/23/22 09:52	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 09:52	EPA200.8		AES
Manganese*	**0.0597**	0.0025	0.0005	mg/L	5	09/23/22 09:52	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 09:52	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0030	mg/L	5	09/23/22 09:52	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	09/23/22 09:52	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0014	mg/L	5	09/23/22 09:52	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 Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

MW-8-MI

2209118-03 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/16/22 11:03	EPA245.7		HTB

Green Analytical Laboratories

Jeremy D Allen, Laboratory Director

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

MW-8-EAA

2209118-04 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**480**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**480**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Cation/Anion Balance	**-6.22**	-100	-100	%	1	09/27/22 08:38	Calculation		JDA
Chloride*	**11.7**	2.00	0.111	mg/L	2	09/22/22 00:48	EPA300.0		AES
Fluoride*	**0.332**	0.200	0.0194	mg/L	2	09/22/22 00:48	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:03	EPA353.2		HTB
pH*	**7.27**			pH Units	1	09/09/22 10:20	EPA150.1		JDA
pH Temperature, degrees C	**20.6**			pH Units	1	09/09/22 10:20	EPA150.1		JDA
Total Dissolved Solids*	**1360**	10.0		mg/L	1	09/14/22 18:06	EPA160.1		JDA
Sulfate*	**627**	20.0	2.48	mg/L	20	09/22/22 01:09	EPA300.0		AES
Total Organic Carbon*	**3.64**	0.500	0.175	mg/L	1	09/12/22 22:44	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/21/22 13:29	EPA200.7		AES
Calcium*	**143**	0.200	0.047	mg/L	2	09/21/22 13:29	EPA200.7		AES
Hardness as CaCO3	**831**	1.32	0.371	mg/L	2	09/21/22 13:29	2340 B		AES
Iron*	**2.28**	0.100	0.071	mg/L	2	09/21/22 13:29	EPA200.7		AES
Magnesium*	**115**	0.200	0.062	mg/L	2	09/21/22 13:29	EPA200.7		AES
Potassium*	**3.45**	2.00	0.130	mg/L	2	09/21/22 13:29	EPA200.7		AES
Silica (Si02)	**15.4**	2.14	0.137	mg/L	2	09/21/22 13:29	Calculation		AES
Silicon	**7.18**	1.00	0.064	mg/L	2	09/21/22 13:29	EPA200.7		AES
Sodium*	**75.0**	2.00	0.211	mg/L	2	09/21/22 13:29	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0012	mg/L	5	09/23/22 09:54	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	09/23/22 09:54	EPA200.8		AES
Copper*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 09:54	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 09:54	EPA200.8		AES
Manganese*	**3.77**	0.0025	0.0005	mg/L	5	09/23/22 09:54	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 09:54	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0030	mg/L	5	09/23/22 09:54	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	09/23/22 09:54	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0014	mg/L	5	09/23/22 09:54	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

MW-8-EAA

2209118-04 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/16/22 11:48	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

MW-7-EAA

2209118-05 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**400**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Carbonate as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Alkalinity, Total as CaCO3*	**400**	10.0	2.27	mg/L	10	09/19/22 16:00	2320 B		HTB
Cation/Anion Balance	**-4.83**	-100	-100	%	1	09/27/22 08:38	Calculation		JDA
Chloride*	**11.2**	2.00	0.111	mg/L	2	09/22/22 01:30	EPA300.0		AES
Fluoride*	**0.310**	0.200	0.0194	mg/L	2	09/22/22 01:30	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.012	mg/L as N	1	09/20/22 10:05	EPA353.2		HTB
pH*	**7.24**			pH Units	1	09/09/22 10:20	EPA150.1		JDA
pH Temperature, degrees C	**20.5**			pH Units	1	09/09/22 10:20	EPA150.1		JDA
Total Dissolved Solids*	**1490**	10.0		mg/L	1	09/14/22 18:08	EPA160.1		JDA
Sulfate*	**759**	20.0	2.48	mg/L	20	09/22/22 01:51	EPA300.0		AES
Total Organic Carbon*	**3.38**	0.500	0.175	mg/L	1	09/12/22 23:34	5310C		HTB
Dissolved Metals by ICP									
Aluminum*	<0.100	0.100	0.072	mg/L	2	09/21/22 13:38	EPA200.7		AES
Calcium*	**154**	0.200	0.047	mg/L	2	09/21/22 13:38	EPA200.7		AES
Hardness as CaCO3	**916**	1.32	0.371	mg/L	2	09/21/22 13:38	2340 B		AES
Iron*	**1.75**	0.100	0.071	mg/L	2	09/21/22 13:38	EPA200.7		AES
Magnesium*	**129**	0.200	0.062	mg/L	2	09/21/22 13:38	EPA200.7		AES
Potassium*	**3.71**	2.00	0.130	mg/L	2	09/21/22 13:38	EPA200.7		AES
Silica (Si02)	**16.1**	2.14	0.137	mg/L	2	09/21/22 13:38	Calculation		AES
Silicon	**7.54**	1.00	0.064	mg/L	2	09/21/22 13:38	EPA200.7		AES
Sodium*	**71.6**	2.00	0.211	mg/L	2	09/21/22 13:38	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0012	mg/L	5	09/23/22 09:56	EPA200.8		AES
Cadmium*	<0.0025	0.0025	0.0001	mg/L	5	09/23/22 09:56	EPA200.8		AES
Copper*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 09:56	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 09:56	EPA200.8		AES
Manganese*	**4.61**	0.0025	0.0005	mg/L	5	09/23/22 09:56	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0004	mg/L	5	09/23/22 09:56	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0030	mg/L	5	09/23/22 09:56	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	09/23/22 09:56	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0014	mg/L	5	09/23/22 09:56	EPA200.8		AES

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

MW-7-EAA

2209118-05 (Ground Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAFS									
Mercury*	<100	100	24.8	ng/L	1	09/16/22 11:51	EPA245.7		HTB

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222483 - General Prep - Wet Chem										
Blank (B222483-BLK1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B222483-BS1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	9.97	0.500	mg/L	10.0		99.7	85-115			
LCS Dup (B222483-BSD1)				Prepared & Analyzed: 09/12/22						
Total Organic Carbon	9.97	0.500	mg/L	10.0		99.7	85-115	0.0100	20	
Batch B222516 - General Prep - Wet Chem										
Blank (B222516-BLK1)				Prepared & Analyzed: 09/14/22						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B222516-DUP1)		**Source: 2209106-01**		Prepared & Analyzed: 09/14/22						
Total Dissolved Solids	40.1	10.0	mg/L		50.0			22.0	20	R1
Reference (B222516-SRM1)				Prepared & Analyzed: 09/14/22						
Total Dissolved Solids	475	10.0	mg/L	450		106	85-115			
Batch B222543 - General Prep - Wet Chem										
Reference (B222543-SRM1)				Prepared & Analyzed: 09/09/22						
pH	7.04		pH Units	7.00		101	98.57-101.42			
Batch B222565 - General Prep - Wet Chem										
Blank (B222565-BLK1)				Prepared & Analyzed: 09/19/22						
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 (B222565-BS1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115			
LCS Dup (B222565-BSD1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	100	10.0	mg/L	100		100	85-115	2.02	20	
Batch B222566 - General Prep - Wet Chem										
Blank (B222566-BLK1)				Prepared & Analyzed: 09/19/22						

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

General Chemistry - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222566 - General Prep - Wet Chem (Continued)										
Blank (B222566-BLK1) (Continued)				Prepared & Analyzed: 09/19/22						
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 (B222566-BS1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	103	10.0	mg/L	100		103	85-115			
LCS Dup (B222566-BSD1)				Prepared & Analyzed: 09/19/22						
Alkalinity, Total as CaCO3	102	10.0	mg/L	100		102	85-115	0.976	20	
Batch B222575 - Lachat										
Blank (B222575-BLK1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B222575-BS1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	1.06	0.020	mg/L as N	1.00		106	90-110			
LCS Dup (B222575-BSD1)				Prepared & Analyzed: 09/20/22						
Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00		104	90-110	1.13	20	
Batch B222604 - IC- Ion Chromatograph										
Blank (B222604-BLK1)				Prepared & Analyzed: 09/21/22						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B222604-BS1)				Prepared & Analyzed: 09/21/22						
Chloride	24.9	1.00	mg/L	25.0		99.7	90-110			
Fluoride	2.45	0.100	mg/L	2.50		98.0	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.6	90-110			
LCS Dup (B222604-BSD1)				Prepared & Analyzed: 09/21/22						
Chloride	25.1	1.00	mg/L	25.0		100	90-110	0.484	20	
Fluoride	2.46	0.100	mg/L	2.50		98.5	90-110	0.488	20	
Sulfate	24.5	1.00	mg/L	25.0		98.0	90-110	0.454	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222591 - Dissolved ICP										
Blank (B222591-BLK1)				Prepared & Analyzed: 09/21/22						
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 (B222591-BS1)				Prepared & Analyzed: 09/21/22						
Aluminum	3.89	0.050	mg/L	4.00		97.3	85-115			
Calcium	3.73	0.100	mg/L	4.00		93.3	85-115			
Iron	3.80	0.050	mg/L	4.00		95.0	85-115			
Magnesium	19.5	0.100	mg/L	20.0		97.4	85-115			
Potassium	8.14	1.00	mg/L	8.00		102	85-115			
Silicon	3.99	0.500	mg/L	4.00		99.6	85-115			
Sodium	3.21	1.00	mg/L	3.24		99.2	85-115			
LCS Dup (B222591-BSD1)				Prepared & Analyzed: 09/21/22						
Aluminum	3.94	0.050	mg/L	4.00		98.5	85-115	1.21	20	
Calcium	3.82	0.100	mg/L	4.00		95.5	85-115	2.38	20	
Iron	3.89	0.050	mg/L	4.00		97.3	85-115	2.49	20	
Magnesium	19.7	0.100	mg/L	20.0		98.6	85-115	1.22	20	
Potassium	8.11	1.00	mg/L	8.00		101	85-115	0.407	20	
Silicon	4.04	0.500	mg/L	4.00		101	85-115	1.40	20	
Sodium	3.27	1.00	mg/L	3.24		101	85-115	1.79	20	

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222617 - Dissolved ICPMS										
Blank (B222617-BLK1)				Prepared: 09/22/22 Analyzed: 09/23/22						
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 (B222617-BS1)				Prepared: 09/22/22 Analyzed: 09/23/22						
Arsenic	0.0505	0.0005	mg/L	0.0500		101	85-115			
Cadmium	0.0508	0.0005	mg/L	0.0500		102	85-115			
Copper	0.0491	0.0005	mg/L	0.0500		98.2	85-115			
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115			
Manganese	0.0519	0.0005	mg/L	0.0500		104	85-115			
Molybdenum	0.0508	0.0005	mg/L	0.0500		102	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.7	85-115			
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0510	0.0020	mg/L	0.0500		102	85-115			
LCS Dup (B222617-BSD1)				Prepared: 09/22/22 Analyzed: 09/23/22						
Arsenic	0.0515	0.0005	mg/L	0.0500		103	85-115	1.92	20	
Cadmium	0.0507	0.0005	mg/L	0.0500		101	85-115	0.332	20	
Copper	0.0488	0.0005	mg/L	0.0500		97.6	85-115	0.640	20	
Lead	0.0509	0.0005	mg/L	0.0500		102	85-115	0.671	20	
Manganese	0.0516	0.0005	mg/L	0.0500		103	85-115	0.434	20	
Molybdenum	0.0514	0.0005	mg/L	0.0500		103	85-115	1.02	20	
Selenium	0.257	0.0010	mg/L	0.250		103	85-115	3.08	20	
Uranium	0.0534	0.0005	mg/L	0.0500		107	85-115	1.12	20	
Zinc	0.0508	0.0020	mg/L	0.0500		102	85-115	0.382	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: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	09/27/22 10:55

Dissolved Mercury by CVAFS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B222526 - EPA 245.7										
Blank (B222526-BLK1)				Prepared: 09/15/22 Analyzed: 09/16/22						
Mercury	ND	100	ng/L							
LCS (B222526-BS1)				Prepared: 09/15/22 Analyzed: 09/16/22						
Mercury	1720	100	ng/L	2000		86.2	76-113			
LCS Dup (B222526-BSD1)				Prepared: 09/15/22 Analyzed: 09/16/22						
Mercury	1760	100	ng/L	2000		88.0	76-113	2.01	20	

Notes and Definitions

R1	Duplicate sample RPD exceeded laboratory acceptance criteria. Sample(s) may be difficult to homogenize.
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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Jeremy D Allen, Laboratory Director

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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 LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81326
Phone #: 970 385 4528
Contact Person: TOM BIRD TBIRD@HAYGULCHSERVICES.COM
Email Report to: LANDON BECK
Project Name(optional): ~~LANDO~~
LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MARCUS BENNEY / MICHAEL MCFARLAND

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

ANALYSIS REQUEST

For Lab Use	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:	GCCE G.W. BASELINE
2209-118																	
-01	MW 8 PL	9/8/22	9:15	X							1	2		4			X
-02	MW 8 LM	9/8/22	9:43	X							1	2		4			X
-03	MW 8 MI	9/8/22	10:23	X							1	2		4			X
-04	MW 8 EAA	9/8/22	10:53	X							1	2		4			X
-05	MW 7 EAA	9/8/22	11:38	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 received 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: 9/8/22 Time: 300	Received by: Linda Gumper
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: 8.5°C CHECKED BY LLG 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.