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March 24, 2021

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
1st Quarter 2021

Ms. Binns:

Please find enclosed a copy of quarterly water analysis reports for the 1st quarter of 2021 for the following water monitoring locations:

Wiltse Well
#1 Up-gradient Monitoring Well
#2 Down-gradient Monitoring Well
Hay Gulch Irrigation Ditch, Down-gradient
Hay Gulch Irrigation Ditch, Up-gradient & Blind Duplicate MW-98-SW
MW-1-A, MW-1-C
MW-3-MI, MW-3-A, MW-3-C & Blind Duplicate MW-99-A (MW-3-A)
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 & Blind Duplicate MW-99-EAA (MW-8-EAA)

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

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

Sincerely,

Sarah Vance
Environmental Manager
GCC Energy, LLC

GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Upgradient

Year		2016										2017						2018				2019				2020				2021
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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	5	8	12	2
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	5/14	8/9	11/8	2/28	5/23	8/16	11/13	2/13	5/13	8/13	12/3	2/22
Lab Analysis (Y/N)		Y	N	N	Y	N	N	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																														
Flow Rate	cfs	0.7	1.0	1.2	1.6	1.0	1.0	1.1	1.0	NM	1.0	NM	0.8	0.3	2.7	NM	NM	NM	0.6	0.7	0.7	0.3	3.6	1.2	NM	NM	0.9	0.1	1.0	0.1
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	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
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	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
Specific Conductance	µS/cm	247	323	197	141	189	207	233	210	258	234	687	455	454	106	549	868	1041	304	307	307	752	306	275	682	902	314	528	434	1024
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	-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
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	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
Lab Analytical Results:																														
Hardness as CaCO3	mg/L	128			80.9			119		152				257	69.2	316	456	489	101	153	149	393	136	125	372	405	150	287	213	588
pH (Lab)	SU	8.17			8.04			8.16		8.19				8.06	8.06	8.22	8.31	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
Total Dissolved Solids (Lab)	mg/L	170			75			165		180				285	65.0	390	650	700	140	215	175	535	205	225	635	587	255	340	160	685
Total Suspended Solids	mg/L	30.0			117			17.0		4.8				2.50	63.5	2.00	5.75	6.01	106	6.25	14.8	22.0	113	20.0	5.38	<4.0	140	19.5	13.2	55
Calcium	mg/L	33.5			24			33.0		38.4				53.6	20.8	64.9	86.6	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
Magnesium	mg/L	10.9			5.08			9.01		13.7				29.8	4.21	37.5	58.3	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
Sodium	mg/L	4.46			2.19			3.90		6				10.9	1.97	13.8	27.1	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
Potassium	mg/L	<1			<1			1.35		<1.00				<1.00	1.75	2.15	3.05	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
Alkalinity, Total	mg/L	160			65			98.0		118				185	55.0	177	305	244	67	111	120	260	390	103	233	315	102	220	137	340
Alkalinity, Bicarbonate	mg/L	160			65			94.0		118				185	55.0	161	285	244	67	107	120	260	390	103	233	295	102	220	131	340
Alkalinity, Carbonate	mg/L	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	16.0	20.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	5.77			2.07			4.32		7.92				22.7	1.76	30.8	48.2	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
Fluoride	mg/L	0.213			0.208			0.223		0.208				0.215	0.195	0.265	0.283	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
Sulfate as SO4	mg/L	42.1			17.7			29.0		45.3				87.7	15.0	99.0	179	229	34	49.7	45.0	128	47.2	35.6	107	151	44.0	86.3	64.4	211
Total Organic Carbon (TOC)	mg/L	1.41			1.6			2.21		1.14				2.49	1.15	1.90	1.99	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
Oil & Grease	mg/L	<5.00			<5.00			<5.00		<5.00				<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
Nitrate/Nitrite as N	mg/L	<0.02			0.028			<0.020		<0.020				0.053	<0.020	0.045	0.088	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
Sodium Adsorption Ratio (SAR)	no unit	0.17			0.1			0.16		0.21				0.30	0.10	0.34	0.55	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
Ammonia as N ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	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	<0.0500	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
Arsenic	mg/L	<0.0005			<0.0005			<0.0005		<0.0005				0.0005	<0.0005	0.0009	0.0007	<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
Cadmium	mg/L	<0.0001			<0.0001			<0.0001		<0.0001				<0.0001	<0.0001	<0.0001	<0.0001	<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
Copper	mg/L	0.0006			0.0011			0.0011		0.0005				0.0008	0.0013	0.0006	0.0005	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
Iron	mg/L	<0.05			<0.05			<0.05		<0.050				<0.050	<0.050	<0.050	<0.050	<0.050	<0.05	<0.05	<0.05	0.255	0.055	<0.050	0.316	0.551	<0.050	<0.050	<0.05	0.103
Lead	mg/L	<0.0005			<0.0005			<0.0005		<0.0005				<0.0005	<0.0005	<0.0005	<0.0005	<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
Manganese	mg/L	0.0059			0.0035			0.0043		0.0047				0.0070	0.0024	0.0098	0.0049	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
Mercury	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	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	<0.0005			0.0009			0.0007		0.0008				0.0006	0.0009	0.0012	0.0008	<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
Selenium	mg/L	<0.001			<0.001			<0.001		<0.0010				0.0023	<0.0010	<0.0010	0.0010	<0.0050	<0.001	<0.001	<0.001	0.0017	<0.0010	<0.0010	<0.0010	<0.001	<0.0010	<0.0010	<0.001	0.0018
Silica (Si02)	mg/L	7.78			8.23			10.5		9.71				9.04	7.71	9.45	10.1	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
Silicon	mg/L	3.64			3.85			4.89		4.54				4.23	3.60	4.42	4.71	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
Uranium	mg/L	0.0002			0.0001			0.0002		0.0003				0.0003	0.0001	0.0006	0.0009	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
Zinc	mg/L	<0.001			<0.001			<0.001		<0.0010				0.0022	<0.0020	<0.0040	<0.0020	<0.0100	<0.002	0.0033	<0.002	0.0044	<0.0020	<0.0020	0.0033	0.0087	<0.0020	<0.0020	<0.002	<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
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

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)

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
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
Field Parameters:																														
Flow Rate	cfs	1.1	1.2	1.1	NM	1.1	1.1	NM	0.8	NM	NM	NM	0.8	0.3	0.3	NM	dry	NM	NM	NM	0.5	0.25	0.3	1.05	NM	NM	1.5	0.125	NM	0.001
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
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
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
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
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
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
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
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
Total Suspended Solids	mg/L	27.3			18			4.20		12.4				12.7	3.00	<0.500		49.5	<2	5.67	4.40	18.4	153.0	22.5	<4.00	4.20	17.5	28.6	10.5	28.0
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
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
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
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
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
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
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
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
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
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
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
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
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
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	<0.02	0.148
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
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
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
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	<0.05	<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
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
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
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	<0.05	<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
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
Mercury	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
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
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	<0.001	0.0015
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
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
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
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	<0.002	<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
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

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)

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**
Quarter		Q1	Q2			Q3			Q4			Q1		Q2	Q3	Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
Sodium	***mg/L***	199			196			210		189				167	189	203	195	183	191	154	212	196	172	167	198	183	178	193	196	204
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
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
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
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
Alkalinity, Hydroxide	***mg/L***	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	***mg/L***	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
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
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
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
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
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
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
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
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
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
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
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
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
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
Mercury	***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
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
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
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
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
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
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
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
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

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)**

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**
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
Field Parameters:																															
Purge Flow Rate	***gpm***	0.5	0.5	0.5	0.5	0.5	0.5	0.5	NM	7.2	2.0	NM	NM	NM	NM	NM	NM	0.1	1.0	0.1	1.0	0.5	0.3	0.5	0.3	0.5	0.3	0.3	0.3	0.1	0.5
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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
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***	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
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
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
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
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
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
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
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
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
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
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
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
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
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
Mercury	***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
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
Selenium	***mg/L***	<0.001			<0.001			<0.001		0.0011				0.0045	<0.001	<0.0010	<0.0010	0.0012	<0.001	0.0012	0.0015	0.0013	0.0021	0.001	0.0011	0.0011	<0.0010	0.0012	<0.002	0.0012	0.0069
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
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
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
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
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
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

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)**

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						2018				2019				2020				2021
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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	5	8	12	2
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	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
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
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	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
Total Purged	gal	5850	4228	4229	3686	2844	2979	2637	2724	2992	2916	3595	3580	3560	2980	2712	2423	2700	2890	2783	2747	3017	3200	3010	3058	3825	3495	3200	3030	2920
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	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
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	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
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	7.30	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
Specific Conductance	µS/cm	2043	1633	1805	1768	1478	1602	1941	1937	2014	2036	2262	2276	2085	1869	2074	2190	2232	2144	2072	2167	2170	2151	1964	1970	2171	2017	1450	1984	1739
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	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
Lab Analytical Results:																														
Hardness as CaCO3	mg/L	990			1050			1030		963				1040	1060	1140	1150	1090	1160	1130	1180	1150	1080	1080	1060	982	1060	1070	1130	1090
pH (Lab)	SU	7.22			7.34			7.29		7.36				7.22	7.46	7.30	7.33	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
Total Dissolved Solids (Lab)	mg/L	1580			1480			1520		1520				1480	1510	1680	1740	1740	1740	1750	1720	1710	1670	1520	1480	1600	1560	1580	1540	1550
Calcium	mg/L	197			208			206		186				205	211	219	226	211	216	221	230	226	214	214	208	191	206	206	215	208
Magnesium	mg/L	121			128			126		121				128	129	143	142	136	150	139	147	143	132	132	132	123	132	136	144	138
Sodium	mg/L	95.9			75.2			80.7		82.4				110	87.5	80.7	83.4	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
Potassium	mg/L	4.64			4.56			4.90		4.42				4.61	4.79	4.62	<5.00	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
Alkalinity, Total	mg/L	460			500			470		450				410	445	510	475	445	435	463	505	515	469	474	460	460	431	475	470	480
Alkalinity, Bicarbonate	mg/L	440			500			470		450				410	445	510	475	445	435	463	505	515	469	474	460	460	431	475	470	480
Alkalinity, Carbonate	mg/L	20.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	81.0			76.3			62.3		70.1				72.5	72.5	68.7	68.9	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
Fluoride	mg/L	0.285			<0.5			<0.5		0.3				<0.500	0.332	<0.500	<0.500	<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
Sulfate as SO4	mg/L	671			595			656		676				731	702	779	772	832	714	733	741	801	709	627	627	711	633	704	728	683
Total Organic Carbon (TOC)	mg/L	3.54			4.1			3.15		3.02				3.40	3.54	3.34	3.26	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
Nitrate/Nitrite as N	mg/L	0.456			0.891			1.08		0.965				0.492	1.07	1.80	1.94	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
Ammonia as N ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	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	<0.0500	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.05			<0.05			<0.05		<0.050				<0.050	<0.1	<0.050	<0.250	<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
Arsenic	mg/L	<0.0025			<0.0025			0.0005		0.0008				0.0009	0.0006	0.0005	0.0029	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
Cadmium	mg/L	<0.0005			<0.0005			<0.0005		<0.0001				<0.0001	<0.0001	<0.0001	<0.0005	<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
Copper	mg/L	0.0018			0.0024			0.0020		0.0038				0.0023	0.0019	0.0025	0.0097	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
Iron	mg/L	0.100			<0.05			0.060		0.136				0.286	0.161	<0.050	<0.250	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
Lead	mg/L	<0.0025			<0.0025			<0.0025		<0.0005				<0.0005	<0.0005	<0.0005	<0.0025	<0.0005	<0.0005	<0.0005	<0.001	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.001	<0.0005	<0.0025
Manganese	mg/L	0.673			0.857			0.756		0.608				0.440	0.797	0.881	4.50	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
Mercury	mg/L	<0.0002			<0.0002			<0.0002		<0.0002				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	<0.0025			<0.0025			0.0017		0.0016				0.0016	0.0021	0.0021	0.0093	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
Selenium	mg/L	<0.0050			<0.0050			0.0013		0.0023				0.0027	0.0019	0.0016	0.0087	0.0027	0.0025	0.0025	<0.002	0.0025	0.0016	<0.0020	<0.0020	<0.0020	<0.0050	<0.002	0.0022	<0.0050
Silica (Si02)	mg/L	13.9			16.1			16.4		14.3				14.7	15.5	16.1	13.4	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
Silicon	mg/L	6.51			7.53			7.67		6.69				6.85	7.22	7.54	6.29	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
Uranium	mg/L	0.0029			0.0021			0.0023		0.0026				0.0024	0.0021	0.0021	0.0110	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
Zinc	mg/L	0.0156			0.0364			0.0301		0.0269				0.0194	0.026	0.0208	0.0855	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
Radium 226 ^	pCi/L	0.7 +/- 0.1			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

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)

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**
Quarter		Q4	Q1			Q2			Q3			Q4			Q1		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
Field Parameters:																													
Purge Flow Rate	***gpm***	0.5	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	9.4	NM	0.1	1.5	2.0	1.0	1.1	1.0	1.0	0.3	1.0	0.3	0.3	0.1	0.3
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
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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	***mg/L***	855			710			715			750		775			740	730	695	770	795	695	695	715	705	685	700	665	685
Calcium	***mg/L***	147			118			121			102		118			110	108	102	124	122	110	106	123	112	101	111	122	126
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
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
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
Alkalinity, Total	***mg/L***	545			465			415			465		475			460	425	410	460	455	445	455	432	435	416	485	457	475
Alkalinity, Bicarbonate	***mg/L***	545			465			415			465		475			460	425	410	460	455	445	455	432	435	416	485	457	475
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
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
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
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
Sulfate as SO4	***mg/L***	240			229			192			205		204			222	190	169	201	221	186	212	190	193	181	179	187	191
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
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
Ammonia as N ^	***mg/L***	NA			NA			NA			NA		NA			NA	NA	NA	NA	NA	NA	NA	0.528	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
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
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
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
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
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
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
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
Mercury	***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
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
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
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
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
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
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	<0.002	<0.0040	<0.0040	<0.002	<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)**

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
Quarter		Q2	Q3				Q4			Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
Field Parameters:																											
Purge Flow Rate	gpm	NM	NM*	NM*	NM	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	***	0.1	0.1	0.1	0.12	0.1	0.1	0.3	0.25	0.3	0.1	0.1	0.1
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
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
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
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
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
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
Lab Analytical Results:																											
Hardness as CaCO3	mg/L	124				133		130			159			156			160	174	159	153	148	150	159	165	161	168	168
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
Total Dissolved Solids (Lab)	mg/L	975				1080		1120			1100			1150			1040	1130	1160	1150	1150	1140	1190	1150	1150	1170	1250
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
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
Sodium	mg/L	324				329		325			348			327			333	358	357	319	348	333	337	349	348	353	357
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
Alkalinity, Total	mg/L	375				450		380			415			353			385	395	375	355	368	420	360	340	325	366	400
Alkalinity, Bicarbonate	mg/L	375				450		380			415			353			385	395	375	355	368	420	360	340	325	366	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	2.75				2.16		<5.00			2.19			<5			2.12	2.20	2.74	2.33	2.72	2.66	2.74	2.71	2.74	2.88	2.73
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
Sulfate as SO4	mg/L	427				432		511			518			522			515	511	508	494	537	495	506	532	510	508	553
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
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
Ammonia as N ^	mg/L	NA				NA		NA			NA			NA			NA	NA	NA	NA	NA	0.387	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
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
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
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
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
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
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
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
Mercury	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
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
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
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
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
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
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

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)

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
Quarter		Q2	Q3			Q4			Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
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
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	*mg/L*	<0.0002																								
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)**

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**
Quarter		Q2	Q3				Q4			Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
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	0.1	0.06	0.02	0.03	0.01	0.01	0.10	0.05	0.05	0.05
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
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
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
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
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
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
Lab Analytical Results:																												
Hardness as CaCO3	***mg/L***	498				1290		1180			1190			1130			1120	1180	1010	1820	1840	1700	1600	1590	1400	1420	1320
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
Total Dissolved Solids (Lab)	***mg/L***	2020				2440		2360			2360			2340			2170	2200	1960	2880	2890	2750	2610	2460	2420	2450	2330
Calcium	***mg/L***	96.0				234		216			219			203			203	219	188	340	342	318	301	294	248	265	241
Magnesium	***mg/L***	62.8				172		155			156			150			148	154	131	237	240	219	207	207	189	183	173
Sodium	***mg/L***	506				242		253			260			239			239	255	265	146	119	119	143	155	168	194	206
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
Alkalinity, Total	***mg/L***	530				700		540			570			580			560	410	525	530	518	505	515	490	445	520	580
Alkalinity, Bicarbonate	***mg/L***	530				700		540			570			580			560	410	525	530	518	505	515	490	445	520	580
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***	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
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
Sulfate as SO4	***mg/L***	1090				1350		1230			1160			1210			1090	1080	1070	1630	1730	1520	1400	1370	1280	1180	1150
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
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
Ammonia as N ^	***mg/L***	NA				NA		NA			NA			NA			NA	NA	NA	NA	NA	0.140	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
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
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
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
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
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
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
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
Mercury	***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
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
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
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
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
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
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

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)

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
Quarter		Q1	Q2	Q3		Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Month		3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2
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
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
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
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	*mg/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)**

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GCC Energy Hydrologic Monitoring Data

MW-2-MI																									
Year		2017							2018							2019				2020				2021
Quarter		Q1	Q2	Q3		Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Month		3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2
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
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
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
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*																								
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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)**
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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-C																									
Year		2017							2018							2019				2020				2021
Quarter		Q1	Q2	Q3		Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Month		3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2
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
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
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
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	*mg/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)**

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-A																									
Year		**2017**								**2018**							**2019**				**2020**				**2021**
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
Field Parameters:																									
Purge Flow Rate	***gpm***	0.5	NM	NM	NM	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.1	0.1	0.1	0.1
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
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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	***mg/L***	1630	1670			1630		1690			1680			1670	1600	1540	1500	1530	1520	1510	1500	1460	1380	1460	1410
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
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
Sodium	***mg/L***	566	585			589		551			562			542	562	605	543	525	553	528	520	507	510	505	536
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
Alkalinity, Total	***mg/L***	530	470			500		490			430			480	480	475	540	450	459	420	460	430	440	470	520
Alkalinity, Bicarbonate	***mg/L***	380	470			440		460			360			480	420	385	330	430	423	420	460	400	440	450	520
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
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
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
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
Sulfate as SO4	***mg/L***	729	802			840		730			812			756	706	682	716	699	724	633	637	656	624	644	600
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
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
Ammonia as N ^	***mg/L***	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.354	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
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
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
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
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
Iron	***mg/L***	<0.050	<0.050			<0.050		<0.250			<0.100			<0.05	<0.05	<0.100	<0.100	<0.05	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250
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
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
Mercury	***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
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
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
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
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
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
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

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)**

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**
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
Field Parameters:																										
Purge Flow Rate	***gpm***	0.5	NM	NM	NM	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.5	0.3	0.1	0.1	0.1
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
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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	***mg/L***	1550	1120			1140		1080			1170			1210	1110	1120	1120	1170	1010	1130	1130	1130	1060	1160	1120
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
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
Sodium	***mg/L***	420	430			440		411			459			417	446	476	434	419	454	437	437	427	431	431	468
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
Alkalinity, Total	***mg/L***	740	675			700		660			700			680	730	720	685	755	720	690	705	680	625	770	690
Alkalinity, Bicarbonate	***mg/L***	510	555			600		570			600			500	630	610	485	605	590	610	645	550	465	690	450
Alkalinity, Carbonate	***mg/L***	230	120			100		90.0			100			180	100	110	200	150	130	80.0	60.0	130	160	80	240
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
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
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
Sulfate as SO4	***mg/L***	165	241			247		254			245			250	226	230	232	229	236	224	227	231	222	110	223
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
Nitrate/Nitrite as N	***mg/L***	<0.020	<0.020			<0.020		<0.020			<0.020			<0.02	<0.02	<0.02	<0.020	<0.020	<0.020	<0.020	0.034	<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
Ortho-Phosphate as P ^	***mg/L***	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.348	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
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
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
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
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
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
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
Mercury	***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
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
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
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
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
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
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

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)**

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**
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
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
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
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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	***mg/L***	2130	2360			3070		3310			3540			3610	3520	3360	3300	3440	3500	3390	3220	3180	3170	3280	3200
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
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
Sodium	***mg/L***	796	890			1100		1130			1200			1350	1220	1460	1270	1100	1360	1300	1280	1240	1250	1250	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
Alkalinity, Total	***mg/L***	1490	1570			1690		1880			1910			1760	1730	2050	2000	2110	2190	2130	2160	2050	1820	2090	2170
Alkalinity, Bicarbonate	***mg/L***	1360	1480			1650		1830			1810			1600	1670	1900	1830	2000	2020	2070	2000	1800	1690	1970	1710
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
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
Chloride	***mg/L***	182	330			477		506			549			544	524	561	577	575	620	542	549	555	552	578	574
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
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
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
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	<0.02	<0.020
Ammonia as N ^	***mg/L***	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.500	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
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
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
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
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
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
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
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
Mercury	***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
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
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
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
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
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
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

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)**

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**
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
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
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
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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	***mg/L***	1470	1470			1450		1500			1490			1470	1430	1350	1450	1410	1540	1490	1500	1480	1460	1560	1370
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
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
Sodium	***mg/L***	515	537			513		511			507			528	531	568	535	515	548	529	551	498	533	531	565
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
Alkalinity, Total	***mg/L***	635	560			630		590			530			560	575	575	545	565	575	544	560	585	605	538	620
Alkalinity, Bicarbonate	***mg/L***	635	560			590		560			490			560	555	575	505	544	535	528	560	545	565	530	620
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
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
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
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
Sulfate as SO4	***mg/L***	594	588			783		594			579			561	522	450	567	584	615	559	557	580	542	607	561
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
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
Ammonia as N ^	***mg/L***	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.312	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
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
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
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
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
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
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
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
Mercury	***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
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
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
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
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
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
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

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)**

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**
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
Field Parameters:																										
Purge Flow Rate	***gpm***	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.1	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
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
Depth to Water	***ft bgs***	378.2	330.15	330.94	330.85	330.81	330.80	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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	***mg/L***	1160	1170			1180		1180			1220			1140	1120	1100	1130	1130	1140	1120	1110	1110	1070	1170	1130
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
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
Sodium	***mg/L***	408	458			449		452			447			471	470	500	462	458	496	477	441	460	459	458	476
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
Alkalinity, Total	***mg/L***	965	915			1100		985			965			955	968	995	510	890	970	978	985	1030	1020	1010	990
Alkalinity, Bicarbonate	***mg/L***	775	825			880		885			875			865	896	885	420	650	880	886	895	935	940	965	910
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
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
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
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
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
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
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
Ammonia as N ^	***mg/L***	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.240	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
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
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
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
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
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
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
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
Mercury	***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
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
Selenium	***mg/L***	<0.0010	0.0012			<0.0050		<0.0050			<0.0010			0.0022	0.0113	<0.0020	0.002	<0.001	<0.0010	<0.0020	<0.0020	<0.0010	<0.005	<0.004	0.0143
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
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
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
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

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)**

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**
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
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
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
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
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
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
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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	***mg/L***	3230	4050			3750		3780			3730			3660	3650	3590	3580	3590	3610	3610	3580	3570	3510	3610	3720
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
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
Sodium	***mg/L***	908	1510			1490		1400			1410			1400	1410	1590	1410	1370	1440	1430	1440	1390	1400	1400	1520
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
Alkalinity, Total	***mg/L***	1250	2360			2780		2680			2600			2410	2480	2450	2470	2550	2500	2470	2480	2460	2500	2950	2470
Alkalinity, Bicarbonate	***mg/L***	1250	2360			2780		2640			2600			2330	2480	2450	2470	2350	2390	2410	2420	2340	2390	2880	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
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
Chloride	***mg/L***	181	550			587		608			592			573	533	590	575	554	580	525	528	555	543	565	557
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
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
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
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
Ammonia as N ^	***mg/L***	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.424	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
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
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
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
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
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
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	<0.005	<0.005	<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
Mercury	***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
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
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
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
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
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	<0.005	<0.0050	<0.0050
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

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)**

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**
Quarter		Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3	Q4	Q1
Month		12	1	2	3	4	5	6	7	8	9	11	2	5	8	11	2
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
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	Y	Y	Y	Y	Y	Y
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
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
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
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
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
Specific Conductance	***µS/cm***	6573	6053	6072	6107	6012	6057	5725	5598	5562	5451	5108	5043	4779	4339	4656	4051
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
Lab Analytical Results:																	
Hardness as CaCO3	***mg/L***	4360		4190			3920			3540		3070	3200	2780	2690	2710	2660
pH (Lab)	***SU***	7.10		6.85			6.77			6.85		6.87	6.9	6.93	6.66	7.04	7.20
Total Dissolved Solids (Lab)	***mg/L***	6520		6520			120*			6080		5210	4980	4670	4490	4570	4480
Calcium	***mg/L***	615		559			553			492		431	467	400	398	406	398
Magnesium	***mg/L***	687		678			617			560		484	495	431	411	413	404
Sodium	***mg/L***	294		283			296			304		276	296	274	261	273	272
Potassium	***mg/L***	15.0		14.4			12.4			12.8		11.1	<20.0	10.6	10.3	10.5	11.1
Alkalinity, Total	***mg/L***	160		160			143			183		220	215	233	236	246	245
Alkalinity, Bicarbonate	***mg/L***	160		160			143			183		220	215	233	236	246	245
Alkalinity, Carbonate	***mg/L***	<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
Chloride	***mg/L***	97.4		28.6			27.3			29.9		29.6	28.4	29.0	26.0	26.6	24.9
Fluoride	***mg/L***	2.83		<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
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA		2.72	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	***mg/L***	NA		NA			NA			NA		<0.0500	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
Arsenic	***mg/L***	<0.0025		<0.0025			0.0009			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<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
Copper	***mg/L***	0.0116		0.0081			0.0035			0.0039		0.0017	0.0028	<0.0050	<0.0025	<0.0050	<0.0025
Iron	***mg/L***	1.37		3.75			3.93			3.22		2.72	1.95	1.38	1.10	1.24	1.17
Lead	***mg/L***	<0.0025		<0.0025			<0.0005			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<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
Mercury	***mg/L***	<0.0002		<0.0002			<0.0002			<0.0002		<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	***mg/L***	<0.0025		<0.0025			<0.0005			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.005	<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
Silica (Si02)	***mg/L***	12.3		11.9			14.3			13.4		12.5	<21.4	11.0	11.4	12.3	11.9
Silicon	***mg/L***	5.77		5.57			6.69			6.28		5.83	<10.00	5.17	5.35	5.76	5.58
Uranium	***mg/L***	<0.0005		<0.0005			<0.0001			<0.0005		<0.0005	<0.0025	<0.0050	<0.0025	<0.0050	<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

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)**

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
Quarter		Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3	Q4	Q1
Month		12	1	2	3	4	5	6	7	8	9	11	2	5	8	11	2
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
Lab Analysis (Y/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
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	*mg/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)**

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**
Quarter		Q4	Q1			Q2				Q3			Q4	Q1	Q2	Q3	Q4	Q1
Month		12	1	2	3	4	5	5	6	7	8	9	11	2	5	8	11	2
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
Lab Analysis (Y/N)		Y	N	Y	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
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	***mg/L***	<0.0002		<0.0002														
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)**

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**
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2
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
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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
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
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
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
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
Specific Conductance	***µS/cm***	6011	3784	3503	1461	1164	1296	1400	1272	1532	2104	2267	2113	2283	2287	2442	2495	2136
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
Lab Analytical Results:																		
Hardness as CaCO3	***mg/L***	2260		1270			431			621			843	1060	965	1130	1160	1120
pH (Lab)	***SU***	7.60		7.52			7.47			7.59			7.32	7.43	7.18	6.95	7.45	7.49
Total Dissolved Solids (Lab)	***mg/L***	5100		2840			875			1150			1630	1840	1840	2040	2020	1990
Calcium	***mg/L***	367		216			75.9			103			136	173	150	179	184	176
Magnesium	***mg/L***	325		177			58.7			88.3			122	153	143	165	171	166
Sodium	***mg/L***	459		248			129			153			172	203	188	194	194	188
Potassium	***mg/L***	173		64.5			14.0			13.7			11.3	11	7.82	7.20	6.04	5.96
Alkalinity, Total	***mg/L***	205		315			371			381			355	320	353	335	329	336
Alkalinity, Bicarbonate	***mg/L***	205		315			371			381			355	320	353	335	329	336
Alkalinity, Carbonate	***mg/L***	<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
Chloride	***mg/L***	256		43.7			5.73			8.70			11.4	11	11.7	12.2	12.4	11
Fluoride	***mg/L***	0.530		<0.500			0.324			<0.500			<0.500	0.352	<0.500	0.346	0.356	0.318
Sulfate as SO4	***mg/L***	3050		1790			338			492			830	951	904	1260	1170	1020
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			1.99	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	***mg/L***	NA		NA			NA			NA			<0.0500	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
Arsenic	***mg/L***	0.0039		0.0049			0.0036			0.0038			0.0035	0.0044	0.0034	0.0038	0.0036	0.0038
Cadmium	***mg/L***	<0.0005		<0.0005			<0.0001			<0.0001			<0.0002	<0.0002	<0.0005	<0.0003	<0.0005	<0.0005
Copper	***mg/L***	0.0135		0.0064			0.0017			0.0018			0.0069	0.0014	<0.0025	<0.0015	<0.0025	<0.0025
Iron	***mg/L***	<0.250		<0.250			<0.050			<0.050			<0.100	<0.250	<0.250	<0.150	<0.250	<0.250
Lead	***mg/L***	<0.0025		<0.0025			<0.0005			<0.0005			<0.0010	<0.001	<0.0025	<0.0015	<0.0025	<0.0025
Manganese	***mg/L***	0.383		0.223			0.0692			0.148			0.166	0.184	0.171	0.267	0.292	0.253
Mercury	***mg/L***	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	***mg/L***	0.0490		0.0169			0.0037			0.0025			0.0022	0.002	<0.0025	0.0023	<0.0025	<0.0025
Selenium	***mg/L***	0.0080		<0.0050			<0.0010			<0.0010			<0.0020	<0.002	<0.0050	<0.0030	<0.0050	0.0151
Silica (Si02)	***mg/L***	10.5		13.5			17.0			17.4			15.9	17.1	15.1	14.7	16.0	15.6
Silicon	***mg/L***	4.91		6.29			7.96			8.12			7.43	7.97	7.07	6.88	7.47	7.3
Uranium	***mg/L***	0.0230		0.0075			0.0039			0.0054			0.0047	0.0055	0.0043	0.0046	0.0042	0.0039
Zinc	***mg/L***	0.0323		<0.0100			<0.0020			<0.0040			<0.0040	<0.004	<0.0100	0.0069	<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)

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**
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2
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
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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
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
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
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
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
Specific Conductance	***µS/cm***	2001	1910	1910	1926	1912	1767	1836	1885	1890	1913	1936	1922	1993	1890	1772	1628	1672
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
Lab Analytical Results:																		
Hardness as CaCO3	***mg/L***	936		1030			982			997			1020	963	1020	1080	939	1090
pH (Lab)	***SU***	7.2		7.37			7.17			7.09			6.99	6.92	6.89	7.23	7.06	6.99
Total Dissolved Solids (Lab)	***mg/L***	1460		1480			1490			1480			1530	1520	1430	1480	1450	1590
Calcium	***mg/L***	170		179			171			173			162	165	175	183	157	186
Magnesium	***mg/L***	124		142			135			137			144	134	142	150	133	152
Sodium	***mg/L***	75.3		81.3			75.0			75.2			74.9	73.7	76.0	80.9	73.4	81.4
Potassium	***mg/L***	3.87		3.9			<5.00			3.74			3.74	3.82	<5.00	<5.00	<5.00	4.25
Alkalinity, Total	***mg/L***	380		367			405			392			350	357	355	268	430	420
Alkalinity, Bicarbonate	***mg/L***	380		367			405			392			425	357	355	268	430	420
Alkalinity, Carbonate	***mg/L***	<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
Chloride	***mg/L***	11.9		10.7			10.8			10.9			11.6	10.3	10.7	10.2	10.1	10.4
Fluoride	***mg/L***	<0.500		0.332			0.322			0.322			<0.500	0.354	0.330	0.322	0.322	0.300
Sulfate as SO4	***mg/L***	732		736			733			844			746	774	803	767	742	757
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			0.178	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	***mg/L***	NA		NA			NA			NA			<0.0500	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
Arsenic	***mg/L***	0.0014		0.0015			0.0013			0.0016			0.0013	0.0013	0.0011	<0.0015	<0.0025	0.0016
Cadmium	***mg/L***	<0.0001		<0.0002			<0.0001			<0.0001			<0.0002	<0.0002	<0.0002	<0.0003	<0.0005	<0.0001
Copper	***mg/L***	0.0003		0.0018			0.0011			0.0008			0.0006	<0.0010	<0.0010	<0.0015	<0.0025	0.0007
Iron	***mg/L***	1.82		1.95			1.81			2.12			2.00	1.84	1.71	2.16	2.15	2.08
Lead	***mg/L***	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.001	<0.0010	<0.0015	<0.0025	<0.0005
Manganese	***mg/L***	3.72		4.49			4.01			4.22			4.76	4.86	3.63	4.49	4.42	5.22
Mercury	***mg/L***	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	***mg/L***	0.0008		0.0011			0.0007			0.0009			<0.0010	0.001	<0.0010	<0.0015	<0.0025	0.0006
Selenium	***mg/L***	<0.0020		<0.0020			<0.0010			0.0011			<0.0020	<0.002	<0.0020	<0.0030	<0.0050	<0.0010
Silica (Si02)	***mg/L***	16.6		16.1			16.1			16.9			16.8	16.4	15.8	16.9	14.9	17.7
Silicon	***mg/L***	7.75		7.52			7.55			7.90			7.83	7.67	7.37	7.91	6.96	8.28
Uranium	***mg/L***	0.0021		0.0018			0.0017			0.0018			0.0020	0.0019	0.0016	0.0018	<0.0025	0.0018
Zinc	***mg/L***	<0.0050		<0.0040			0.0021			0.0020			<0.0040	<0.004	<0.0040	<0.0060.	<0.0100	0.0022

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)**

1. *"<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.*

2. *Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.*

3. *Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.*

GCC Energy Hydrologic Monitoring Data

MW-8-EAA																		
Year		**2018**	**2019**											**2020**				**2021**
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2
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
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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
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
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
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
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
Specific Conductance	***µS/cm***	1781	1696	1720	1725	1729	1628	1676	1699	172	1739	1774	1739	1758	1760	1675	1716	1570
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
Lab Analytical Results:																		
Hardness as CaCO3	***mg/L***	870		861			864			883			867	861	907	937	810	914
pH (Lab)	***SU***	7.28		7.36			7.13			7.05			7.01	7.11	6.96	7.18	7.1	7.03
Total Dissolved Solids (Lab)	***mg/L***	1220		1290			1240			1280			1380	1290	1260	1280	1310	1400
Calcium	***mg/L***	152		151			148			154			143	149	153	160	134	156
Magnesium	***mg/L***	119		118			120			121			124	119	127	130	115	127
Sodium	***mg/L***	81.7		82.6			77.2			78.6			77.1	77.2	77.7	82.9	74.3	80.9
Potassium	***mg/L***	3.80		3.27			3.55			3.18			3.52	3.8	<5.00	<5.00	<5.00	3.63
Alkalinity, Total	***mg/L***	400		435			450			431			445	404	385	288	480	450
Alkalinity, Bicarbonate	***mg/L***	400		435			450			431			445	404	385	288	480	450
Alkalinity, Carbonate	***mg/L***	<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
Chloride	***mg/L***	9.83		10.5			10.3			11.1			11.0	10.2	10.3	10.1	11.3	10.4
Fluoride	***mg/L***	0.380		0.370			0.338			0.342			<0.500	0.33	0.346	0.336	0.334	0.292
Sulfate as SO4	***mg/L***	533		559			606			643			577	602	625	605	582	609
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
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
Ammonia as N ^	***mg/L***	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
Aluminum	***mg/L***	<0.100		<0.100			<0.050			<0.100			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150
Arsenic	***mg/L***	0.0020		0.0018			0.0018			0.0021			0.0018	0.0017	0.0017	0.0018	<0.0025	0.0018
Cadmium	***mg/L***	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0003	<0.0005	<0.0003
Copper	***mg/L***	0.0004		0.0024			0.0023			0.0008			0.0010	0.001	<0.0010	<0.0015	<0.0025	<0.0015
Iron	***mg/L***	2.12		2.13			2.42			2.46			2.30	2.28	2.29	2.31	0.762	2.33
Lead	***mg/L***	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.001	<0.0010	<0.0015	<0.0025	<0.0015
Manganese	***mg/L***	3.17		3.52			3.06			3.37			3.39	3.7	3.36	3.54	3.81	3.55
Mercury	***mg/L***	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	***mg/L***	0.0009		0.0011			0.0008			0.0011			0.0008	<0.0010	<0.0010	<0.0015	<0.0025	<0.0015
Selenium	***mg/L***	<0.0020		<0.0020			0.0010			0.0013			<0.0010	<0.0020	<0.0020	<0.0030	<0.0050	0.0046
Silica (Si02)	***mg/L***	16.3		15.3			15.7			16.1			15.9	15.7	15.0	16.1	14.2	16.0
Silicon	***mg/L***	7.63		7.15			7.32			7.52			7.42	7.32	7.02	7.53	6.63	7.48
Uranium	***mg/L***	0.0021		0.0017			0.0016			0.0018			0.0019	0.0019	0.0017	0.0017	<0.0025	0.0016
Zinc	***mg/L***	<0.0050		<0.0040			<0.0020			<0.0020			<0.0020	<0.0040	<0.0040	<0.0060	<0.0100	<0.0060

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)**

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**
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2
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
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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
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
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
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
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
Specific Conductance	***µS/cm***	1786	1667	1651	1658	1643	1595	1639	1645	1658	1637	1689	1642	1651	1659	1598	1628	1468
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
Lab Analytical Results:																		
Hardness as CaCO3	***mg/L***	167		249			273			253			267	254	309	355	339	376
pH (Lab)	***SU***	7.73		7.54			7.24			7.46			7.44	7.53	7.25	7.34	7.27	7.33
Total Dissolved Solids (Lab)	***mg/L***	1050		1030			1100			1110			1050	1060	1040	1010	1040	1060
Calcium	***mg/L***	34.0		48.5			52.4			49.7			51.3	48.7	58.5	65.9	62.6	69.7
Magnesium	***mg/L***	19.9		31.0			34.5			31.4			33.8	32.1	39.6	46.2	44.4	49.1
Sodium	***mg/L***	344		312			289			289			275	269	272	260	232	237
Potassium	***mg/L***	4.47		5.25			<5.00			4.55			5.07	4.71	5.00	5.56	5.22	5.88
Alkalinity, Total	***mg/L***	500		565			560			573			585	543	545	448	590	590
Alkalinity, Bicarbonate	***mg/L***	500		565			560			573			585	543	545	448	590	590
Alkalinity, Carbonate	***mg/L***	<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
Chloride	***mg/L***	12.7		10.0			9.33			9.06			9.66	8.19	8.23	8.12	7.91	7.96
Fluoride	***mg/L***	<0.500		<0.200			<0.200			<0.200			<0.500	<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
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			1.31	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	***mg/L***	NA		NA			NA			NA			<0.0500	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
Arsenic	***mg/L***	0.0008		<0.0010			0.0006			0.0005			0.0005	<0.0010	<0.0010	<0.0015	<0.0025	<0.0015
Cadmium	***mg/L***	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0003	<0.0005	<0.0003
Copper	***mg/L***	0.0031		0.0066			0.0036			0.0035			0.0037	0.0027	<0.0010	<0.0015	<0.0025	0.0015
Iron	***mg/L***	0.137		0.162			<0.250			0.129			0.130	0.108	<0.250	<0.250	<0.250	<0.150
Lead	***mg/L***	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.001	<0.0025	<0.0015	<0.0025	<0.0015
Manganese	***mg/L***	0.0495		0.0383			0.0327			0.0351			0.0377	0.0391	0.0393	0.0551	0.0546	0.0579
Mercury	***mg/L***	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	***mg/L***	0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.001	<0.0010	<0.0015	<0.0025	<0.0015
Selenium	***mg/L***	<0.0020		<0.0020			0.0010			0.0010			<0.0010	<0.0020	0.0020	<0.0030	<0.0050	0.0425
Silica (Si02)	***mg/L***	12.1		12.4			12.8			12.5			12.6	12.2	11.9	12.9	12.1	13.5
Silicon	***mg/L***	5.65		5.78			5.99			5.83			5.88	5.71	5.55	6.05	5.67	6.32
Uranium	***mg/L***	0.0002		0.0002			0.0002			0.0001			0.0001	<0.0010	<0.0025	<0.0015	<0.0025	<0.0015
Zinc	***mg/L***	<0.0050		<0.0040			<0.0020			<0.0020			<0.0020	<0.0040	<0.0040	<0.0060	<0.0100	<0.0060

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)**

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**
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2
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
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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
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
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
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
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
Specific Conductance	***µS/cm***	2306	1274	1265	1310	1262	1234	1264	1226	1269	1252	1299	1255	1294	1282	1055	1117	1132
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
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
pH (Lab)	***SU***	8.57		8.63			8.02			8.56			8.52	8.55	8.41	8.45	8.48	8.54
Total Dissolved Solids (Lab)	***mg/L***	1420		770			780			785			780	840	730	740	700	795
Calcium	***mg/L***	10.8		1.93			3.84			1.78			1.68	1.77	2.09	2.05	1.71	1.87
Magnesium	***mg/L***	4.39		0.600			1.77			0.541			0.528	0.574	0.620	0.587	0.502	0.550
Sodium	***mg/L***	382		341			317			306			305	309	315	337	304	319
Potassium	***mg/L***	45.7		3.49			<5.00			2.27			2.18	2.06	<5.00	<5.00	<5.00	<3.00
Alkalinity, Total	***mg/L***	615		720			745			731			745	685	630	675	780	730
Alkalinity, Bicarbonate	***mg/L***	535		610			645			645			685	595	530	585	680	630
Alkalinity, Carbonate	***mg/L***	80.0		110			100			86.0			60.0	90	100	90	100	100
Alkalinity, Hydroxide	***mg/L***	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	***mg/L***	175		5.11			6.80			2.63			2.48	3.04	3.01	2.98	2.47	2.5
Fluoride	***mg/L***	2.06		3.91			3.95			3.97			3.88	3.61	3.63	3.53	3.66	3.58
Sulfate as SO4	***mg/L***	190		3.79			9.58			1.02			<1.00	<2.00	<2.00	<2.00	<1.00	<1.00
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			0.282	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	***mg/L***	NA		NA			NA			NA			<0.0500	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
Arsenic	***mg/L***	0.0106		<0.0010			0.0006			0.0007			0.0006	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015
Cadmium	***mg/L***	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0001	<0.0002	<0.0003	<0.0005	<0.0003
Copper	***mg/L***	0.0337		0.0077			0.0047			0.0041			0.0051	0.0033	0.0012	0.0017	<0.0025	0.0025
Iron	***mg/L***	<0.050		<0.100			<0.250			<0.050			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150
Lead	***mg/L***	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015
Manganese	***mg/L***	0.0258		0.0038			0.0150			0.0020			0.0026	0.0025	0.0029	0.0026	0.0028	0.0024
Mercury	***mg/L***	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	***mg/L***	0.0142		<0.0010			0.0009			<0.0005			<0.0005	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015
Selenium	***mg/L***	0.0020		<0.0020			<0.0010			<0.0010			<0.0010	<0.0010	<0.0020	<0.0030	<0.0050	0.0031
Silica (Si02)	***mg/L***	9.09		8.45			8.68			8.28			7.77	7.62	7.40	7.84	7.4	8.17
Silicon	***mg/L***	4.25		3.95			4.06			3.87			3.63	3.56	3.46	3.67	3.46	3.82
Uranium	***mg/L***	0.0044		<0.0002			0.0001			0.0001			<0.0002	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015
Zinc	***mg/L***	0.0080		<0.0040			0.0023			<0.0020			<0.0020	<0.002	<0.0040	<0.0060	<0.0100	<0.0060

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)**

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**
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2
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
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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
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
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
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
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
Specific Conductance	***µS/cm***	1690	1531	1571	1558	1554	1411	1326	1165	1083	947	940	900	862	844	792	827	760
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
Lab Analytical Results:																		
Hardness as CaCO3	***mg/L***	617		644			596			411			294	278	298	292	268	281
pH (Lab)	***SU***	7.28		7.40			7.26			7.22			7.39	7.47	7.19	7.16	7.41	7.36
Total Dissolved Solids (Lab)	***mg/L***	1150		1090			995			705			620	500	490	525	465	525
Calcium	***mg/L***	112		120			105			73.1			52.1	49.3	53.8	53.3	49.1	52.2
Magnesium	***mg/L***	82.1		83.8			81.4			55.4			39.7	37.6	39.7	38.5	35.4	36.6
Sodium	***mg/L***	106		124			102			91.7			83.3	78.5	80.4	81.6	77.2	78.6
Potassium	***mg/L***	5.14		5.62			<5.00			2.80			2.35	2.32	2.11	<2.00	<2.00	1.78
Alkalinity, Total	***mg/L***	370		415			435			393			390	339	340	315	410	370
Alkalinity, Bicarbonate	***mg/L***	370		415			435			393			390	339	340	315	410	370
Alkalinity, Carbonate	***mg/L***	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	***mg/L***	<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
Fluoride	***mg/L***	0.505		0.474			0.290			0.291			<0.500	0.258	0.240	0.233	0.224	0.219
Sulfate as SO4	***mg/L***	478		471			390			232			127	109	103	99.2	99	101
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
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
Ammonia as N ^	***mg/L***	NA		NA			NA			NA			0.199	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	***mg/L***	NA		NA			NA			NA			<0.0500	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
Arsenic	***mg/L***	0.0074		0.0124			0.0190			0.0156			0.0104	0.0073	0.0075	0.0064	0.0058	0.0074
Cadmium	***mg/L***	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001
Copper	***mg/L***	0.0016		0.0025			0.0017			0.0011			0.0004	0.001	<0.0025	<0.001	0.0014	0.0005
Iron	***mg/L***	<0.050		0.352			<0.250			0.129			0.075	0.054	<0.100	<0.100	<0.100	<0.050
Lead	***mg/L***	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005
Manganese	***mg/L***	1.31		1.22			0.697			0.505			0.313	0.303	0.307	0.259	0.219	0.196
Mercury	***mg/L***	<0.0002		<0.0002			<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	***mg/L***	0.0090		0.0068			0.0020			0.0021			0.0017	0.0008	<0.0005	<0.0010	<0.0010	<0.0005
Selenium	***mg/L***	0.0012		<0.0020			<0.0010			<0.0010			<0.0010	<0.001	<0.0010	<0.0020	<0.0020	0.0038
Silica (Si02)	***mg/L***	14.1		16.3			17.7			18.5			18.0	18.9	18.7	19.9	18.5	20.1
Silicon	***mg/L***	6.58		7.64			8.28			8.67			8.42	8.82	8.75	9.28	8.66	9.4
Uranium	***mg/L***	0.0052		0.0040			0.0010			0.0009			0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005
Zinc	***mg/L***	0.0344		<0.0040			<0.0020			<0.0080			<0.0020	<0.0020	<0.0100	<0.0040	<0.0040	<0.0020

Notes & Definitions:

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Y/N	**yes or no**
gpm	**gallons per minute**
deg C	**degrees Celsius**
SU	**standard pH units**
µS/cm	**microsiemens per centimeter**
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mg/L	**milligram per liter**
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NM	**not measured (field)**
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09 March 2021

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 02/24/21 14:10.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt
Reports Manager

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

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

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.

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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	03/09/21 13:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Wiltse Well	2102200-01	Water	02/24/21 11:13	02/24/21 14:10	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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

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GCC Energy, LLC	Project: GCC GW Baseline	
6473 CR 120	Project Name / Number: GCC GW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/09/21 13:34

Wiltse Well

2102200-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**480**	10.0	4.53	mg/L	5	03/04/21 08:40	2320 B		VJW
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	03/04/21 08:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	03/04/21 08:40	2320 B		VJW
Alkalinity, Total as CaCO3*	**480**	10.0	4.53	mg/L	5	03/04/21 08:40	2320 B		VJW
Chloride*	**54.8**	2.00	0.0845	mg/L	2	03/06/21 11:02	EPA300.0		AES
Fluoride*	**0.276**	0.200	0.0194	mg/L	2	03/06/21 11:02	EPA300.0		AES
Nitrate/Nitrite as N*	**1.82**	0.020	0.006	mg/L as N	1	03/04/21 16:25	EPA353.2		JDA
pH*	**7.27**			pH Units	1	02/26/21 08:50	EPA150.1		VJW
Total Dissolved Solids*	**1550**	10.0		mg/L	1	03/02/21 15:38	EPA160.1		JDA
Sulfate*	**683**	20.0	3.05	mg/L	20	03/06/21 11:23	EPA300.0		AES
Total Organic Carbon*	**3.29**	0.500	0.0616	mg/L	1	03/04/21 18:53	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	03/03/21 16:55	EPA200.7		AES
Calcium*	**208**	0.500	0.289	mg/L	5	03/03/21 16:55	EPA200.7		AES
Hardness as CaCO3	**1090**	3.31	2.07	mg/L	5	03/03/21 16:55	2340 B		AES
Iron*	<0.250	0.250	0.089	mg/L	5	03/03/21 16:55	EPA200.7		AES
Magnesium*	**138**	0.500	0.327	mg/L	5	03/03/21 16:55	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	03/03/21 16:55	EPA200.7		AES
Silica (Si02)	**14.6**	5.35	0.398	mg/L	5	03/03/21 16:55	Calculation		AES
Silicon	**6.82**	2.50	0.186	mg/L	5	03/03/21 16:55	EPA200.7		AES
Sodium*	**65.1**	5.00	0.396	mg/L	5	03/03/21 16:55	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0002	mg/L	5	03/04/21 13:51	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0005	mg/L	5	03/04/21 13:51	EPA200.8		AES
Copper*	**0.0028**	0.0025	0.0005	mg/L	5	03/04/21 13:51	EPA200.8		AES
Lead*	<0.0025	0.0025	0.00007	mg/L	5	03/04/21 13:51	EPA200.8		AES
Manganese*	**1.21**	0.0025	0.0006	mg/L	5	03/04/21 13:51	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0001	mg/L	5	03/04/21 13:51	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0008	mg/L	5	03/04/21 13:51	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0002	mg/L	5	03/04/21 13:51	EPA200.8		AES
Zinc*	**0.0130**	0.0100	0.0005	mg/L	5	03/04/21 13:51	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	03/05/21 14:23	EPA245.1		JDA
Cation/Anion Balance	**-1.44**								

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	03/09/21 13:34

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210449 - General Prep - Wet Chem										
Duplicate (B210449-DUP2)		**Source: 2102204-02**		Prepared & Analyzed: 02/26/21						
pH	7.59		pH Units		7.50			1.19	20	
Reference (B210449-SRM1)				Prepared & Analyzed: 02/26/21						
pH	7.05		pH Units	7.00		101	98.57-101.42			
Batch B210465 - General Prep - Wet Chem										
Blank (B210465-BLK1)				Prepared & Analyzed: 03/02/21						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B210465-DUP1)		**Source: 2102192-01**		Prepared & Analyzed: 03/02/21						
Total Dissolved Solids	400	10.0	mg/L		405			1.26	20	
Reference (B210465-SRM1)				Prepared & Analyzed: 03/02/21						
Total Dissolved Solids	570	10.0	mg/L	600		95.0	85-115			
Batch B210482 - General Prep - Wet Chem										
Blank (B210482-BLK1)				Prepared: 03/03/21 Analyzed: 03/06/21						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B210482-BS1)				Prepared: 03/03/21 Analyzed: 03/06/21						
Chloride	23.7	1.00	mg/L	25.0		94.6	90-110			
Fluoride	2.52	0.100	mg/L	2.50		101	90-110			
Sulfate	24.5	1.00	mg/L	25.0		97.9	90-110			
LCS Dup (B210482-BSD1)				Prepared: 03/03/21 Analyzed: 03/06/21						
Chloride	23.6	1.00	mg/L	25.0		94.3	90-110	0.343	20	
Fluoride	2.54	0.100	mg/L	2.50		101	90-110	0.712	20	
Sulfate	24.1	1.00	mg/L	25.0		96.5	90-110	1.44	20	
Batch B210487 - General Prep - Wet Chem										
Blank (B210487-BLK1)				Prepared & Analyzed: 03/04/21						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B210487-BS1)				Prepared & Analyzed: 03/04/21						
Total Organic Carbon	9.37	0.500	mg/L	10.0		93.7	85-115			
LCS Dup (B210487-BSD1)				Prepared & Analyzed: 03/04/21						
Total Organic Carbon	9.42	0.500	mg/L	10.0		94.2	85-115	0.532	20	
Batch B210490 - General Prep - Wet Chem										

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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	03/09/21 13:34

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210490 - General Prep - Wet Chem (Continued)										
Blank (B210490-BLK1)				Prepared: 03/03/21 Analyzed: 03/04/21						
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 (B210490-BS1)				Prepared: 03/03/21 Analyzed: 03/04/21						
Alkalinity, Bicarbonate as CaCO3	99.0	10.0	mg/L				85-115			
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115			
LCS Dup (B210490-BSD1)				Prepared: 03/03/21 Analyzed: 03/04/21						
Alkalinity, Bicarbonate as CaCO3	101	10.0	mg/L				85-115	2.00	20	
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L				85-115		20	
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L				85-115		20	
Alkalinity, Total as CaCO3	101	10.0	mg/L	100		101	85-115	2.00	20	
Batch B210497 - General Prep - Wet Chem										
Blank (B210497-BLK1)				Prepared: 03/03/21 Analyzed: 03/04/21						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B210497-BS1)				Prepared: 03/03/21 Analyzed: 03/04/21						
Nitrate/Nitrite as N	1.08	0.020	mg/L as N	1.00		108	90-110			
LCS Dup (B210497-BSD1)				Prepared: 03/03/21 Analyzed: 03/04/21						
Nitrate/Nitrite as N	1.07	0.020	mg/L as N	1.00		107	90-110	0.839	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	03/09/21 13:34

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210469 - Diss. 200.7/200.8										
Blank (B210469-BLK1)				Prepared: 03/02/21 Analyzed: 03/03/21						
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 (B210469-BS1)				Prepared: 03/02/21 Analyzed: 03/03/21						
Aluminum	5.18	0.050	mg/L	5.00		104	85-115			
Calcium	5.33	0.100	mg/L	5.00		107	85-115			
Iron	5.04	0.050	mg/L	5.00		101	85-115			
Magnesium	26.6	0.100	mg/L	25.0		106	85-115			
Potassium	10.6	1.00	mg/L	10.0		106	85-115			
Silicon	5.23	0.500	mg/L	5.00		105	85-115			
Sodium	4.35	1.00	mg/L	4.05		108	85-115			
LCS Dup (B210469-BSD1)				Prepared: 03/02/21 Analyzed: 03/03/21						
Aluminum	5.16	0.050	mg/L	5.00		103	85-115	0.401	20	
Calcium	5.33	0.100	mg/L	5.00		107	85-115	0.0264	20	
Iron	5.07	0.050	mg/L	5.00		101	85-115	0.607	20	
Magnesium	26.5	0.100	mg/L	25.0		106	85-115	0.0471	20	
Potassium	10.2	1.00	mg/L	10.0		102	85-115	3.17	20	
Silicon	5.20	0.500	mg/L	5.00		104	85-115	0.592	20	
Sodium	4.20	1.00	mg/L	4.05		104	85-115	3.57	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	03/09/21 13:34

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210472 - Diss. 200.7/200.8										
Blank (B210472-BLK1)				Prepared: 03/02/21 Analyzed: 03/04/21						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0001	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 (B210472-BS1)				Prepared: 03/02/21 Analyzed: 03/04/21						
Arsenic	0.0502	0.0005	mg/L	0.0500		100	85-115			
Cadmium	0.0498	0.0001	mg/L	0.0500		99.6	85-115			
Copper	0.0499	0.0005	mg/L	0.0500		99.7	85-115			
Lead	0.0494	0.0005	mg/L	0.0500		98.7	85-115			
Manganese	0.0518	0.0005	mg/L	0.0500		104	85-115			
Molybdenum	0.0491	0.0005	mg/L	0.0500		98.2	85-115			
Selenium	0.250	0.0010	mg/L	0.250		100	85-115			
Uranium	0.0494	0.0005	mg/L	0.0500		98.9	85-115			
Zinc	0.0494	0.0020	mg/L	0.0500		98.9	85-115			
LCS Dup (B210472-BSD1)				Prepared: 03/02/21 Analyzed: 03/04/21						
Arsenic	0.0496	0.0005	mg/L	0.0500		99.2	85-115	1.26	20	
Cadmium	0.0497	0.0001	mg/L	0.0500		99.3	85-115	0.247	20	
Copper	0.0495	0.0005	mg/L	0.0500		98.9	85-115	0.781	20	
Lead	0.0488	0.0005	mg/L	0.0500		97.6	85-115	1.10	20	
Manganese	0.0522	0.0005	mg/L	0.0500		104	85-115	0.700	20	
Molybdenum	0.0477	0.0005	mg/L	0.0500		95.4	85-115	2.90	20	
Selenium	0.247	0.0010	mg/L	0.250		98.8	85-115	1.28	20	
Uranium	0.0492	0.0005	mg/L	0.0500		98.3	85-115	0.578	20	
Zinc	0.0494	0.0020	mg/L	0.0500		98.8	85-115	0.0733	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	03/09/21 13:34

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210457 - EPA 245.1/7470										
Blank (B210457-BLK1)				Prepared: 02/26/21 Analyzed: 03/05/21						
Mercury	ND	0.0002	mg/L							
LCS (B210457-BS1)				Prepared: 02/26/21 Analyzed: 03/05/21						
Mercury	0.0054	0.0002	mg/L	0.00500		107	85-115			
LCS Dup (B210457-BSD1)				Prepared: 02/26/21 Analyzed: 03/05/21						
Mercury	0.0054	0.0002	mg/L	0.00500		107	85-115	0.168	20	

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Debbie Zufelt, Reports Manager

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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	03/09/21 13:34

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@GCC.COM
Email Report to: LONDON BECK / LBECK@RESOURCEHYDROGEOLOGIC.COM
Project Name(optional):
Sampler Name (Print): MICHAEL G. MCFARLAND & MARCUS BENALLY

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

ANALYSIS REQUEST: GCAE 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:
2102200 01	WILTSE WELL	2-24-21	11:13	X							1	1		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:
Michael G McFarland	2-24-2021	12:16	Marcus Benally
[illegible]	2-24-2021	2:10	Dublin Zufelt

ADDITIONAL REMARKS:
#3 Laser

Report to State? (Circle): Yes No

-1.3°C Temperature at receipt: DZ CHECKED BY: 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.

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25 February 2021

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 02/11/21 11:07.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt
Reports Manager

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

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

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.

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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	02/25/21 11:31

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Well #2 Downgradient	2102112-01	Water	02/11/21 09:46	02/11/21 11:07	
Well #1 Upgradient	2102112-02	Water	02/11/21 08:45	02/11/21 11:07	

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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	02/25/21 11:31

Well #2 Downgradient

2102112-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**385**	10.0	4.53	mg/L	5	02/15/21 15:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	02/15/21 15:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/15/21 15:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**385**	10.0	4.53	mg/L	5	02/15/21 15:00	2320 B		LLG
Chloride*	**46.0**	1.00	0.0422	mg/L	1	02/22/21 20:29	EPA300.0		AES
Fluoride*	**0.216**	0.100	0.00971	mg/L	1	02/22/21 20:29	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:23	EPA353.2		JDA
pH*	**7.17**			pH Units	1	02/11/21 15:05	EPA150.1		VJW
Total Dissolved Solids*	**660**	10.0		mg/L	1	02/15/21 14:00	EPA160.1		VJW
Sulfate*	**190**	10.0	1.52	mg/L	10	02/23/21 12:59	EPA300.0		AES
Total Organic Carbon*	**2.18**	0.500	0.0616	mg/L	1	02/18/21 01:29	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/15/21 12:19	EPA200.7		AES
Calcium*	**97.9**	0.500	0.289	mg/L	5	02/15/21 12:19	EPA200.7		AES
Hardness as CaCO3	**624**	3.31	2.07	mg/L	5	02/15/21 12:19	2340 B		AES
Iron*	<0.250	0.250	0.089	mg/L	5	02/15/21 12:19	EPA200.7		AES
Magnesium*	**92.2**	0.500	0.327	mg/L	5	02/15/21 12:19	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	02/15/21 12:19	EPA200.7		AES
Silica (Si02)	**11.2**	5.35	0.398	mg/L	5	02/15/21 12:19	Calculation		AES
Silicon	**5.24**	2.50	0.186	mg/L	5	02/15/21 12:19	EPA200.7		AES
Sodium*	**26.9**	5.00	0.396	mg/L	5	02/15/21 12:19	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 13:46	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0002	mg/L	5	02/22/21 13:46	EPA200.8		AES
Copper*	<0.0025	0.0025	0.0014	mg/L	5	02/22/21 13:46	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 13:46	EPA200.8		AES
Manganese*	**0.422**	0.0025	0.0006	mg/L	5	02/22/21 13:46	EPA200.8		AES
Molybdenum*	**0.0026**	0.0025	0.0007	mg/L	5	02/22/21 13:46	EPA200.8		AES
Selenium*	**0.0069**	0.0050	0.0031	mg/L	5	02/22/21 13:46	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	02/22/21 13:46	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0036	mg/L	5	02/22/21 13:46	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**2.77**								

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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	02/25/21 11:31

Well #1 Upgradient

2102112-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**570**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**570**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Chloride*	**4.27**	1.00	0.0422	mg/L	1	02/22/21 20:50	EPA300.0		AES
Fluoride*	**0.311**	0.100	0.00971	mg/L	1	02/22/21 20:50	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:27	EPA353.2		JDA
pH*	**7.39**			pH Units	1	02/11/21 15:05	EPA150.1		VJW
Total Dissolved Solids*	**755**	10.0		mg/L	1	02/15/21 14:00	EPA160.1		VJW
Sulfate*	**102**	5.00	0.762	mg/L	5	02/23/21 13:19	EPA300.0		AES
Total Organic Carbon*	**3.26**	0.500	0.0616	mg/L	1	02/18/21 01:45	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/15/21 12:24	EPA200.7		AES
Calcium*	**58.1**	0.500	0.289	mg/L	5	02/15/21 12:24	EPA200.7		AES
Hardness as CaCO3	**298**	3.31	2.07	mg/L	5	02/15/21 12:24	2340 B		AES
Iron*	**1.66**	0.250	0.089	mg/L	5	02/15/21 12:24	EPA200.7		AES
Magnesium*	**37.2**	0.500	0.327	mg/L	5	02/15/21 12:24	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	02/15/21 12:24	EPA200.7		AES
Silica (Si02)	**13.0**	5.35	0.398	mg/L	5	02/15/21 12:24	Calculation		AES
Silicon	**6.10**	2.50	0.186	mg/L	5	02/15/21 12:24	EPA200.7		AES
Sodium*	**204**	5.00	0.396	mg/L	5	02/15/21 12:24	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 13:49	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0002	mg/L	5	02/22/21 13:49	EPA200.8		AES
Copper*	<0.0025	0.0025	0.0014	mg/L	5	02/22/21 13:49	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 13:49	EPA200.8		AES
Manganese*	**0.414**	0.0025	0.0006	mg/L	5	02/22/21 13:49	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0007	mg/L	5	02/22/21 13:49	EPA200.8		AES
Selenium*	**0.0902**	0.0050	0.0031	mg/L	5	02/22/21 13:49	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	02/22/21 13:49	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0036	mg/L	5	02/22/21 13:49	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**4.59**								

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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	02/25/21 11:31

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210324 - General Prep - Wet Chem										
Duplicate (B210324-DUP1)		**Source: 2102110-01**		Prepared & Analyzed: 02/11/21						
pH	8.25		pH Units		8.21			0.486	20	
Reference (B210324-SRM1)				Prepared & Analyzed: 02/11/21						
pH	7.04		pH Units	7.00		101	98.57-101.42			
Batch B210339 - General Prep - Wet Chem										
Blank (B210339-BLK1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B210339-DUP1)		**Source: 2102092-01**		Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	4400	10.0	mg/L		4480			1.80	20	
Reference (B210339-SRM1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	630	10.0	mg/L	600		105	85-115			
Batch B210358 - General Prep - Wet Chem										
Blank (B210358-BLK1)				Prepared: 02/15/21 Analyzed: 02/22/21						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B210358-BS1)				Prepared: 02/15/21 Analyzed: 02/22/21						
Chloride	23.9	1.00	mg/L	25.0		95.5	90-110			
Fluoride	2.49	0.100	mg/L	2.50		99.6	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.8	90-110			
LCS Dup (B210358-BSD1)				Prepared: 02/15/21 Analyzed: 02/22/21						
Chloride	23.6	1.00	mg/L	25.0		94.4	90-110	1.10	20	
Fluoride	2.48	0.100	mg/L	2.50		99.0	90-110	0.604	20	
Sulfate	24.4	1.00	mg/L	25.0		97.5	90-110	0.266	20	
Batch B210360 - General Prep - Wet Chem										
Blank (B210360-BLK1)				Prepared & Analyzed: 02/15/21						
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B210360-BS1)				Prepared & Analyzed: 02/15/21						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115			
LCS Dup (B210360-BSD1)				Prepared & Analyzed: 02/15/21						
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115	1.02	20	
Batch B210369 - General Prep - Wet Chem										
Blank (B210369-BLK1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							

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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	02/25/21 11:31

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210369 - General Prep - Wet Chem (Continued)										
LCS (B210369-BS1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	0.943	0.020	mg/L as N	1.00		94.3	90-110			
LCS Dup (B210369-BSD1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	0.942	0.020	mg/L as N	1.00		94.2	90-110	0.0955	20	
Batch B210386 - General Prep - Wet Chem										
Blank (B210386-BLK1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B210386-BS1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	9.46	0.500	mg/L	10.0		94.6	85-115			
LCS Dup (B210386-BSD1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	9.48	0.500	mg/L	10.0		94.8	85-115	0.275	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	02/25/21 11:31

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210333 - Diss. 200.7/200.8										
Blank (B210333-BLK1)				Prepared: 02/12/21 Analyzed: 02/15/21						
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 (B210333-BS1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Aluminum	4.85	0.050	mg/L	5.00		97.0	85-115			
Calcium	4.92	0.100	mg/L	5.00		98.4	85-115			
Iron	4.88	0.050	mg/L	5.00		97.6	85-115			
Magnesium	25.0	0.100	mg/L	25.0		100	85-115			
Potassium	10.0	1.00	mg/L	10.0		100	85-115			
Silicon	4.72	0.500	mg/L	5.00		94.5	85-115			
Sodium	3.96	1.00	mg/L	4.05		97.9	85-115			
LCS Dup (B210333-BSD1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Aluminum	5.00	0.050	mg/L	5.00		100	85-115	2.98	20	
Calcium	5.03	0.100	mg/L	5.00		101	85-115	2.17	20	
Iron	5.00	0.050	mg/L	5.00		99.9	85-115	2.38	20	
Magnesium	25.6	0.100	mg/L	25.0		102	85-115	2.43	20	
Potassium	10.0	1.00	mg/L	10.0		100	85-115	0.146	20	
Silicon	4.84	0.500	mg/L	5.00		96.9	85-115	2.52	20	
Sodium	4.05	1.00	mg/L	4.05		100	85-115	2.21	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	02/25/21 11:31

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210335 - Diss. 200.7/200.8										
Blank (B210335-BLK1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0001	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 (B210335-BS1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0503	0.0005	mg/L	0.0500		101	85-115			
Cadmium	0.0492	0.0001	mg/L	0.0500		98.4	85-115			
Copper	0.0486	0.0005	mg/L	0.0500		97.3	85-115			
Lead	0.0517	0.0005	mg/L	0.0500		103	85-115			
Manganese	0.0515	0.0005	mg/L	0.0500		103	85-115			
Molybdenum	0.0486	0.0005	mg/L	0.0500		97.2	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.6	85-115			
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0492	0.0020	mg/L	0.0500		98.4	85-115			
LCS Dup (B210335-BSD1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0513	0.0005	mg/L	0.0500		103	85-115	1.92	20	
Cadmium	0.0508	0.0001	mg/L	0.0500		102	85-115	3.26	20	
Copper	0.0496	0.0005	mg/L	0.0500		99.2	85-115	1.92	20	
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115	2.24	20	
Manganese	0.0505	0.0005	mg/L	0.0500		101	85-115	2.05	20	
Molybdenum	0.0494	0.0005	mg/L	0.0500		98.8	85-115	1.61	20	
Selenium	0.250	0.0010	mg/L	0.250		100	85-115	0.446	20	
Uranium	0.0505	0.0005	mg/L	0.0500		101	85-115	4.46	20	
Zinc	0.0493	0.0020	mg/L	0.0500		98.6	85-115	0.235	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	02/25/21 11:31

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210406 - EPA 245.1/7470										
Blank (B210406-BLK1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	ND	0.0002	mg/L							
LCS (B210406-BS1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	0.0057	0.0002	mg/L	0.00500		113	85-115			
LCS Dup (B210406-BSD1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	0.0058	0.0002	mg/L	0.00500		115	85-115	1.52	20	BS1

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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	02/25/21 11:31

Notes and Definitions

BS1	Laboratory control sample recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
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@GCC.COM
Email Report to: LANDON BECK
Project Name(optional): LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MICHAEL McFARLAND & 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	Matrix (check one): GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER :	# of containers: No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCC GW BASELINE
2102-112-01	WELL #2 DOWNGRADIENT	2-11-21	09:46	X							1	1		4			X
-02	WELL #1 UPGRADIENT	2-11-21	08:45	X							1	1		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:
Michael McFarland	2-11-21	10:26	
	2-11-21	11:07	Debbie Zufelt

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

5.4°C Temperature at receipt: CHECKED BY DZ 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.

75 Suttle Street
Durango, CO 81303
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10 March 2021

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

RE: GCC GW & SW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 02/22/21 15:00.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt
Reports Manager

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

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

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.

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www.GreenAnalytical.com

GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/10/21 08:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Haygulch Ditch Downgradient	2102165-01	Water	02/22/21 08:42	02/22/21 15:00	
Hay Gulch Ditch Upgradient	2102165-02	Water	02/22/21 09:47	02/22/21 15:00	
MW-HGA-4	2102165-03	Water	02/22/21 11:49	02/22/21 15:00	
MW-99-SW	2102165-04	Water	02/22/21 10:06	02/22/21 15:00	

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/10/21 08:51

Haygulch Ditch Downgradient

2102165-01 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**315**	10.0	4.53	mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Total as CaCO3*	**315**	10.0	4.53	mg/L	5	03/02/21 00:00	2320 B		JDA
Chloride*	**59.0**	5.00	0.211	mg/L	5	03/04/21 15:17	EPA300.0		AES
Fluoride*	**0.246**	0.100	0.00971	mg/L	1	03/03/21 11:12	EPA300.0		AES
Nitrate/Nitrite as N*	**0.148**	0.020	0.006	mg/L as N	1	03/01/21 15:20	EPA353.2		VJW
Oil & Grease (HEM)	<5.00	5.00	1.16	mg/L	1	03/03/21 11:00	EPA1664 A	M5	VJW
pH*	**7.83**			pH Units	1	02/24/21 08:30	EPA150.1		VJW
SAR	**0.34**			No Unit	1	03/03/21 12:48	Calculation		AES
Total Dissolved Solids*	**435**	10.0		mg/L	1	02/25/21 09:25	EPA160.1		VJW
Total Suspended Solids*	**28.0**	4.00		mg/L	1	02/26/21 15:18	EPA160.2		VJW
Sulfate*	**90.1**	5.00	0.762	mg/L	5	03/04/21 15:17	EPA300.0		AES
Total Organic Carbon*	**2.31**	0.500	0.0616	mg/L	1	03/04/21 17:13	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.013	mg/L	1	03/03/21 12:48	EPA200.7		AES
Calcium*	**98.2**	0.100	0.058	mg/L	1	03/03/21 12:48	EPA200.7		AES
Hardness as CaCO3	**419**	0.662	0.414	mg/L	1	03/03/21 12:48	2340 B		AES
Iron*	<0.050	0.050	0.018	mg/L	1	03/03/21 12:48	EPA200.7		AES
Magnesium*	**42.2**	0.100	0.065	mg/L	1	03/03/21 12:48	EPA200.7		AES
Potassium*	**3.75**	1.00	0.081	mg/L	1	03/03/21 12:48	EPA200.7		AES
Silica (Si02)	**12.9**	1.07	0.0797	mg/L	1	03/03/21 12:48	Calculation		AES
Silicon	**6.01**	0.500	0.037	mg/L	1	03/03/21 12:48	EPA200.7		AES
Sodium*	**15.8**	1.00	0.079	mg/L	1	03/03/21 12:48	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0013**	0.0005	0.00005	mg/L	1	03/04/21 12:52	EPA200.8		AES
Cadmium*	<0.0001	0.0001	0.0001	mg/L	1	03/04/21 12:52	EPA200.8		AES
Copper*	**0.0006**	0.0005	0.00009	mg/L	1	03/04/21 12:52	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00001	mg/L	1	03/04/21 12:52	EPA200.8		AES
Manganese*	**0.133**	0.0005	0.0001	mg/L	1	03/04/21 12:52	EPA200.8		AES
Molybdenum*	**0.0009**	0.0005	0.00003	mg/L	1	03/04/21 12:52	EPA200.8		AES
Selenium*	**0.0015**	0.0010	0.0002	mg/L	1	03/04/21 12:52	EPA200.8		AES
Uranium	**0.0009**	0.0005	0.00004	mg/L	1	03/04/21 12:52	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0001	mg/L	1	03/04/21 12:52	EPA200.8		AES

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project:	GCC GW & SW Baseline	
6473 CR 120	Project Name / Number:	GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	03/10/21 08:51

Haygulch Ditch Downgradient

2102165-01 (Surface Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Total Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/26/21 16:31	EPA245.1		LLG
Cation/Anion Balance	**-3.68**								

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/10/21 08:51

Hay Gulch Ditch Upgradient

2102165-02 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**340**	10.0	4.53	mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Total as CaCO3*	**340**	10.0	4.53	mg/L	5	03/02/21 00:00	2320 B		JDA
Chloride*	**85.9**	10.0	0.422	mg/L	10	03/04/21 15:37	EPA300.0		AES
Fluoride*	**0.235**	0.100	0.00971	mg/L	1	03/03/21 11:33	EPA300.0		AES
Nitrate/Nitrite as N*	**0.282**	0.020	0.006	mg/L as N	1	03/01/21 15:21	EPA353.2		VJW
Oil & Grease (HEM)	<5.00	5.00	1.16	mg/L	1	03/03/21 11:00	EPA1664 A		VJW
pH*	**7.57**			pH Units	1	02/24/21 08:30	EPA150.1		VJW
SAR	**0.62**			No Unit	1	03/03/21 12:50	Calculation		AES
Total Dissolved Solids*	**685**	10.0		mg/L	1	02/25/21 09:27	EPA160.1		VJW
Total Suspended Solids*	**55.0**	4.00		mg/L	1	02/26/21 15:18	EPA160.2		VJW
Sulfate*	**211**	10.0	1.52	mg/L	10	03/04/21 15:37	EPA300.0		AES
Total Organic Carbon*	**2.69**	0.500	0.0616	mg/L	1	03/04/21 18:04	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.013	mg/L	1	03/03/21 12:50	EPA200.7		AES
Calcium*	**113**	0.100	0.058	mg/L	1	03/03/21 12:50	EPA200.7		AES
Hardness as CaCO3	**588**	0.662	0.414	mg/L	1	03/03/21 12:50	2340 B		AES
Iron*	**0.103**	0.050	0.018	mg/L	1	03/03/21 12:50	EPA200.7		AES
Magnesium*	**74.3**	0.100	0.065	mg/L	1	03/03/21 12:50	EPA200.7		AES
Potassium*	**4.74**	1.00	0.081	mg/L	1	03/03/21 12:50	EPA200.7		AES
Silica (Si02)	**13.4**	1.07	0.0797	mg/L	1	03/03/21 12:50	Calculation		AES
Silicon	**6.26**	0.500	0.037	mg/L	1	03/03/21 12:50	EPA200.7		AES
Sodium*	**34.3**	1.00	0.079	mg/L	1	03/03/21 12:50	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0012**	0.0005	0.00005	mg/L	1	03/04/21 12:53	EPA200.8		AES
Cadmium*	<0.0001	0.0001	0.0001	mg/L	1	03/04/21 12:53	EPA200.8		AES
Copper*	**0.0007**	0.0005	0.00009	mg/L	1	03/04/21 12:53	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00001	mg/L	1	03/04/21 12:53	EPA200.8		AES
Manganese*	**0.149**	0.0005	0.0001	mg/L	1	03/04/21 12:53	EPA200.8		AES
Molybdenum*	**0.0007**	0.0005	0.00003	mg/L	1	03/04/21 12:53	EPA200.8		AES
Selenium*	**0.0018**	0.0010	0.0002	mg/L	1	03/04/21 12:53	EPA200.8		AES
Uranium	**0.0013**	0.0005	0.00004	mg/L	1	03/04/21 12:53	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0001	mg/L	1	03/04/21 12:53	EPA200.8		AES

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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GCC Energy, LLC	Project:	GCC GW & SW Baseline	
6473 CR 120	Project Name / Number:	GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	03/10/21 08:51

Hay Gulch Ditch Upgradient

2102165-02 (Surface Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Total Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/26/21 16:31	EPA245.1		LLG
Cation/Anion Balance	**-.98**								

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/10/21 08:51

MW-HGA-4

2102165-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**475**	10.0	4.53	mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Total as CaCO3*	**475**	10.0	4.53	mg/L	5	03/02/21 00:00	2320 B		JDA
Chloride*	**9.65**	1.00	0.0422	mg/L	1	03/03/21 11:53	EPA300.0		AES
Fluoride*	**0.424**	0.100	0.00971	mg/L	1	03/03/21 11:53	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	03/01/21 15:25	EPA353.2		VJW
pH*	**7.38**			pH Units	1	02/26/21 04:50	EPA150.1	H4	VJW
Total Dissolved Solids*	**685**	10.0		mg/L	1	02/25/21 09:29	EPA160.1		VJW
Sulfate*	**191**	10.0	1.52	mg/L	10	03/04/21 15:58	EPA300.0		AES
Total Organic Carbon*	**4.31**	0.500	0.0616	mg/L	1	03/04/21 18:21	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.013	mg/L	1	03/03/21 12:54	EPA200.7		AES
Calcium*	**126**	0.100	0.058	mg/L	1	03/03/21 12:54	EPA200.7		AES
Hardness as CaCO3	**630**	0.662	0.414	mg/L	1	03/03/21 12:54	2340 B		AES
Iron*	**9.60**	0.050	0.018	mg/L	1	03/03/21 12:54	EPA200.7		AES
Magnesium*	**76.8**	0.100	0.065	mg/L	1	03/03/21 12:54	EPA200.7		AES
Potassium*	**2.24**	1.00	0.081	mg/L	1	03/03/21 12:54	EPA200.7		AES
Silica (Si02)	**16.9**	1.07	0.0797	mg/L	1	03/03/21 12:54	Calculation		AES
Silicon	**7.88**	0.500	0.037	mg/L	1	03/03/21 12:54	EPA200.7		AES
Sodium*	**28.4**	1.00	0.079	mg/L	1	03/03/21 12:54	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0036**	0.0005	0.00005	mg/L	1	03/04/21 12:55	EPA200.8		AES
Cadmium*	<0.0001	0.0001	0.0001	mg/L	1	03/04/21 12:55	EPA200.8		AES
Copper*	**0.0006**	0.0005	0.00009	mg/L	1	03/04/21 12:55	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00001	mg/L	1	03/04/21 12:55	EPA200.8		AES
Manganese*	**2.54**	0.0050	0.0013	mg/L	10	03/08/21 17:33	EPA200.8		AES
Molybdenum*	**0.0027**	0.0005	0.00003	mg/L	1	03/04/21 12:55	EPA200.8		AES
Selenium*	<0.0010	0.0010	0.0002	mg/L	1	03/04/21 12:55	EPA200.8		AES
Uranium	<0.0005	0.0005	0.00004	mg/L	1	03/04/21 12:55	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0001	mg/L	1	03/04/21 12:55	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	03/05/21 14:23	EPA245.1		JDA
Cation/Anion Balance	**1.7**								

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/10/21 08:51

MW-99-SW

2102165-04 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**355**	10.0	4.53	mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	03/02/21 00:00	2320 B		JDA
Alkalinity, Total as CaCO3*	**355**	10.0	4.53	mg/L	5	03/02/21 00:00	2320 B		JDA
Chloride*	**89.6**	10.0	0.422	mg/L	10	03/04/21 16:18	EPA300.0		AES
Fluoride*	**0.241**	0.100	0.00971	mg/L	1	03/03/21 12:14	EPA300.0		AES
Nitrate/Nitrite as N*	**0.287**	0.020	0.006	mg/L as N	1	03/01/21 15:26	EPA353.2		VJW
Oil & Grease (HEM)	<5.00	5.00	1.16	mg/L	1	03/03/21 11:00	EPA1664 A		VJW
pH*	**7.60**			pH Units	1	02/24/21 08:30	EPA150.1		VJW
SAR	**0.62**			No Unit	1	03/03/21 12:58	Calculation		AES
Total Dissolved Solids*	**690**	10.0		mg/L	1	02/25/21 09:31	EPA160.1		VJW
Total Suspended Solids*	**6.47**	4.00		mg/L	1	02/26/21 15:18	EPA160.2		VJW
Sulfate*	**212**	10.0	1.52	mg/L	10	03/04/21 16:18	EPA300.0		AES
Total Organic Carbon*	**2.57**	0.500	0.0616	mg/L	1	03/04/21 18:37	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.013	mg/L	1	03/03/21 12:58	EPA200.7		AES
Calcium*	**114**	0.100	0.058	mg/L	1	03/03/21 12:58	EPA200.7		AES
Hardness as CaCO3	**593**	0.662	0.414	mg/L	1	03/03/21 12:58	2340 B		AES
Iron*	**0.121**	0.050	0.018	mg/L	1	03/03/21 12:58	EPA200.7		AES
Magnesium*	**74.9**	0.100	0.065	mg/L	1	03/03/21 12:58	EPA200.7		AES
Potassium*	**4.73**	1.00	0.081	mg/L	1	03/03/21 12:58	EPA200.7		AES
Silica (Si02)	**13.4**	1.07	0.0797	mg/L	1	03/03/21 12:58	Calculation		AES
Silicon	**6.26**	0.500	0.037	mg/L	1	03/03/21 12:58	EPA200.7		AES
Sodium*	**34.6**	1.00	0.079	mg/L	1	03/03/21 12:58	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0012**	0.0005	0.00005	mg/L	1	03/04/21 12:56	EPA200.8		AES
Cadmium*	<0.0001	0.0001	0.0001	mg/L	1	03/04/21 12:56	EPA200.8		AES
Copper*	**0.0008**	0.0005	0.00009	mg/L	1	03/04/21 12:56	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00001	mg/L	1	03/04/21 12:56	EPA200.8		AES
Manganese*	**0.150**	0.0005	0.0001	mg/L	1	03/04/21 12:56	EPA200.8		AES
Molybdenum*	**0.0007**	0.0005	0.00003	mg/L	1	03/04/21 12:56	EPA200.8		AES
Selenium*	**0.0018**	0.0010	0.0002	mg/L	1	03/04/21 12:56	EPA200.8		AES
Uranium	**0.0012**	0.0005	0.00004	mg/L	1	03/04/21 12:56	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0001	mg/L	1	03/04/21 12:56	EPA200.8		AES

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www.GreenAnalytical.com

GCC Energy, LLC	Project:	GCC GW & SW Baseline	
6473 CR 120	Project Name / Number:	GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	03/10/21 08:51

MW-99-SW

2102165-04 (Surface Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Total Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/26/21 16:31	EPA245.1		LLG
Cation/Anion Balance	**-2.09**								

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/10/21 08:51

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210320 - General Prep - Wet Chem										
Blank (B210320-BLK1)				Prepared & Analyzed: 02/11/21						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (B210320-BS1)				Prepared & Analyzed: 02/11/21						
Oil & Grease (HEM)	38.4	5.00	mg/L	40.0		96.0	85-115			
LCS Dup (B210320-BSD1)				Prepared & Analyzed: 02/11/21						
Oil & Grease (HEM)	36.0	5.00	mg/L	40.0		90.0	85-115	6.45	20	
Matrix Spike (B210320-MS2)		**Source: 2102165-01**		Prepared & Analyzed: 03/03/21						
Oil & Grease (HEM)	28.7	5.00	mg/L	40.0	ND	71.8	80-120			M2
Batch B210426 - General Prep - Wet Chem										
Blank (B210426-BLK1)				Prepared & Analyzed: 02/25/21						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B210426-DUP1)		**Source: 2102155-01**		Prepared & Analyzed: 02/25/21						
Total Dissolved Solids	405	10.0	mg/L		455			11.6	20	
Reference (B210426-SRM1)				Prepared & Analyzed: 02/25/21						
Total Dissolved Solids	580	10.0	mg/L	600		96.7	85-115			
Batch B210427 - General Prep - Wet Chem										
Blank (B210427-BLK1)				Prepared: 02/25/21 Analyzed: 03/01/21						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B210427-BS1)				Prepared: 02/25/21 Analyzed: 03/01/21						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110			
LCS Dup (B210427-BSD1)				Prepared: 02/25/21 Analyzed: 03/01/21						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110	0.0391	20	
Batch B210437 - General Prep - Wet Chem										
Blank (B210437-BLK1)				Prepared: 02/26/21 Analyzed: 03/03/21						
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 (B210437-BS1)				Prepared: 02/26/21 Analyzed: 03/03/21						
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Total as CaCO3	101	10.0	mg/L	100		101	85-115			

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/10/21 08:51

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210437 - General Prep - Wet Chem (Continued)										
LCS Dup (B210437-BSD1)				Prepared: 02/26/21 Analyzed: 03/03/21						
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L				85-115		20	
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L				85-115		20	
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L				85-115		20	
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115	2.00	20	
Batch B210446 - General Prep - Wet Chem										
Blank (B210446-BLK1)				Prepared & Analyzed: 02/26/21						
Total Suspended Solids	ND	4.00	mg/L							
Duplicate (B210446-DUP1)		**Source: 2102165-01**		Prepared & Analyzed: 02/26/21						
Total Suspended Solids	30.8	4.00	mg/L		28.0			9.52	20	
Reference (B210446-SRM1)				Prepared & Analyzed: 02/26/21						
Total Suspended Solids	96.0	4.00	mg/L	100		96.0	85-115			
Batch B210448 - General Prep - Wet Chem										
Duplicate (B210448-DUP1)		**Source: 2102166-01**		Prepared & Analyzed: 02/24/21						
pH	7.44		pH Units		7.42			0.269	20	
Reference (B210448-SRM1)				Prepared & Analyzed: 02/24/21						
pH	7.04		pH Units	7.00		101	98.57-101.42			
Batch B210452 - General Prep - Wet Chem										
Duplicate (B210452-DUP2)		**Source: 2102210-01**		Prepared & Analyzed: 02/26/21						
pH	7.52		pH Units		7.56			0.531	20	
Batch B210481 - General Prep - Wet Chem										
Blank (B210481-BLK1)				Prepared: 03/03/21 Analyzed: 03/04/21						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B210481-BS1)				Prepared & Analyzed: 03/03/21						
Chloride	23.3	1.00	mg/L	25.0		93.2	90-110			
Fluoride	2.43	0.100	mg/L	2.50		97.2	90-110			
Sulfate	24.0	1.00	mg/L	25.0		95.9	90-110			
LCS Dup (B210481-BSD1)				Prepared & Analyzed: 03/03/21						
Chloride	23.3	1.00	mg/L	25.0		93.3	90-110	0.159	20	
Fluoride	2.43	0.100	mg/L	2.50		97.4	90-110	0.123	20	
Sulfate	24.0	1.00	mg/L	25.0		96.0	90-110	0.100	20	
Batch B210487 - General Prep - Wet Chem										

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/10/21 08:51

General Chemistry - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210487 - General Prep - Wet Chem (Continued)										
Blank (B210487-BLK1)				Prepared & Analyzed: 03/04/21						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B210487-BS1)				Prepared & Analyzed: 03/04/21						
Total Organic Carbon	9.37	0.500	mg/L	10.0		93.7	85-115			
LCS Dup (B210487-BSD1)				Prepared & Analyzed: 03/04/21						
Total Organic Carbon	9.42	0.500	mg/L	10.0		94.2	85-115	0.532	20	

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210468 - Diss. 200.7/200.8										
Blank (B210468-BLK1)				Prepared: 03/02/21 Analyzed: 03/03/21						
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 (B210468-BS1)				Prepared: 03/02/21 Analyzed: 03/03/21						
Aluminum	5.02	0.050	mg/L	5.00		100	85-115			
Calcium	5.23	0.100	mg/L	5.00		105	85-115			
Iron	5.10	0.050	mg/L	5.00		102	85-115			
Magnesium	26.0	0.100	mg/L	25.0		104	85-115			
Potassium	10.3	1.00	mg/L	10.0		103	85-115			
Silicon	5.21	0.500	mg/L	5.00		104	85-115			
Sodium	4.12	1.00	mg/L	4.05		102	85-115			
LCS Dup (B210468-BSD1)				Prepared: 03/02/21 Analyzed: 03/03/21						
Aluminum	4.92	0.050	mg/L	5.00		98.4	85-115	2.04	20	
Calcium	5.08	0.100	mg/L	5.00		102	85-115	2.92	20	
Iron	4.95	0.050	mg/L	5.00		99.0	85-115	3.04	20	
Magnesium	25.3	0.100	mg/L	25.0		101	85-115	2.67	20	
Potassium	10.1	1.00	mg/L	10.0		101	85-115	1.49	20	
Silicon	5.04	0.500	mg/L	5.00		101	85-115	3.38	20	
Sodium	4.04	1.00	mg/L	4.05		99.8	85-115	1.92	20	

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/10/21 08:51

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210471 - Diss. 200.7/200.8										
Blank (B210471-BLK1)				Prepared: 03/02/21 Analyzed: 03/04/21						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0001	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 (B210471-BS1)				Prepared: 03/02/21 Analyzed: 03/04/21						
Arsenic	0.0516	0.0005	mg/L	0.0500		103	85-115			
Cadmium	0.0508	0.0001	mg/L	0.0500		102	85-115			
Copper	0.0518	0.0005	mg/L	0.0500		104	85-115			
Lead	0.0504	0.0005	mg/L	0.0500		101	85-115			
Manganese	0.0525	0.0005	mg/L	0.0500		105	85-115			
Molybdenum	0.0493	0.0005	mg/L	0.0500		98.5	85-115			
Selenium	0.254	0.0010	mg/L	0.250		102	85-115			
Uranium	0.0495	0.0005	mg/L	0.0500		99.0	85-115			
Zinc	0.0518	0.0020	mg/L	0.0500		104	85-115			
LCS Dup (B210471-BSD1)				Prepared: 03/02/21 Analyzed: 03/04/21						
Arsenic	0.0518	0.0005	mg/L	0.0500		104	85-115	0.473	20	
Cadmium	0.0503	0.0001	mg/L	0.0500		101	85-115	1.06	20	
Copper	0.0525	0.0005	mg/L	0.0500		105	85-115	1.43	20	
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115	0.113	20	
Manganese	0.0523	0.0005	mg/L	0.0500		105	85-115	0.432	20	
Molybdenum	0.0504	0.0005	mg/L	0.0500		101	85-115	2.29	20	
Selenium	0.258	0.0010	mg/L	0.250		103	85-115	1.43	20	
Uranium	0.0498	0.0005	mg/L	0.0500		99.6	85-115	0.589	20	
Zinc	0.0522	0.0020	mg/L	0.0500		104	85-115	0.667	20	

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6473 CR 120	Project Name / Number: GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/10/21 08:51

Total Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210429 - EPA 245.1/7470										
Blank (B210429-BLK1)				Prepared: 02/25/21 Analyzed: 02/26/21						
Mercury	ND	0.0002	mg/L							
LCS (B210429-BS1)				Prepared: 02/25/21 Analyzed: 02/26/21						
Mercury	0.0049	0.0002	mg/L	0.00500		97.7	85-115			
LCS Dup (B210429-BSD1)				Prepared: 02/25/21 Analyzed: 02/26/21						
Mercury	0.0049	0.0002	mg/L	0.00500		98.6	85-115	0.978	20	

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210457 - EPA 245.1/7470										
Blank (B210457-BLK1)				Prepared: 02/26/21 Analyzed: 03/05/21						
Mercury	ND	0.0002	mg/L							
LCS (B210457-BS1)				Prepared: 02/26/21 Analyzed: 03/05/21						
Mercury	0.0054	0.0002	mg/L	0.00500		107	85-115			
LCS Dup (B210457-BSD1)				Prepared: 02/26/21 Analyzed: 03/05/21						
Mercury	0.0054	0.0002	mg/L	0.00500		107	85-115	0.168	20	

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GCC Energy, LLC	Project:	GCC GW & SW Baseline	
6473 CR 120	Project Name / Number:	GCC GW & SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	03/10/21 08:51

Notes and Definitions

M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.
M2	Matrix spike recovery was below laboratory acceptance criteria. Recovery possibly affected by a matrix interference in the sample. The method blank spike recovery was acceptable.
H4	pH analysis perfomed more than 48 hours after sampling.
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 L.L.C.
Address: 6473 COUNTY ROAD 120
City: HESPERUS **State:** CO **Zip:** 81326
Phone #: 970 385 4528
Contact Person: TOM BIRD / TBIRD@GCC.COM
Email Report to: LANDON BECK
Project Name(optional): LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MICHAEL G. MCFARLAND & MARCUS BENALLY

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:	GCC ENERGY GW BASELINE	GCC ENERGY SW BASELINE
2102165-01	HAY GULCH DITCH DOWNGRADIENT	2-22-21	08:42		X						2	2	2	4				X
-02	HAY GULCH DITCH UPGRADIENT	2-22-21	09:47		X						2	2	1	4				X
-03	MW-HGA-4	2-22-21	11:49	X							1	1		4			X	
-04	MW-99-SW	2-22-21	10:06		X						2	2	1	4				X

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Relinquished by:	Date:	Time:	Received by:
Michael McFarland	2-22-2021	13:21	Marc Bell
[illegible]	2-22-21	3:00	Linda Gumper

ADDITIONAL REMARKS:
2102165-01 MS for O&G

Report to State? (Circle) Yes No

Temperature at receipt: 2.6 CHECKED BY [illegible] On Ice ☒ No Ice ☐

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

Just Click Printing Form #17-0301

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26 February 2021

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 02/15/21 14:01.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt
Reports Manager

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

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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	02/26/21 12:32

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1-C	2102132-01	Water	02/15/21 10:34	02/15/21 14:01	
MW-1-A	2102132-02	Water	02/15/21 09:46	02/15/21 14:01	

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Debbie Zufelt, Reports Manager

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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	02/26/21 12:32

MW-1-C

2102132-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**580**	10.0	4.53	mg/L	10	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	10	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	10	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**580**	10.0	4.53	mg/L	10	02/22/21 15:30	2320 B		JDA
Chloride*	**7.13**	3.00	0.127	mg/L	3	02/19/21 14:31	EPA300.0		AES
Fluoride*	**0.804**	0.300	0.0291	mg/L	3	02/19/21 14:31	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:32	EPA353.2		JDA
pH*	**7.08**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
Total Dissolved Solids*	**2330**	10.0		mg/L	1	02/16/21 12:25	EPA160.1		VJW
Sulfate*	**1150**	60.0	9.15	mg/L	60	02/19/21 23:34	EPA300.0		AES
Total Organic Carbon*	**2.26**	0.500	0.0616	mg/L	1	02/18/21 03:19	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/24/21 18:05	EPA200.7		AES
Calcium*	**241**	0.500	0.289	mg/L	5	02/24/21 18:05	EPA200.7		AES
Hardness as CaCO3	**1320**	3.31	2.07	mg/L	5	02/24/21 18:05	2340 B		AES
Iron*	**0.769**	0.250	0.089	mg/L	5	02/24/21 18:05	EPA200.7		AES
Magnesium*	**173**	0.500	0.327	mg/L	5	02/24/21 18:05	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	02/24/21 18:05	EPA200.7		AES
Silica (Si02)	**14.4**	5.35	0.398	mg/L	5	02/24/21 18:05	Calculation		AES
Silicon	**6.75**	2.50	0.186	mg/L	5	02/24/21 18:05	EPA200.7		AES
Sodium*	**206**	5.00	0.396	mg/L	5	02/24/21 18:05	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 14:07	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0002	mg/L	5	02/22/21 14:07	EPA200.8		AES
Copper*	<0.0025	0.0025	0.0014	mg/L	5	02/22/21 14:07	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	02/23/21 11:13	EPA200.8		AES
Manganese*	**0.0482**	0.0025	0.0006	mg/L	5	02/22/21 14:07	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0007	mg/L	5	02/22/21 14:07	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0031	mg/L	5	02/22/21 14:07	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	02/23/21 11:13	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0036	mg/L	5	02/22/21 14:07	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**-.65**								

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/26/21 12:32

MW-1-A

2102132-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**400**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**400**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Chloride*	**2.73**	2.00	0.0845	mg/L	2	02/19/21 14:51	EPA300.0		AES
Fluoride*	**0.212**	0.200	0.0194	mg/L	2	02/19/21 14:51	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:33	EPA353.2		JDA
pH*	**7.22**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
Total Dissolved Solids*	**1250**	10.0		mg/L	1	02/16/21 12:25	EPA160.1		VJW
Sulfate*	**553**	20.0	3.05	mg/L	20	02/19/21 23:55	EPA300.0		AES
Total Organic Carbon*	**1.58**	0.500	0.0616	mg/L	1	02/18/21 03:39	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/24/21 18:08	EPA200.7		AES
Calcium*	**32.1**	0.500	0.289	mg/L	5	02/24/21 18:08	EPA200.7		AES
Hardness as CaCO3	**168**	3.31	2.07	mg/L	5	02/24/21 18:08	2340 B		AES
Iron*	**0.572**	0.250	0.089	mg/L	5	02/24/21 18:08	EPA200.7		AES
Magnesium*	**21.4**	0.500	0.327	mg/L	5	02/24/21 18:08	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	02/24/21 18:08	EPA200.7		AES
Silica (Si02)	**11.3**	5.35	0.398	mg/L	5	02/24/21 18:08	Calculation		AES
Silicon	**5.27**	2.50	0.186	mg/L	5	02/24/21 18:08	EPA200.7		AES
Sodium*	**357**	5.00	0.396	mg/L	5	02/24/21 18:08	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0015	0.0015	0.0002	mg/L	3	02/22/21 14:10	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0001	mg/L	3	02/22/21 14:10	EPA200.8		AES
Copper*	**0.0026**	0.0015	0.0008	mg/L	3	02/22/21 14:10	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0002	mg/L	3	02/23/21 11:16	EPA200.8		AES
Manganese*	**0.0367**	0.0015	0.0003	mg/L	3	02/22/21 14:10	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0004	mg/L	3	02/22/21 14:10	EPA200.8		AES
Selenium*	<0.0030	0.0030	0.0018	mg/L	3	02/22/21 14:10	EPA200.8		AES
Uranium	<0.0015	0.0015	0.0003	mg/L	3	02/23/21 11:16	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0022	mg/L	3	02/22/21 14:10	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**-1.62**								

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/26/21 12:32

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210339 - General Prep - Wet Chem										
Blank (B210339-BLK1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B210339-DUP1)		**Source: 2102092-01**		Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	4400	10.0	mg/L		4480			1.80	20	
Reference (B210339-SRM1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	630	10.0	mg/L	600		105	85-115			
Batch B210369 - General Prep - Wet Chem										
Blank (B210369-BLK1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B210369-BS1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	0.943	0.020	mg/L as N	1.00		94.3	90-110			
LCS Dup (B210369-BSD1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	0.942	0.020	mg/L as N	1.00		94.2	90-110	0.0955	20	
Batch B210376 - General Prep - Wet Chem										
Duplicate (B210376-DUP2)		**Source: 2102140-07**		Prepared & Analyzed: 02/17/21						
pH	7.44		pH Units		7.44			0.00	20	
Reference (B210376-SRM1)				Prepared & Analyzed: 02/17/21						
pH	7.04		pH Units	7.00		101	98.57-101.42			
Batch B210386 - General Prep - Wet Chem										
Blank (B210386-BLK1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B210386-BS1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	9.46	0.500	mg/L	10.0		94.6	85-115			
LCS Dup (B210386-BSD1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	9.48	0.500	mg/L	10.0		94.8	85-115	0.275	20	
Batch B210396 - General Prep - Wet Chem										
Blank (B210396-BLK1)				Prepared & Analyzed: 02/19/21						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/26/21 12:32

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210396 - General Prep - Wet Chem (Continued)										
LCS (B210396-BS1)				Prepared & Analyzed: 02/19/21						
Chloride	24.0	1.00	mg/L	25.0		96.1	90-110			
Fluoride	2.51	0.100	mg/L	2.50		100	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.7	90-110			
LCS Dup (B210396-BSD1)				Prepared & Analyzed: 02/19/21						
Chloride	23.8	1.00	mg/L	25.0		95.1	90-110	1.00	20	
Fluoride	2.53	0.100	mg/L	2.50		101	90-110	0.675	20	
Sulfate	24.5	1.00	mg/L	25.0		98.0	90-110	0.384	20	
Batch B210414 - General Prep - Wet Chem										
Blank (B210414-BLK1)				Prepared & Analyzed: 02/22/21						
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B210414-BS1)				Prepared & Analyzed: 02/22/21						
Alkalinity, Total as CaCO3	101	10.0	mg/L	100		101	85-115			
LCS Dup (B210414-BSD1)				Prepared & Analyzed: 02/22/21						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115	3.02	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	02/26/21 12:32

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210419 - Diss. 200.7/200.8										
Blank (B210419-BLK1)				Prepared: 02/23/21 Analyzed: 02/24/21						
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 (B210419-BS1)				Prepared: 02/23/21 Analyzed: 02/24/21						
Aluminum	5.19	0.050	mg/L	5.00		104	85-115			
Calcium	5.37	0.100	mg/L	5.00		107	85-115			
Iron	5.28	0.050	mg/L	5.00		106	85-115			
Magnesium	27.5	0.100	mg/L	25.0		110	85-115			
Potassium	10.5	1.00	mg/L	10.0		105	85-115			
Silicon	5.32	0.500	mg/L	5.00		106	85-115			
Sodium	4.11	1.00	mg/L	4.05		102	85-115			
LCS Dup (B210419-BSD1)				Prepared: 02/23/21 Analyzed: 02/24/21						
Aluminum	5.21	0.050	mg/L	5.00		104	85-115	0.286	20	
Calcium	5.38	0.100	mg/L	5.00		108	85-115	0.0499	20	
Iron	5.26	0.050	mg/L	5.00		105	85-115	0.275	20	
Magnesium	27.5	0.100	mg/L	25.0		110	85-115	0.178	20	
Potassium	10.7	1.00	mg/L	10.0		107	85-115	1.49	20	
Silicon	5.30	0.500	mg/L	5.00		106	85-115	0.440	20	
Sodium	4.09	1.00	mg/L	4.05		101	85-115	0.465	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	02/26/21 12:32

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210335 - Diss. 200.7/200.8										
Blank (B210335-BLK1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0001	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 (B210335-BS1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0503	0.0005	mg/L	0.0500		101	85-115			
Cadmium	0.0492	0.0001	mg/L	0.0500		98.4	85-115			
Copper	0.0486	0.0005	mg/L	0.0500		97.3	85-115			
Lead	0.0517	0.0005	mg/L	0.0500		103	85-115			
Manganese	0.0515	0.0005	mg/L	0.0500		103	85-115			
Molybdenum	0.0486	0.0005	mg/L	0.0500		97.2	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.6	85-115			
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0492	0.0020	mg/L	0.0500		98.4	85-115			
LCS Dup (B210335-BSD1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0513	0.0005	mg/L	0.0500		103	85-115	1.92	20	
Cadmium	0.0508	0.0001	mg/L	0.0500		102	85-115	3.26	20	
Copper	0.0496	0.0005	mg/L	0.0500		99.2	85-115	1.92	20	
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115	2.24	20	
Manganese	0.0505	0.0005	mg/L	0.0500		101	85-115	2.05	20	
Molybdenum	0.0494	0.0005	mg/L	0.0500		98.8	85-115	1.61	20	
Selenium	0.250	0.0010	mg/L	0.250		100	85-115	0.446	20	
Uranium	0.0505	0.0005	mg/L	0.0500		101	85-115	4.46	20	
Zinc	0.0493	0.0020	mg/L	0.0500		98.6	85-115	0.235	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	02/26/21 12:32

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210406 - EPA 245.1/7470										
Blank (B210406-BLK1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	ND	0.0002	mg/L							
LCS (B210406-BS1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	0.0057	0.0002	mg/L	0.00500		113	85-115			
LCS Dup (B210406-BSD1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	0.0058	0.0002	mg/L	0.00500		115	85-115	1.52	20	BS1

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/26/21 12:32

Notes and Definitions

BS1	Laboratory control sample recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
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

Debbie Zufelt, Reports Manager

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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@GCC.COM
Email Report to: LANDON BECK / LBECK@RESOURCEHYDROGEOLOGIC.COM
Project Name (optional):
Sampler Name (Print): MICHAEL MCFARLAND & 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 GW BASELINE
2102-132-01	MW-1-C	2-15-21	1034	X							1	1		4			X
2102-132-02	MW-1-A	2-15-21	09:46	X							1	1		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:
Michael McFarland	2-15-21	14:01	
	2-15-21	14:01	Dulcine Zufelt

ADDITIONAL REMARKS:
#3 Laser

Report to State? (Circle) Yes No

1.8°C Temperature at receipt: DZ CHECKED BY ✓ On Ice No Ice

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

75 Suttle Street
Durango, CO 81303
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25 February 2021

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 02/10/21 15:00.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt
Reports Manager

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

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

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.

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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	02/25/21 11:05

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-4-MI	2102110-01	Water	02/10/21 09:00	02/10/21 15:00	
MW-4-A	2102110-02	Water	02/10/21 10:19	02/10/21 15:00	
MW-4-C	2102110-03	Water	02/10/21 10:51	02/10/21 15:00	
MW-3-MI	2102110-04	Water	02/10/21 11:38	02/10/21 15:00	
MW-3-A	2102110-05	Water	02/10/21 12:08	02/10/21 15:00	
MW-99-A	2102110-06	Water	02/10/21 12:30	02/10/21 15:00	
MW-3-C	2102110-07	Water	02/10/21 13:01	02/10/21 15:00	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/25/21 11:05

MW-4-MI

2102110-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**910**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	**80.0**	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**990**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Chloride*	**4.89**	2.00	0.0845	mg/L	2	02/22/21 16:44	EPA300.0	M5	AES
Fluoride*	**4.92**	0.200	0.0194	mg/L	2	02/22/21 16:44	EPA300.0	M5	AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:15	EPA353.2		JDA
pH*	**8.21**			pH Units	1	02/11/21 12:40	EPA150.1		VJW
Total Dissolved Solids*	**1130**	10.0		mg/L	1	02/15/21 14:00	EPA160.1		VJW
Sulfate*	**17.1**	2.00	0.305	mg/L	2	02/22/21 16:44	EPA300.0	M5	AES
Total Organic Carbon*	**5.78**	0.500	0.0616	mg/L	1	02/17/21 23:20	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/15/21 11:38	EPA200.7		AES
Calcium*	**1.97**	0.500	0.289	mg/L	5	02/15/21 11:38	EPA200.7		AES
Hardness as CaCO3	**4.91**	3.31	2.07	mg/L	5	02/15/21 11:38	2340 B		AES
Iron*	<0.250	0.250	0.089	mg/L	5	02/15/21 11:38	EPA200.7		AES
Magnesium*	<0.500	0.500	0.327	mg/L	5	02/15/21 11:38	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	02/15/21 11:38	EPA200.7		AES
Silica (Si02)	**9.26**	5.35	0.398	mg/L	5	02/15/21 11:38	Calculation		AES
Silicon	**4.33**	2.50	0.186	mg/L	5	02/15/21 11:38	EPA200.7		AES
Sodium*	**476**	5.00	0.396	mg/L	5	02/15/21 11:38	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0088**	0.0025	0.0004	mg/L	5	02/22/21 13:07	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0002	mg/L	5	02/22/21 13:07	EPA200.8		AES
Copper*	**0.0040**	0.0025	0.0014	mg/L	5	02/22/21 13:07	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 13:07	EPA200.8		AES
Manganese*	**0.0094**	0.0025	0.0006	mg/L	5	02/22/21 13:07	EPA200.8		AES
Molybdenum*	**0.0082**	0.0025	0.0007	mg/L	5	02/22/21 13:07	EPA200.8		AES
Selenium*	**0.0143**	0.0050	0.0031	mg/L	5	02/22/21 13:07	EPA200.8		AES
Uranium	**0.0137**	0.0025	0.0005	mg/L	5	02/22/21 13:07	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0036	mg/L	5	02/22/21 13:07	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**.8**								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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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	02/25/21 11:05

MW-4-A

2102110-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**620**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**620**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Chloride*	**8.79**	2.00	0.0845	mg/L	2	02/22/21 18:26	EPA300.0		AES
Fluoride*	<0.200	0.200	0.0194	mg/L	2	02/22/21 18:26	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:16	EPA353.2		JDA
pH*	**8.04**			pH Units	1	02/11/21 12:40	EPA150.1		VJW
Total Dissolved Solids*	**1370**	10.0		mg/L	1	02/15/21 14:00	EPA160.1		VJW
Sulfate*	**561**	20.0	3.05	mg/L	20	02/23/21 10:56	EPA300.0		AES
Total Organic Carbon*	**3.42**	0.500	0.0616	mg/L	1	02/17/21 23:36	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/15/21 11:56	EPA200.7		AES
Calcium*	**2.04**	0.500	0.289	mg/L	5	02/15/21 11:56	EPA200.7		AES
Hardness as CaCO3	**8.87**	3.31	2.07	mg/L	5	02/15/21 11:56	2340 B		AES
Iron*	<0.250	0.250	0.089	mg/L	5	02/15/21 11:56	EPA200.7		AES
Magnesium*	**0.917**	0.500	0.327	mg/L	5	02/15/21 11:56	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	02/15/21 11:56	EPA200.7		AES
Silica (Si02)	**10.4**	5.35	0.398	mg/L	5	02/15/21 11:56	Calculation		AES
Silicon	**4.87**	2.50	0.186	mg/L	5	02/15/21 11:56	EPA200.7		AES
Sodium*	**565**	5.00	0.396	mg/L	5	02/15/21 11:56	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 13:10	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0002	mg/L	5	02/22/21 13:10	EPA200.8		AES
Copper*	**0.0036**	0.0025	0.0014	mg/L	5	02/22/21 13:10	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 13:10	EPA200.8		AES
Manganese*	**0.0029**	0.0025	0.0006	mg/L	5	02/22/21 13:10	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0007	mg/L	5	02/22/21 13:10	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0031	mg/L	5	02/22/21 13:10	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	02/22/21 13:10	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0036	mg/L	5	02/22/21 13:10	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**.95**								

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/25/21 11:05

MW-4-C

2102110-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**2430**	10.0	4.53	mg/L	5	02/15/21 15:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	**40.0**	10.0		mg/L	5	02/15/21 15:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/15/21 15:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**2470**	10.0	4.53	mg/L	5	02/15/21 15:00	2320 B		LLG
Chloride*	**557**	25.0	1.06	mg/L	25	02/23/21 11:17	EPA300.0		AES
Fluoride*	**2.21**	0.500	0.0486	mg/L	5	02/22/21 18:47	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:17	EPA353.2		JDA
pH*	**7.96**			pH Units	1	02/11/21 12:40	EPA150.1		VJW
Total Dissolved Solids*	**3720**	10.0		mg/L	1	02/15/21 14:00	EPA160.1		VJW
Sulfate*	<5.00	5.00	0.762	mg/L	5	02/22/21 18:47	EPA300.0		AES
Total Organic Carbon*	**4.57**	0.500	0.0616	mg/L	1	02/18/21 00:04	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.500	0.500	0.128	mg/L	10	02/15/21 12:01	EPA200.7		AES
Calcium*	**5.98**	1.00	0.579	mg/L	10	02/15/21 12:01	EPA200.7		AES
Hardness as CaCO3	**25.6**	6.62	4.14	mg/L	10	02/15/21 12:01	2340 B		AES
Iron*	**0.837**	0.500	0.178	mg/L	10	02/15/21 12:01	EPA200.7		AES
Magnesium*	**2.58**	1.00	0.654	mg/L	10	02/15/21 12:01	EPA200.7		AES
Potassium*	<10.0	10.0	0.807	mg/L	10	02/15/21 12:01	EPA200.7		AES
Silica (Si02)	**10.8**	10.7	0.797	mg/L	10	02/15/21 12:01	Calculation		AES
Silicon	**5.06**	5.00	0.373	mg/L	10	02/15/21 12:01	EPA200.7		AES
Sodium*	**1520**	10.0	0.793	mg/L	10	02/15/21 12:01	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0177**	0.0050	0.0007	mg/L	10	02/22/21 13:28	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0004	mg/L	10	02/22/21 13:28	EPA200.8		AES
Copper*	**0.0111**	0.0050	0.0028	mg/L	10	02/22/21 13:28	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0008	mg/L	10	02/22/21 13:28	EPA200.8		AES
Manganese*	**0.0059**	0.0050	0.0012	mg/L	10	02/22/21 13:28	EPA200.8		AES
Molybdenum*	<0.0050	0.0050	0.0014	mg/L	10	02/22/21 13:28	EPA200.8		AES
Selenium*	<0.0100	0.0100	0.0061	mg/L	10	02/22/21 13:28	EPA200.8		AES
Uranium	<0.0050	0.0050	0.0009	mg/L	10	02/22/21 13:28	EPA200.8		AES
Zinc*	<0.0200	0.0200	0.0072	mg/L	10	02/22/21 13:28	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**1.19**								

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/25/21 11:05

MW-3-MI

2102110-04 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**450**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	**240**	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**690**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Chloride*	**9.84**	2.00	0.0845	mg/L	2	02/22/21 19:07	EPA300.0		AES
Fluoride*	**1.03**	0.200	0.0194	mg/L	2	02/22/21 19:07	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:18	EPA353.2		JDA
pH*	**8.72**			pH Units	1	02/11/21 12:40	EPA150.1		VJW
Total Dissolved Solids*	**1120**	10.0		mg/L	1	02/15/21 14:00	EPA160.1		VJW
Sulfate*	**223**	10.0	1.52	mg/L	10	02/23/21 11:37	EPA300.0		AES
Total Organic Carbon*	**5.34**	0.500	0.0616	mg/L	1	02/18/21 00:20	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/15/21 12:04	EPA200.7		AES
Calcium*	**1.66**	0.500	0.289	mg/L	5	02/15/21 12:04	EPA200.7		AES
Hardness as CaCO3	**6.63**	3.31	2.07	mg/L	5	02/15/21 12:04	2340 B		AES
Iron*	<0.250	0.250	0.089	mg/L	5	02/15/21 12:04	EPA200.7		AES
Magnesium*	**0.606**	0.500	0.327	mg/L	5	02/15/21 12:04	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	02/15/21 12:03	EPA200.7		AES
Silica (Si02)	**9.64**	5.35	0.398	mg/L	5	02/15/21 12:04	Calculation		AES
Silicon	**4.51**	2.50	0.186	mg/L	5	02/15/21 12:04	EPA200.7		AES
Sodium*	**468**	5.00	0.396	mg/L	5	02/15/21 12:03	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0083**	0.0025	0.0004	mg/L	5	02/22/21 13:31	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0002	mg/L	5	02/22/21 13:31	EPA200.8		AES
Copper*	**0.0031**	0.0025	0.0014	mg/L	5	02/22/21 13:31	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 13:31	EPA200.8		AES
Manganese*	**0.0069**	0.0025	0.0006	mg/L	5	02/22/21 13:31	EPA200.8		AES
Molybdenum*	**0.0162**	0.0025	0.0007	mg/L	5	02/22/21 13:31	EPA200.8		AES
Selenium*	**0.0462**	0.0050	0.0031	mg/L	5	02/22/21 13:31	EPA200.8		AES
Uranium	**0.0049**	0.0025	0.0005	mg/L	5	02/22/21 13:31	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0036	mg/L	5	02/22/21 13:31	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**4.49**								

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/25/21 11:05

MW-3-A

2102110-05 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**520**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**520**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Chloride*	**13.5**	2.00	0.0845	mg/L	2	02/22/21 19:28	EPA300.0		AES
Fluoride*	**0.336**	0.200	0.0194	mg/L	2	02/22/21 19:28	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:19	EPA353.2		JDA
pH*	**8.13**			pH Units	1	02/11/21 12:40	EPA150.1		VJW
Total Dissolved Solids*	**1410**	10.0		mg/L	1	02/15/21 14:00	EPA160.1		VJW
Sulfate*	**600**	20.0	3.05	mg/L	20	02/23/21 11:58	EPA300.0		AES
Total Organic Carbon*	**3.16**	0.500	0.0616	mg/L	1	02/18/21 00:36	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/15/21 12:08	EPA200.7		AES
Calcium*	**3.07**	0.500	0.289	mg/L	5	02/15/21 12:08	EPA200.7		AES
Hardness as CaCO3	**10.5**	3.31	2.07	mg/L	5	02/15/21 12:08	2340 B		AES
Iron*	<0.250	0.250	0.089	mg/L	5	02/15/21 12:08	EPA200.7		AES
Magnesium*	**0.698**	0.500	0.327	mg/L	5	02/15/21 12:08	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	02/15/21 12:08	EPA200.7		AES
Silica (Si02)	**11.3**	5.35	0.398	mg/L	5	02/15/21 12:08	Calculation		AES
Silicon	**5.28**	2.50	0.186	mg/L	5	02/15/21 12:08	EPA200.7		AES
Sodium*	**536**	5.00	0.396	mg/L	5	02/15/21 12:08	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0026**	0.0025	0.0004	mg/L	5	02/22/21 13:35	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0002	mg/L	5	02/22/21 13:35	EPA200.8		AES
Copper*	**0.0037**	0.0025	0.0014	mg/L	5	02/22/21 13:35	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 13:35	EPA200.8		AES
Manganese*	**0.0128**	0.0025	0.0006	mg/L	5	02/22/21 13:35	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0007	mg/L	5	02/22/21 13:35	EPA200.8		AES
Selenium*	**0.129**	0.0050	0.0031	mg/L	5	02/22/21 13:35	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	02/22/21 13:35	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0036	mg/L	5	02/22/21 13:35	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**.59**								

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Debbie Zufelt, Reports Manager

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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	02/25/21 11:05

MW-99-A

2102110-06 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**470**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**470**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Chloride*	**13.5**	2.00	0.0845	mg/L	2	02/22/21 19:48	EPA300.0		AES
Fluoride*	**0.330**	0.200	0.0194	mg/L	2	02/22/21 19:48	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:21	EPA353.2		JDA
pH*	**8.20**			pH Units	1	02/11/21 12:40	EPA150.1		VJW
Total Dissolved Solids*	**1420**	10.0		mg/L	1	02/15/21 14:00	EPA160.1		VJW
Sulfate*	**602**	20.0	3.05	mg/L	20	02/23/21 12:18	EPA300.0		AES
Total Organic Carbon*	**3.15**	0.500	0.0616	mg/L	1	02/18/21 00:53	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/15/21 12:12	EPA200.7		AES
Calcium*	**2.88**	0.500	0.289	mg/L	5	02/15/21 12:12	EPA200.7		AES
Hardness as CaCO3	**9.78**	3.31	2.07	mg/L	5	02/15/21 12:12	2340 B		AES
Iron*	<0.250	0.250	0.089	mg/L	5	02/15/21 12:12	EPA200.7		AES
Magnesium*	**0.628**	0.500	0.327	mg/L	5	02/15/21 12:12	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	02/15/21 12:12	EPA200.7		AES
Silica (Si02)	**10.6**	5.35	0.398	mg/L	5	02/15/21 12:12	Calculation		AES
Silicon	**4.95**	2.50	0.186	mg/L	5	02/15/21 12:12	EPA200.7		AES
Sodium*	**494**	5.00	0.396	mg/L	5	02/15/21 12:12	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0026**	0.0025	0.0004	mg/L	5	02/22/21 13:38	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0002	mg/L	5	02/22/21 13:38	EPA200.8		AES
Copper*	**0.0037**	0.0025	0.0014	mg/L	5	02/22/21 13:38	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 13:38	EPA200.8		AES
Manganese*	**0.0129**	0.0025	0.0006	mg/L	5	02/22/21 13:38	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0007	mg/L	5	02/22/21 13:38	EPA200.8		AES
Selenium*	**0.0742**	0.0050	0.0031	mg/L	5	02/22/21 13:38	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	02/22/21 13:38	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0036	mg/L	5	02/22/21 13:38	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**-1.39**								

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/25/21 11:05

MW-3-C

2102110-07 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**1710**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	**460**	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	10	02/15/21 15:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**2170**	10.0	4.53	mg/L	10	02/15/21 15:00	2320 B		LLG
Chloride*	**574**	25.0	1.06	mg/L	25	02/23/21 12:39	EPA300.0		AES
Fluoride*	**3.37**	0.500	0.0486	mg/L	5	02/22/21 20:09	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:22	EPA353.2		JDA
pH*	**8.43**			pH Units	1	02/11/21 12:40	EPA150.1		VJW
Total Dissolved Solids*	**3200**	10.0		mg/L	1	02/15/21 14:00	EPA160.1		VJW
Sulfate*	<5.00	5.00	0.762	mg/L	5	02/22/21 20:09	EPA300.0		AES
Total Organic Carbon*	**15.7**	0.500	0.0616	mg/L	1	02/18/21 01:14	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.500	0.500	0.128	mg/L	10	02/15/21 12:17	EPA200.7		AES
Calcium*	**4.25**	1.00	0.579	mg/L	10	02/15/21 12:17	EPA200.7		AES
Hardness as CaCO3	**18.5**	6.62	4.14	mg/L	10	02/15/21 12:17	2340 B		AES
Iron*	<0.500	0.500	0.178	mg/L	10	02/15/21 12:17	EPA200.7		AES
Magnesium*	**1.92**	1.00	0.654	mg/L	10	02/15/21 12:17	EPA200.7		AES
Potassium*	<10.0	10.0	0.807	mg/L	10	02/15/21 12:17	EPA200.7		AES
Silica (Si02)	<10.7	10.7	0.797	mg/L	10	02/15/21 12:17	Calculation		AES
Silicon	<5.00	5.00	0.373	mg/L	10	02/15/21 12:17	EPA200.7		AES
Sodium*	**1360**	10.0	0.793	mg/L	10	02/15/21 12:17	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0113**	0.0050	0.0007	mg/L	10	02/22/21 13:42	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0004	mg/L	10	02/22/21 13:42	EPA200.8		AES
Copper*	**0.0102**	0.0050	0.0028	mg/L	10	02/22/21 13:42	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0008	mg/L	10	02/22/21 13:42	EPA200.8		AES
Manganese*	**0.0052**	0.0050	0.0012	mg/L	10	02/22/21 13:42	EPA200.8		AES
Molybdenum*	**0.0080**	0.0050	0.0014	mg/L	10	02/22/21 13:42	EPA200.8		AES
Selenium*	**0.0270**	0.0100	0.0061	mg/L	10	02/22/21 13:42	EPA200.8		AES
Uranium	<0.0050	0.0050	0.0009	mg/L	10	02/22/21 13:42	EPA200.8		AES
Zinc*	**0.0294**	0.0200	0.0072	mg/L	10	02/22/21 13:42	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**-.1**								

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/25/21 11:05

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210324 - General Prep - Wet Chem										
Duplicate (B210324-DUP1)		**Source: 2102110-01**		Prepared & Analyzed: 02/11/21						
pH	8.25		pH Units		8.21			0.486	20	
Reference (B210324-SRM1)				Prepared & Analyzed: 02/11/21						
pH	7.04		pH Units	7.00		101	98.57-101.42			
Batch B210339 - General Prep - Wet Chem										
Blank (B210339-BLK1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B210339-DUP1)		**Source: 2102092-01**		Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	4400	10.0	mg/L		4480			1.80	20	
Reference (B210339-SRM1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	630	10.0	mg/L	600		105	85-115			
Batch B210358 - General Prep - Wet Chem										
Blank (B210358-BLK1)				Prepared: 02/15/21 Analyzed: 02/22/21						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B210358-BS1)				Prepared: 02/15/21 Analyzed: 02/22/21						
Chloride	23.9	1.00	mg/L	25.0		95.5	90-110			
Fluoride	2.49	0.100	mg/L	2.50		99.6	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.8	90-110			
LCS Dup (B210358-BSD1)				Prepared: 02/15/21 Analyzed: 02/22/21						
Chloride	23.6	1.00	mg/L	25.0		94.4	90-110	1.10	20	
Fluoride	2.48	0.100	mg/L	2.50		99.0	90-110	0.604	20	
Sulfate	24.4	1.00	mg/L	25.0		97.5	90-110	0.266	20	
Batch B210360 - General Prep - Wet Chem										
Blank (B210360-BLK1)				Prepared & Analyzed: 02/15/21						
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B210360-BS1)				Prepared & Analyzed: 02/15/21						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115			
LCS Dup (B210360-BSD1)				Prepared & Analyzed: 02/15/21						
Alkalinity, Total as CaCO3	99.0	10.0	mg/L	100		99.0	85-115	1.02	20	
Batch B210369 - General Prep - Wet Chem										
Blank (B210369-BLK1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							

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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	02/25/21 11:05

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210369 - General Prep - Wet Chem (Continued)										
LCS (B210369-BS1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	0.943	0.020	mg/L as N	1.00		94.3	90-110			
LCS Dup (B210369-BSD1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	0.942	0.020	mg/L as N	1.00		94.2	90-110	0.0955	20	
Batch B210386 - General Prep - Wet Chem										
Blank (B210386-BLK1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B210386-BS1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	9.46	0.500	mg/L	10.0		94.6	85-115			
LCS Dup (B210386-BSD1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	9.48	0.500	mg/L	10.0		94.8	85-115	0.275	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	02/25/21 11:05

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210333 - Diss. 200.7/200.8										
Blank (B210333-BLK1)				Prepared: 02/12/21 Analyzed: 02/15/21						
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 (B210333-BS1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Aluminum	4.85	0.050	mg/L	5.00		97.0	85-115			
Calcium	4.92	0.100	mg/L	5.00		98.4	85-115			
Iron	4.88	0.050	mg/L	5.00		97.6	85-115			
Magnesium	25.0	0.100	mg/L	25.0		100	85-115			
Potassium	10.0	1.00	mg/L	10.0		100	85-115			
Silicon	4.72	0.500	mg/L	5.00		94.5	85-115			
Sodium	3.96	1.00	mg/L	4.05		97.9	85-115			
LCS Dup (B210333-BSD1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Aluminum	5.00	0.050	mg/L	5.00		100	85-115	2.98	20	
Calcium	5.03	0.100	mg/L	5.00		101	85-115	2.17	20	
Iron	5.00	0.050	mg/L	5.00		99.9	85-115	2.38	20	
Magnesium	25.6	0.100	mg/L	25.0		102	85-115	2.43	20	
Potassium	10.0	1.00	mg/L	10.0		100	85-115	0.146	20	
Silicon	4.84	0.500	mg/L	5.00		96.9	85-115	2.52	20	
Sodium	4.05	1.00	mg/L	4.05		100	85-115	2.21	20	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/25/21 11:05

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210335 - Diss. 200.7/200.8										
Blank (B210335-BLK1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0001	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 (B210335-BS1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0503	0.0005	mg/L	0.0500		101	85-115			
Cadmium	0.0492	0.0001	mg/L	0.0500		98.4	85-115			
Copper	0.0486	0.0005	mg/L	0.0500		97.3	85-115			
Lead	0.0517	0.0005	mg/L	0.0500		103	85-115			
Manganese	0.0515	0.0005	mg/L	0.0500		103	85-115			
Molybdenum	0.0486	0.0005	mg/L	0.0500		97.2	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.6	85-115			
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0492	0.0020	mg/L	0.0500		98.4	85-115			
LCS Dup (B210335-BSD1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0513	0.0005	mg/L	0.0500		103	85-115	1.92	20	
Cadmium	0.0508	0.0001	mg/L	0.0500		102	85-115	3.26	20	
Copper	0.0496	0.0005	mg/L	0.0500		99.2	85-115	1.92	20	
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115	2.24	20	
Manganese	0.0505	0.0005	mg/L	0.0500		101	85-115	2.05	20	
Molybdenum	0.0494	0.0005	mg/L	0.0500		98.8	85-115	1.61	20	
Selenium	0.250	0.0010	mg/L	0.250		100	85-115	0.446	20	
Uranium	0.0505	0.0005	mg/L	0.0500		101	85-115	4.46	20	
Zinc	0.0493	0.0020	mg/L	0.0500		98.6	85-115	0.235	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	02/25/21 11:05

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210406 - EPA 245.1/7470										
Blank (B210406-BLK1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	ND	0.0002	mg/L							
LCS (B210406-BS1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	0.0057	0.0002	mg/L	0.00500		113	85-115			
LCS Dup (B210406-BSD1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	0.0058	0.0002	mg/L	0.00500		115	85-115	1.52	20	BS1

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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	02/25/21 11:05

Notes and Definitions

M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.
BS1	Laboratory control sample recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
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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GREEN ANALYTICAL LABORATORIES
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75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC ENERGY LLC
Address: 6473 COUNTY ROAD 120
City: HESPERUS State: CO Zip: 81326
Phone #: 970 385 4528
Contact Person: T BIRD@GCC.COM / TOM BIRD
Email Report to: LANDON BECK
LBECK@RESOURCEHYDROGEOLOGIC.COM
Project Name(optional):
Sampler Name (Print): MICHAEL MCFARLAND & 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 GW BASELINE
2102-110,01	MW-4-M1	2-10-21	09:00	X							1	1		4			X
-02	MW-4-A	2-10-21	10:19	X							1	1		4			X
-03	MW-4-C	2-10-21	10:51	X							1	1		4			X
-04	MW-3-M1	2-10-21	11:38	X							1	1		4			X
-05	MW-3-A	2-10-21	12:08	X							1	1		4			X
-06	MW-99-A	2-10-21	12:30	X							1	1		4			X
-07	MW-3-C	2-10-21	13:01	X							1	1		4			X

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Relinquished by:	Date: / Time:	Received by:
Michael McFarland	2-10-21 / 1355	
	2-10-21 / 1800	

ADDITIONAL REMARKS:

Report to State? (Circle) Yes No

Cooler #3

7.2°C Temperature at receipt: CHECKED BY X On Ice No Ice

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

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Durango, CO 81303
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26 February 2021

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 02/15/21 15:00.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt
Reports Manager

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

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

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.

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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	02/26/21 12:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-5-MI	2102131-01	Water	02/15/21 11:27	02/15/21 15:00	
MW-5-C	2102131-02	Water	02/15/21 12:01	02/15/21 15:00	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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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	02/26/21 12:26

MW-5-MI

2102131-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**825**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	**110**	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**935**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Chloride*	**5.27**	2.00	0.0845	mg/L	2	02/19/21 13:09	EPA300.0		AES
Fluoride*	**0.250**	0.200	0.0194	mg/L	2	02/19/21 13:09	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:28	EPA353.2		JDA
pH*	**8.37**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
Total Dissolved Solids*	**955**	10.0		mg/L	1	02/16/21 12:25	EPA160.1		VJW
Sulfate*	**6.80**	2.00	0.305	mg/L	2	02/19/21 13:09	EPA300.0		AES
Total Organic Carbon*	**2.64**	0.500	0.0616	mg/L	1	02/18/21 02:38	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.150	0.150	0.038	mg/L	3	02/24/21 18:01	EPA200.7		AES
Calcium*	**2.42**	0.300	0.174	mg/L	3	02/24/21 18:01	EPA200.7		AES
Hardness as CaCO3	**9.45**	1.98	1.24	mg/L	3	02/24/21 18:01	2340 B		AES
Iron*	<0.150	0.150	0.053	mg/L	3	02/24/21 18:01	EPA200.7		AES
Magnesium*	**0.826**	0.300	0.196	mg/L	3	02/24/21 18:01	EPA200.7		AES
Potassium*	<3.00	3.00	0.242	mg/L	3	02/24/21 18:01	EPA200.7		AES
Silica (Si02)	**8.91**	3.21	0.239	mg/L	3	02/24/21 18:01	Calculation		AES
Silicon	**4.17**	1.50	0.112	mg/L	3	02/24/21 18:01	EPA200.7		AES
Sodium*	**435**	3.00	0.238	mg/L	3	02/24/21 18:01	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0143**	0.0015	0.0002	mg/L	3	02/22/21 13:53	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0001	mg/L	3	02/22/21 13:53	EPA200.8		AES
Copper*	**0.0030**	0.0015	0.0008	mg/L	3	02/22/21 13:53	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0002	mg/L	3	02/22/21 13:53	EPA200.8		AES
Manganese*	**0.0215**	0.0015	0.0003	mg/L	3	02/22/21 13:53	EPA200.8		AES
Molybdenum*	**0.0028**	0.0015	0.0004	mg/L	3	02/22/21 13:53	EPA200.8		AES
Selenium*	**0.0039**	0.0030	0.0018	mg/L	3	02/22/21 13:53	EPA200.8		AES
Uranium	**0.0079**	0.0015	0.0003	mg/L	3	02/22/21 13:53	EPA200.8		AES
Zinc*	**0.0831**	0.0060	0.0022	mg/L	3	02/22/21 13:53	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**.37**								

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/26/21 12:26

MW-5-C

2102131-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**1550**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	**60.0**	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**1610**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Chloride*	**5.84**	5.00	0.211	mg/L	5	02/19/21 14:10	EPA300.0		AES
Fluoride*	**1.99**	0.500	0.0486	mg/L	5	02/19/21 14:10	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:29	EPA353.2	M5	JDA
pH*	**8.03**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
Total Dissolved Solids*	**2710**	10.0		mg/L	1	02/16/21 12:25	EPA160.1		VJW
Sulfate*	**693**	25.0	3.81	mg/L	25	02/19/21 22:33	EPA300.0		AES
Total Organic Carbon*	**2.70**	0.500	0.0616	mg/L	1	02/18/21 02:59	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.500	0.500	0.128	mg/L	10	02/24/21 18:03	EPA200.7		AES
Calcium*	**6.70**	1.00	0.579	mg/L	10	02/24/21 18:03	EPA200.7		AES
Hardness as CaCO3	**29.4**	6.62	4.14	mg/L	10	02/24/21 18:03	2340 B		AES
Iron*	<0.500	0.500	0.178	mg/L	10	02/24/21 18:03	EPA200.7		AES
Magnesium*	**3.08**	1.00	0.654	mg/L	10	02/24/21 18:03	EPA200.7		AES
Potassium*	<10.0	10.0	0.807	mg/L	10	02/24/21 18:03	EPA200.7		AES
Silica (Si02)	<10.7	10.7	0.797	mg/L	10	02/24/21 18:03	Calculation		AES
Silicon	<5.00	5.00	0.373	mg/L	10	02/24/21 18:03	EPA200.7		AES
Sodium*	**1070**	10.0	0.793	mg/L	10	02/24/21 18:03	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0050	0.0050	0.0007	mg/L	10	02/22/21 13:56	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0004	mg/L	10	02/22/21 13:56	EPA200.8		AES
Copper*	**0.0066**	0.0050	0.0028	mg/L	10	02/22/21 13:56	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0008	mg/L	10	02/22/21 13:56	EPA200.8		AES
Manganese*	<0.0050	0.0050	0.0012	mg/L	10	02/22/21 13:56	EPA200.8		AES
Molybdenum*	<0.0050	0.0050	0.0014	mg/L	10	02/22/21 13:56	EPA200.8		AES
Selenium*	**0.0142**	0.0100	0.0061	mg/L	10	02/22/21 13:56	EPA200.8		AES
Uranium	<0.0050	0.0050	0.0009	mg/L	10	02/22/21 13:56	EPA200.8		AES
Zinc*	<0.0200	0.0200	0.0072	mg/L	10	02/22/21 13:56	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**.34**								

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/26/21 12:26

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210339 - General Prep - Wet Chem										
Blank (B210339-BLK1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B210339-DUP1)		**Source: 2102092-01**		Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	4400	10.0	mg/L		4480			1.80	20	
Reference (B210339-SRM1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	630	10.0	mg/L	600		105	85-115			
Batch B210369 - General Prep - Wet Chem										
Blank (B210369-BLK1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B210369-BS1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	0.943	0.020	mg/L as N	1.00		94.3	90-110			
LCS Dup (B210369-BSD1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	0.942	0.020	mg/L as N	1.00		94.2	90-110	0.0955	20	
Batch B210376 - General Prep - Wet Chem										
Duplicate (B210376-DUP1)		**Source: 2102131-01**		Prepared & Analyzed: 02/17/21						
pH	8.36		pH Units		8.37			0.120	20	
Reference (B210376-SRM1)				Prepared & Analyzed: 02/17/21						
pH	7.04		pH Units	7.00		101	98.57-101.42			
Batch B210386 - General Prep - Wet Chem										
Blank (B210386-BLK1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B210386-BS1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	9.46	0.500	mg/L	10.0		94.6	85-115			
LCS Dup (B210386-BSD1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	9.48	0.500	mg/L	10.0		94.8	85-115	0.275	20	
Batch B210396 - General Prep - Wet Chem										
Blank (B210396-BLK1)				Prepared & Analyzed: 02/19/21						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	02/26/21 12:26

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210396 - General Prep - Wet Chem (Continued)										
LCS (B210396-BS1)				Prepared & Analyzed: 02/19/21						
Chloride	24.0	1.00	mg/L	25.0		96.1	90-110			
Fluoride	2.51	0.100	mg/L	2.50		100	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.7	90-110			
LCS Dup (B210396-BSD1)				Prepared & Analyzed: 02/19/21						
Chloride	23.8	1.00	mg/L	25.0		95.1	90-110	1.00	20	
Fluoride	2.53	0.100	mg/L	2.50		101	90-110	0.675	20	
Sulfate	24.5	1.00	mg/L	25.0		98.0	90-110	0.384	20	
Batch B210414 - General Prep - Wet Chem										
Blank (B210414-BLK1)				Prepared & Analyzed: 02/22/21						
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B210414-BS1)				Prepared & Analyzed: 02/22/21						
Alkalinity, Total as CaCO3	101	10.0	mg/L	100		101	85-115			
LCS Dup (B210414-BSD1)				Prepared & Analyzed: 02/22/21						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115	3.02	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	02/26/21 12:26

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210419 - Diss. 200.7/200.8										
Blank (B210419-BLK1)				Prepared: 02/23/21 Analyzed: 02/24/21						
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 (B210419-BS1)				Prepared: 02/23/21 Analyzed: 02/24/21						
Aluminum	5.19	0.050	mg/L	5.00		104	85-115			
Calcium	5.37	0.100	mg/L	5.00		107	85-115			
Iron	5.28	0.050	mg/L	5.00		106	85-115			
Magnesium	27.5	0.100	mg/L	25.0		110	85-115			
Potassium	10.5	1.00	mg/L	10.0		105	85-115			
Silicon	5.32	0.500	mg/L	5.00		106	85-115			
Sodium	4.11	1.00	mg/L	4.05		102	85-115			
LCS Dup (B210419-BSD1)				Prepared: 02/23/21 Analyzed: 02/24/21						
Aluminum	5.21	0.050	mg/L	5.00		104	85-115	0.286	20	
Calcium	5.38	0.100	mg/L	5.00		108	85-115	0.0499	20	
Iron	5.26	0.050	mg/L	5.00		105	85-115	0.275	20	
Magnesium	27.5	0.100	mg/L	25.0		110	85-115	0.178	20	
Potassium	10.7	1.00	mg/L	10.0		107	85-115	1.49	20	
Silicon	5.30	0.500	mg/L	5.00		106	85-115	0.440	20	
Sodium	4.09	1.00	mg/L	4.05		101	85-115	0.465	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	02/26/21 12:26

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210335 - Diss. 200.7/200.8										
Blank (B210335-BLK1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0001	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 (B210335-BS1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0503	0.0005	mg/L	0.0500		101	85-115			
Cadmium	0.0492	0.0001	mg/L	0.0500		98.4	85-115			
Copper	0.0486	0.0005	mg/L	0.0500		97.3	85-115			
Lead	0.0517	0.0005	mg/L	0.0500		103	85-115			
Manganese	0.0515	0.0005	mg/L	0.0500		103	85-115			
Molybdenum	0.0486	0.0005	mg/L	0.0500		97.2	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.6	85-115			
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0492	0.0020	mg/L	0.0500		98.4	85-115			
LCS Dup (B210335-BSD1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0513	0.0005	mg/L	0.0500		103	85-115	1.92	20	
Cadmium	0.0508	0.0001	mg/L	0.0500		102	85-115	3.26	20	
Copper	0.0496	0.0005	mg/L	0.0500		99.2	85-115	1.92	20	
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115	2.24	20	
Manganese	0.0505	0.0005	mg/L	0.0500		101	85-115	2.05	20	
Molybdenum	0.0494	0.0005	mg/L	0.0500		98.8	85-115	1.61	20	
Selenium	0.250	0.0010	mg/L	0.250		100	85-115	0.446	20	
Uranium	0.0505	0.0005	mg/L	0.0500		101	85-115	4.46	20	
Zinc	0.0493	0.0020	mg/L	0.0500		98.6	85-115	0.235	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	02/26/21 12:26

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210406 - EPA 245.1/7470										
Blank (B210406-BLK1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	ND	0.0002	mg/L							
LCS (B210406-BS1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	0.0057	0.0002	mg/L	0.00500		113	85-115			
LCS Dup (B210406-BSD1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	0.0058	0.0002	mg/L	0.00500		115	85-115	1.52	20	BS1

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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	02/26/21 12:26

Notes and Definitions

M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.
BS1	Laboratory control sample recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
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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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@GCC.COM
Email Report to: LANDON BECK
Project Name(optional): LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MICHAEL MCFARLAND & 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:	GCL GW BASELINE
2102-131-01	MW-5-M1	2-15-21	11:27	X							1	1		4			X
2102-131-02	MW-5-C	2-15-21	12:01	X							1	1		4			X

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Relinquished by:	Date:	Time:	Received by:
Michael McFarland	2-15-21	1401	
	2-15-21	15:00	Dublin Zufelt

ADDITIONAL REMARKS:
#3 Lser

Report to State? (Circle)
Yes No

Temperature at receipt: 1.8°C
CHECKED BY: DZ
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.

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02 March 2021

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 02/09/21 15:00.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt
Reports Manager

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

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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.

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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	03/02/21 11:45

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-6-A	2102092-01	Water	02/09/21 11:29	02/09/21 15:00	
MW-6-LM	2102092-02	Water	02/09/21 12:47	02/09/21 15:00	

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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	03/02/21 11:45

MW-6-A

2102092-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**245**	10.0	4.53	mg/L	1	02/11/21 00:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	1	02/11/21 00:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	1	02/11/21 00:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**245**	10.0	4.53	mg/L	1	02/11/21 00:00	2320 B		LLG
Chloride*	**24.9**	5.00	0.211	mg/L	5	02/22/21 15:22	EPA300.0		AES
Fluoride*	<0.500	0.500	0.0486	mg/L	5	02/22/21 15:22	EPA300.0	M5	AES
Nitrate/Nitrite as N*	**0.039**	0.020	0.006	mg/L as N	1	02/18/21 15:08	EPA353.2		JDA
pH*	**7.20**			pH Units	1	02/10/21 14:30	EPA150.1		VJW
Total Dissolved Solids*	**4480**	10.0		mg/L	1	02/15/21 14:00	EPA160.1		VJW
Sulfate*	**2620**	100	15.2	mg/L	100	02/22/21 21:10	EPA300.0		AES
Total Organic Carbon*	**1.71**	0.500	0.0616	mg/L	1	02/17/21 22:11	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/15/21 11:20	EPA200.7		AES
Calcium*	**398**	0.500	0.289	mg/L	5	02/15/21 11:20	EPA200.7		AES
Hardness as CaCO3	**2660**	3.31	2.07	mg/L	5	02/15/21 11:20	2340 B		AES
Iron*	**1.17**	0.250	0.089	mg/L	5	02/15/21 11:20	EPA200.7		AES
Magnesium*	**404**	0.500	0.327	mg/L	5	02/15/21 11:20	EPA200.7		AES
Potassium*	**11.1**	5.00	0.403	mg/L	5	02/15/21 11:20	EPA200.7		AES
Silica (Si02)	**11.9**	5.35	0.398	mg/L	5	02/15/21 11:20	Calculation		AES
Silicon	**5.58**	2.50	0.186	mg/L	5	02/15/21 11:20	EPA200.7		AES
Sodium*	**272**	5.00	0.396	mg/L	5	02/15/21 11:20	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 12:53	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0002	mg/L	5	02/22/21 12:53	EPA200.8		AES
Copper*	<0.0025	0.0025	0.0014	mg/L	5	02/22/21 12:53	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 12:53	EPA200.8		AES
Manganese*	**0.437**	0.0025	0.0006	mg/L	5	02/22/21 12:53	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0007	mg/L	5	02/22/21 12:53	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0031	mg/L	5	02/22/21 12:53	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0005	mg/L	5	02/22/21 12:53	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0036	mg/L	5	02/22/21 12:53	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 17:29	EPA245.1		LLG
Cation/Anion Balance	**4.06**								

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	03/02/21 11:45

MW-6-LM

2102092-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**336**	10.0	4.53	mg/L	1	02/11/21 00:00	2320 B		LLG
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	1	02/11/21 00:00	2320 B		LLG
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	1	02/11/21 00:00	2320 B		LLG
Alkalinity, Total as CaCO3*	**336**	10.0	4.53	mg/L	1	02/11/21 00:00	2320 B		LLG
Chloride*	**11.0**	2.00	0.0845	mg/L	2	02/22/21 16:24	EPA300.0		AES
Fluoride*	**0.318**	0.200	0.0194	mg/L	2	02/22/21 16:24	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	02/18/21 15:09	EPA353.2	M5	JDA
pH*	**7.49**			pH Units	1	02/10/21 14:30	EPA150.1		VJW
Total Dissolved Solids*	**1990**	10.0		mg/L	1	02/25/21 09:49	EPA160.1	H3	VJW
Sulfate*	**1020**	40.0	6.10	mg/L	40	02/22/21 22:52	EPA300.0		AES
Total Organic Carbon*	**3.17**	0.500	0.0616	mg/L	1	02/17/21 23:01	5310C		VJW
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/15/21 11:34	EPA200.7		AES
Calcium*	**176**	0.500	0.289	mg/L	5	02/15/21 11:34	EPA200.7		AES
Hardness as CaCO3	**1120**	3.31	2.07	mg/L	5	02/15/21 11:34	2340 B		AES
Iron*	<0.250	0.250	0.089	mg/L	5	02/15/21 11:34	EPA200.7		AES
Magnesium*	**166**	0.500	0.327	mg/L	5	02/15/21 11:34	EPA200.7		AES
Potassium*	**5.96**	5.00	0.403	mg/L	5	02/15/21 11:34	EPA200.7		AES
Silica (Si02)	**15.6**	5.35	0.398	mg/L	5	02/15/21 11:34	Calculation		AES
Silicon	**7.30**	2.50	0.186	mg/L	5	02/15/21 11:34	EPA200.7		AES
Sodium*	**188**	5.00	0.396	mg/L	5	02/15/21 11:34	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0038**	0.0025	0.0004	mg/L	5	02/22/21 12:56	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0002	mg/L	5	02/22/21 12:56	EPA200.8		AES
Copper*	<0.0025	0.0025	0.0014	mg/L	5	02/22/21 12:56	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0004	mg/L	5	02/22/21 12:56	EPA200.8		AES
Manganese*	**0.253**	0.0025	0.0006	mg/L	5	02/22/21 12:56	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0007	mg/L	5	02/22/21 12:56	EPA200.8		AES
Selenium*	**0.0151**	0.0050	0.0031	mg/L	5	02/22/21 12:56	EPA200.8		AES
Uranium	**0.0039**	0.0025	0.0005	mg/L	5	02/22/21 12:56	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0036	mg/L	5	02/22/21 12:56	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 17:29	EPA245.1		LLG
Cation/Anion Balance	**4.22**								

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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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	03/02/21 11:45

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210319 - General Prep - Wet Chem										
Blank (B210319-BLK1)				Prepared: 02/10/21 Analyzed: 02/11/21						
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B210319-BS1)				Prepared: 02/10/21 Analyzed: 02/11/21						
Alkalinity, Total as CaCO3	103	10.0	mg/L	100		103	85-115			
LCS Dup (B210319-BSD1)				Prepared: 02/10/21 Analyzed: 02/11/21						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115	4.98	20	
Batch B210324 - General Prep - Wet Chem										
Duplicate (B210324-DUP1)		**Source: 2102110-01**		Prepared & Analyzed: 02/11/21						
pH	8.25		pH Units		8.21			0.486	20	
Reference (B210324-SRM1)				Prepared & Analyzed: 02/11/21						
pH	7.04		pH Units	7.00		101	98.57-101.42			
Batch B210339 - General Prep - Wet Chem										
Blank (B210339-BLK1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B210339-DUP1)		**Source: 2102092-01**		Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	4400	10.0	mg/L		4480			1.80	20	
Reference (B210339-SRM1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Total Dissolved Solids	630	10.0	mg/L	600		105	85-115			
Batch B210358 - General Prep - Wet Chem										
Blank (B210358-BLK1)				Prepared: 02/15/21 Analyzed: 02/22/21						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B210358-BS1)				Prepared: 02/15/21 Analyzed: 02/22/21						
Chloride	23.9	1.00	mg/L	25.0		95.5	90-110			
Fluoride	2.49	0.100	mg/L	2.50		99.6	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.8	90-110			
LCS Dup (B210358-BSD1)				Prepared: 02/15/21 Analyzed: 02/22/21						
Chloride	23.6	1.00	mg/L	25.0		94.4	90-110	1.10	20	
Fluoride	2.48	0.100	mg/L	2.50		99.0	90-110	0.604	20	
Sulfate	24.4	1.00	mg/L	25.0		97.5	90-110	0.266	20	
Batch B210369 - General Prep - Wet Chem										
Blank (B210369-BLK1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							

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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	03/02/21 11:45

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210369 - General Prep - Wet Chem (Continued)										
LCS (B210369-BS1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	0.943	0.020	mg/L as N	1.00		94.3	90-110			
LCS Dup (B210369-BSD1)				Prepared: 02/16/21 Analyzed: 02/18/21						
Nitrate/Nitrite as N	0.942	0.020	mg/L as N	1.00		94.2	90-110	0.0955	20	
Batch B210386 - General Prep - Wet Chem										
Blank (B210386-BLK1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B210386-BS1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	9.46	0.500	mg/L	10.0		94.6	85-115			
LCS Dup (B210386-BSD1)				Prepared & Analyzed: 02/17/21						
Total Organic Carbon	9.48	0.500	mg/L	10.0		94.8	85-115	0.275	20	
Batch B210426 - General Prep - Wet Chem										
Blank (B210426-BLK1)				Prepared & Analyzed: 02/25/21						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B210426-SRM1)				Prepared & Analyzed: 02/25/21						
Total Dissolved Solids	580	10.0	mg/L	600		96.7	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	03/02/21 11:45

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210333 - Diss. 200.7/200.8										
Blank (B210333-BLK1)				Prepared: 02/12/21 Analyzed: 02/15/21						
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 (B210333-BS1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Aluminum	4.85	0.050	mg/L	5.00		97.0	85-115			
Calcium	4.92	0.100	mg/L	5.00		98.4	85-115			
Iron	4.88	0.050	mg/L	5.00		97.6	85-115			
Magnesium	25.0	0.100	mg/L	25.0		100	85-115			
Potassium	10.0	1.00	mg/L	10.0		100	85-115			
Silicon	4.72	0.500	mg/L	5.00		94.5	85-115			
Sodium	3.96	1.00	mg/L	4.05		97.9	85-115			
LCS Dup (B210333-BSD1)				Prepared: 02/12/21 Analyzed: 02/15/21						
Aluminum	5.00	0.050	mg/L	5.00		100	85-115	2.98	20	
Calcium	5.03	0.100	mg/L	5.00		101	85-115	2.17	20	
Iron	5.00	0.050	mg/L	5.00		99.9	85-115	2.38	20	
Magnesium	25.6	0.100	mg/L	25.0		102	85-115	2.43	20	
Potassium	10.0	1.00	mg/L	10.0		100	85-115	0.146	20	
Silicon	4.84	0.500	mg/L	5.00		96.9	85-115	2.52	20	
Sodium	4.05	1.00	mg/L	4.05		100	85-115	2.21	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	03/02/21 11:45

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210335 - Diss. 200.7/200.8										
Blank (B210335-BLK1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0001	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 (B210335-BS1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0503	0.0005	mg/L	0.0500		101	85-115			
Cadmium	0.0492	0.0001	mg/L	0.0500		98.4	85-115			
Copper	0.0486	0.0005	mg/L	0.0500		97.3	85-115			
Lead	0.0517	0.0005	mg/L	0.0500		103	85-115			
Manganese	0.0515	0.0005	mg/L	0.0500		103	85-115			
Molybdenum	0.0486	0.0005	mg/L	0.0500		97.2	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.6	85-115			
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0492	0.0020	mg/L	0.0500		98.4	85-115			
LCS Dup (B210335-BSD1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0513	0.0005	mg/L	0.0500		103	85-115	1.92	20	
Cadmium	0.0508	0.0001	mg/L	0.0500		102	85-115	3.26	20	
Copper	0.0496	0.0005	mg/L	0.0500		99.2	85-115	1.92	20	
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115	2.24	20	
Manganese	0.0505	0.0005	mg/L	0.0500		101	85-115	2.05	20	
Molybdenum	0.0494	0.0005	mg/L	0.0500		98.8	85-115	1.61	20	
Selenium	0.250	0.0010	mg/L	0.250		100	85-115	0.446	20	
Uranium	0.0505	0.0005	mg/L	0.0500		101	85-115	4.46	20	
Zinc	0.0493	0.0020	mg/L	0.0500		98.6	85-115	0.235	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	03/02/21 11:45

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210314 - EPA 245.1/7470										
Blank (B210314-BLK1)				Prepared: 02/10/21 Analyzed: 02/24/21						
Mercury	ND	0.0002	mg/L							
LCS (B210314-BS1)				Prepared: 02/10/21 Analyzed: 02/24/21						
Mercury	0.0052	0.0002	mg/L	0.00500		104	85-115			
LCS Dup (B210314-BSD1)				Prepared: 02/10/21 Analyzed: 02/24/21						
Mercury	0.0053	0.0002	mg/L	0.00500		106	85-115	1.54	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	03/02/21 11:45

Notes and Definitions

M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.
H3	Initial analysis performed within hold-time but not reportable due to QC failure or other issue. Sample was subsequently re-analyzed past hold time specified by method.
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@GCC.COM
Email Report to: LANDON BECK
Project Name(optional): LBECK@RESOURCEHYDROGEOLOGIC.COM
Sampler Name (Print): MICHAEL McFARLAND & 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	Matrix (check one): GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER:	# of containers: No preservation (general)	HNO_3	HCl	H_2SO_4	Other:	Other:	GCC GW BASELINE
2102-092.01	MW-6-A	2-9-21	11:29	X							1	1		4			X
-02	MW-6-LM	2-9-21	12:47	X							1	1		4			X

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Relinquished by:	Date:	Time:	Received by:
Michael McFarland	2-9-21	1351	Marcus Benally
[illegible]	2/9/21	2:00	[illegible]

ADDITIONAL REMARKS:
Report to State? (Circle) Yes No
Cooler #3

Temperature at receipt: 6.0°C
CHECKED BY: [illegible]
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.

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03 March 2021

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

RE: GCC GW & SW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 02/16/21 15:00.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt
Reports Manager

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

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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.

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-8-LM	2102140-01	Water	02/16/21 08:55	02/16/21 15:00	
MW-8-PL	2102140-02	Water	02/16/21 09:18	02/16/21 15:00	
MW-8-MI	2102140-03	Water	02/16/21 09:44	02/16/21 15:00	
MW-8-EAA	2102140-04	Water	02/16/21 10:28	02/16/21 15:00	
MW-99-EAA	2102140-05	Water	02/16/21 10:52	02/16/21 15:00	
MW-7-EAA	2102140-06	Water	02/16/21 11:15	02/16/21 15:00	
SEEP#3	2102140-07	Water	02/16/21 11:48	02/16/21 15:00	

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Debbie Zufelt

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

MW-8-LM

2102140-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**630**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	**100**	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**730**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Chloride*	**2.50**	1.00	0.0422	mg/L	1	02/20/21 00:15	EPA300.0		AES
Fluoride*	**3.58**	0.100	0.00971	mg/L	1	02/20/21 00:15	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	03/01/21 15:01	EPA353.2		VJW
pH*	**8.54**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
Total Dissolved Solids*	**795**	10.0		mg/L	1	02/19/21 16:25	EPA160.1		VJW
Sulfate*	<1.00	1.00	0.152	mg/L	1	02/20/21 00:15	EPA300.0		AES
Total Organic Carbon*	**1.20**	0.500	0.0616	mg/L	1	03/02/21 22:47	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.150	0.150	0.038	mg/L	3	02/24/21 18:10	EPA200.7		AES
Calcium*	**1.87**	0.300	0.174	mg/L	3	02/24/21 18:10	EPA200.7		AES
Hardness as CaCO3	**6.93**	1.98	1.24	mg/L	3	02/24/21 18:10	2340 B		AES
Iron*	<0.150	0.150	0.053	mg/L	3	02/24/21 18:10	EPA200.7		AES
Magnesium*	**0.550**	0.300	0.196	mg/L	3	02/24/21 18:10	EPA200.7		AES
Potassium*	<3.00	3.00	0.242	mg/L	3	02/24/21 18:10	EPA200.7		AES
Silica (Si02)	**8.17**	3.21	0.239	mg/L	3	02/24/21 18:10	Calculation		AES
Silicon	**3.82**	1.50	0.112	mg/L	3	02/24/21 18:10	EPA200.7		AES
Sodium*	**319**	3.00	0.238	mg/L	3	02/24/21 18:10	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0015	0.0015	0.0002	mg/L	3	02/22/21 14:14	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0001	mg/L	3	02/22/21 14:14	EPA200.8		AES
Copper*	**0.0025**	0.0015	0.0008	mg/L	3	02/22/21 14:14	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0002	mg/L	3	02/23/21 11:20	EPA200.8		AES
Manganese*	**0.0024**	0.0015	0.0003	mg/L	3	02/22/21 14:14	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0004	mg/L	3	02/22/21 14:14	EPA200.8		AES
Selenium*	**0.0031**	0.0030	0.0018	mg/L	3	02/22/21 14:14	EPA200.8		AES
Uranium	<0.0015	0.0015	0.0003	mg/L	3	02/23/21 11:20	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0022	mg/L	3	02/22/21 14:14	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**-2.75**								

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

MW-8-PL

2102140-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**370**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**370**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Chloride*	**3.39**	1.00	0.0422	mg/L	1	02/19/21 15:32	EPA300.0		AES
Fluoride*	**0.219**	0.100	0.00971	mg/L	1	02/19/21 15:32	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	03/01/21 15:05	EPA353.2		VJW
pH*	**7.36**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
Total Dissolved Solids*	**525**	10.0		mg/L	1	02/19/21 16:25	EPA160.1		VJW
Sulfate*	**101**	5.00	0.762	mg/L	5	02/20/21 00:36	EPA300.0		AES
Total Organic Carbon*	**0.928**	0.500	0.0616	mg/L	1	03/02/21 23:02	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.050	0.050	0.013	mg/L	1	02/24/21 18:12	EPA200.7		AES
Calcium*	**52.2**	0.100	0.058	mg/L	1	02/24/21 18:12	EPA200.7		AES
Hardness as CaCO3	**281**	0.662	0.414	mg/L	1	02/24/21 18:12	2340 B		AES
Iron*	<0.050	0.050	0.018	mg/L	1	02/24/21 18:12	EPA200.7		AES
Magnesium*	**36.6**	0.100	0.065	mg/L	1	02/24/21 18:12	EPA200.7		AES
Potassium*	**1.78**	1.00	0.081	mg/L	1	02/24/21 18:12	EPA200.7		AES
Silica (Si02)	**20.1**	1.07	0.0797	mg/L	1	02/24/21 18:12	Calculation		AES
Silicon	**9.40**	0.500	0.037	mg/L	1	02/24/21 18:12	EPA200.7		AES
Sodium*	**78.6**	1.00	0.079	mg/L	1	02/24/21 18:12	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0074**	0.0005	0.00007	mg/L	1	02/22/21 14:17	EPA200.8		AES
Cadmium*	<0.0001	0.0001	0.00004	mg/L	1	02/22/21 14:17	EPA200.8		AES
Copper*	**0.0005**	0.0005	0.0003	mg/L	1	02/22/21 14:17	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00008	mg/L	1	02/23/21 11:30	EPA200.8		AES
Manganese*	**0.196**	0.0005	0.0001	mg/L	1	02/22/21 14:17	EPA200.8		AES
Molybdenum*	<0.0005	0.0005	0.0001	mg/L	1	02/22/21 14:17	EPA200.8		AES
Selenium*	**0.0038**	0.0010	0.0006	mg/L	1	02/22/21 14:17	EPA200.8		AES
Uranium	<0.0005	0.0005	0.00009	mg/L	1	02/23/21 11:30	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0007	mg/L	1	02/22/21 14:17	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**-2.82**								

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

MW-8-MI

2102140-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**590**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**590**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Chloride*	**7.96**	2.00	0.0845	mg/L	2	02/19/21 17:06	EPA300.0		AES
Fluoride*	<0.200	0.200	0.0194	mg/L	2	02/19/21 17:06	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	03/01/21 15:06	EPA353.2		VJW
pH*	**7.33**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
Total Dissolved Solids*	**1060**	10.0		mg/L	1	02/19/21 16:25	EPA160.1		VJW
Sulfate*	**326**	10.0	1.52	mg/L	10	02/22/21 10:16	EPA300.0		AES
Total Organic Carbon*	**2.60**	0.500	0.0616	mg/L	1	03/02/21 23:18	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.150	0.150	0.038	mg/L	3	02/24/21 18:14	EPA200.7		AES
Calcium*	**69.7**	0.300	0.174	mg/L	3	02/24/21 18:14	EPA200.7		AES
Hardness as CaCO3	**376**	1.98	1.24	mg/L	3	02/24/21 18:14	2340 B		AES
Iron*	<0.150	0.150	0.053	mg/L	3	02/24/21 18:14	EPA200.7		AES
Magnesium*	**49.1**	0.300	0.196	mg/L	3	02/24/21 18:14	EPA200.7		AES
Potassium*	**5.88**	3.00	0.242	mg/L	3	02/24/21 18:14	EPA200.7		AES
Silica (Si02)	**13.5**	3.21	0.239	mg/L	3	02/24/21 18:14	Calculation		AES
Silicon	**6.32**	1.50	0.112	mg/L	3	02/24/21 18:14	EPA200.7		AES
Sodium*	**237**	3.00	0.238	mg/L	3	02/24/21 18:14	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	<0.0015	0.0015	0.0002	mg/L	3	02/22/21 14:21	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0001	mg/L	3	02/22/21 14:21	EPA200.8		AES
Copper*	**0.0015**	0.0015	0.0008	mg/L	3	02/22/21 14:21	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0002	mg/L	3	02/23/21 11:34	EPA200.8		AES
Manganese*	**0.0579**	0.0015	0.0003	mg/L	3	02/22/21 14:21	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0004	mg/L	3	02/22/21 14:21	EPA200.8		AES
Selenium*	**0.0425**	0.0030	0.0018	mg/L	3	02/22/21 14:21	EPA200.8		AES
Uranium	<0.0015	0.0015	0.0003	mg/L	3	02/23/21 11:34	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0022	mg/L	3	02/22/21 14:21	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**-2.27**								

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

MW-8-EAA

2102140-04 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**450**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**450**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Chloride*	**10.4**	2.00	0.0845	mg/L	2	02/19/21 17:26	EPA300.0		AES
Fluoride*	**0.292**	0.200	0.0194	mg/L	2	02/19/21 17:26	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	03/01/21 15:07	EPA353.2		VJW
pH*	**7.03**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
Total Dissolved Solids*	**1400**	10.0		mg/L	1	02/19/21 16:25	EPA160.1		VJW
Sulfate*	**609**	20.0	3.05	mg/L	20	02/22/21 10:37	EPA300.0		AES
Total Organic Carbon*	**3.04**	0.500	0.0616	mg/L	1	03/02/21 23:34	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.150	0.150	0.038	mg/L	3	02/24/21 18:16	EPA200.7		AES
Calcium*	**156**	0.300	0.174	mg/L	3	02/24/21 18:16	EPA200.7		AES
Hardness as CaCO3	**914**	1.98	1.24	mg/L	3	02/24/21 18:16	2340 B		AES
Iron*	**2.33**	0.150	0.053	mg/L	3	02/24/21 18:16	EPA200.7		AES
Magnesium*	**127**	0.300	0.196	mg/L	3	02/24/21 18:16	EPA200.7		AES
Potassium*	**3.63**	3.00	0.242	mg/L	3	02/24/21 18:16	EPA200.7		AES
Silica (Si02)	**16.0**	3.21	0.239	mg/L	3	02/24/21 18:16	Calculation		AES
Silicon	**7.48**	1.50	0.112	mg/L	3	02/24/21 18:16	EPA200.7		AES
Sodium*	**80.9**	3.00	0.238	mg/L	3	02/24/21 18:16	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0018**	0.0015	0.0002	mg/L	3	02/22/21 14:24	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0001	mg/L	3	02/22/21 14:24	EPA200.8		AES
Copper*	<0.0015	0.0015	0.0008	mg/L	3	02/22/21 14:24	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0002	mg/L	3	02/23/21 11:37	EPA200.8		AES
Manganese*	**3.55**	0.0015	0.0003	mg/L	3	02/22/21 14:24	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0004	mg/L	3	02/22/21 14:24	EPA200.8		AES
Selenium*	**0.0046**	0.0030	0.0018	mg/L	3	02/22/21 14:24	EPA200.8		AES
Uranium	**0.0016**	0.0015	0.0003	mg/L	3	02/23/21 11:37	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0022	mg/L	3	02/22/21 14:24	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**-.13**								

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

MW-99-EAA

2102140-05 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**450**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**450**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Chloride*	**10.4**	2.00	0.0845	mg/L	2	02/19/21 17:47	EPA300.0		AES
Fluoride*	**0.306**	0.200	0.0194	mg/L	2	02/19/21 17:47	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	03/01/21 15:11	EPA353.2		VJW
pH*	**7.05**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
Total Dissolved Solids*	**1410**	10.0		mg/L	1	02/19/21 16:25	EPA160.1		VJW
Sulfate*	**609**	20.0	3.05	mg/L	20	02/22/21 10:57	EPA300.0		AES
Total Organic Carbon*	**2.99**	0.500	0.0616	mg/L	1	03/02/21 23:50	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.150	0.150	0.038	mg/L	3	02/24/21 18:24	EPA200.7		AES
Calcium*	**163**	0.300	0.174	mg/L	3	02/24/21 18:24	EPA200.7		AES
Hardness as CaCO3	**967**	1.98	1.24	mg/L	3	02/24/21 18:24	2340 B		AES
Iron*	**2.41**	0.150	0.053	mg/L	3	02/24/21 18:24	EPA200.7		AES
Magnesium*	**136**	0.300	0.196	mg/L	3	02/24/21 18:24	EPA200.7		AES
Potassium*	**3.71**	3.00	0.242	mg/L	3	02/24/21 18:24	EPA200.7		AES
Silica (Si02)	**17.0**	3.21	0.239	mg/L	3	02/24/21 18:24	Calculation		AES
Silicon	**7.96**	1.50	0.112	mg/L	3	02/24/21 18:24	EPA200.7		AES
Sodium*	**83.5**	3.00	0.238	mg/L	3	02/24/21 18:24	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0016**	0.0015	0.0002	mg/L	3	02/22/21 14:28	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0001	mg/L	3	02/22/21 14:28	EPA200.8		AES
Copper*	<0.0015	0.0015	0.0008	mg/L	3	02/22/21 14:28	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0002	mg/L	3	02/23/21 11:45	EPA200.8		AES
Manganese*	**3.60**	0.0015	0.0003	mg/L	3	02/22/21 14:28	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0004	mg/L	3	02/22/21 14:28	EPA200.8		AES
Selenium*	**0.0035**	0.0030	0.0018	mg/L	3	02/22/21 14:28	EPA200.8		AES
Uranium	**0.0015**	0.0015	0.0003	mg/L	3	02/23/21 11:45	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0022	mg/L	3	02/22/21 14:28	EPA200.8		AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**2.55**								

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

MW-7-EAA

2102140-06 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**420**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**420**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Chloride*	**10.4**	2.00	0.0845	mg/L	2	02/19/21 18:07	EPA300.0		AES
Fluoride*	**0.300**	0.200	0.0194	mg/L	2	02/19/21 18:07	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	03/01/21 15:12	EPA353.2		VJW
pH*	**6.99**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
Total Dissolved Solids*	**1590**	10.0		mg/L	1	02/19/21 16:25	EPA160.1		VJW
Sulfate*	**757**	25.0	3.81	mg/L	25	02/22/21 11:17	EPA300.0		AES
Total Organic Carbon*	**3.00**	0.500	0.0616	mg/L	1	03/03/21 00:07	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.150	0.150	0.038	mg/L	3	02/24/21 18:28	EPA200.7		AES
Calcium*	**186**	0.300	0.174	mg/L	3	02/24/21 18:28	EPA200.7		AES
Hardness as CaCO3	**1090**	1.98	1.24	mg/L	3	02/24/21 18:28	2340 B		AES
Iron*	**2.08**	0.150	0.053	mg/L	3	02/24/21 18:28	EPA200.7		AES
Magnesium*	**152**	0.300	0.196	mg/L	3	02/24/21 18:28	EPA200.7		AES
Potassium*	**4.25**	3.00	0.242	mg/L	3	02/24/21 18:28	EPA200.7		AES
Silica (Si02)	**17.7**	3.21	0.239	mg/L	3	02/24/21 18:28	Calculation		AES
Silicon	**8.28**	1.50	0.112	mg/L	3	02/24/21 18:28	EPA200.7		AES
Sodium*	**81.4**	3.00	0.238	mg/L	3	02/24/21 18:28	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0016**	0.0005	0.00007	mg/L	1	02/23/21 15:29	EPA200.8		AES
Cadmium*	<0.0001	0.0001	0.00004	mg/L	1	02/23/21 15:29	EPA200.8		AES
Copper*	**0.0007**	0.0005	0.0003	mg/L	1	02/23/21 15:29	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00008	mg/L	1	02/23/21 15:29	EPA200.8		AES
Manganese*	**5.22**	0.0500	0.0126	mg/L	100	03/02/21 15:08	EPA200.8		AES
Molybdenum*	**0.0006**	0.0005	0.0001	mg/L	1	02/23/21 15:29	EPA200.8		AES
Selenium*	<0.0010	0.0010	0.0006	mg/L	1	02/23/21 15:29	EPA200.8		AES
Uranium	**0.0018**	0.0005	0.00009	mg/L	1	02/23/21 15:29	EPA200.8		AES
Zinc*	**0.0022**	0.0020	0.0007	mg/L	1	02/23/21 15:29	EPA200.8	M5	AES
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**2.09**								

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

SEEP#3

2102140-07 (Surface Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
General Chemistry									
Alkalinity, Bicarbonate as CaCO3*	**495**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	02/22/21 15:30	2320 B		JDA
Alkalinity, Total as CaCO3*	**495**	10.0	4.53	mg/L	5	02/22/21 15:30	2320 B		JDA
Chloride*	**11.8**	3.00	0.127	mg/L	3	02/19/21 18:28	EPA300.0		AES
Fluoride*	**0.342**	0.300	0.0291	mg/L	3	02/19/21 18:28	EPA300.0		AES
Nitrate/Nitrite as N*	**0.401**	0.020	0.006	mg/L as N	1	03/01/21 15:13	EPA353.2		VJW
pH*	**7.44**			pH Units	1	02/17/21 08:40	EPA150.1		VJW
SAR	**1.39**			No Unit	1	02/25/21 15:40	Calculation		AES
Total Dissolved Solids*	**2490**	10.0		mg/L	1	02/19/21 16:25	EPA160.1		VJW
Sulfate*	**1200**	100	15.2	mg/L	100	02/22/21 11:38	EPA300.0		AES
Total Organic Carbon*	**13.3**	0.500	0.0616	mg/L	1	03/03/21 00:25	5310C		JDA
Dissolved Metals by ICP									
Aluminum*	<0.250	0.250	0.064	mg/L	5	02/24/21 18:33	EPA200.7		AES
Calcium*	**333**	0.500	0.289	mg/L	5	02/24/21 18:33	EPA200.7		AES
Hardness as CaCO3	**1810**	3.31	2.07	mg/L	5	02/24/21 18:33	2340 B		AES
Iron*	<0.250	0.250	0.089	mg/L	5	02/24/21 18:33	EPA200.7		AES
Magnesium*	**238**	0.500	0.327	mg/L	5	02/24/21 18:33	EPA200.7		AES
Potassium*	**12.8**	5.00	0.403	mg/L	5	02/24/21 18:33	EPA200.7		AES
Silica (Si02)	**12.4**	5.35	0.398	mg/L	5	02/24/21 18:33	Calculation		AES
Silicon	**5.80**	2.50	0.186	mg/L	5	02/24/21 18:33	EPA200.7		AES
Sodium*	**136**	5.00	0.396	mg/L	5	02/24/21 18:33	EPA200.7		AES
Dissolved Metals by ICPMS									
Arsenic*	**0.0013**	0.0005	0.00007	mg/L	1	02/23/21 15:46	EPA200.8		AES
Cadmium*	<0.0001	0.0001	0.00004	mg/L	1	02/23/21 15:46	EPA200.8		AES
Copper*	**0.0021**	0.0005	0.0003	mg/L	1	02/23/21 15:46	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00008	mg/L	1	02/23/21 15:46	EPA200.8		AES
Manganese*	**0.0921**	0.0005	0.0001	mg/L	1	02/23/21 15:46	EPA200.8		AES
Molybdenum*	**0.0014**	0.0005	0.0001	mg/L	1	02/23/21 15:46	EPA200.8		AES
Selenium*	**0.0026**	0.0010	0.0006	mg/L	1	02/23/21 15:46	EPA200.8		AES
Uranium	**0.0058**	0.0005	0.00009	mg/L	1	02/23/21 15:46	EPA200.8		AES
Zinc*	**0.0077**	0.0020	0.0007	mg/L	1	02/23/21 15:46	EPA200.8		AES

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GCC Energy, LLC	Project:	GCC GW & SW Baseline	
6473 CR 120	Project Name / Number:	GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	03/03/21 11:20

SEEP#3

2102140-07 (Surface Water)

Analyte	**Result**	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Dissolved Mercury by CVAA									
Mercury*	<0.0002	0.0002	0.00001	mg/L	1	02/24/21 15:33	EPA245.1		LLG
Cation/Anion Balance	**9.27**								

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210376 - General Prep - Wet Chem										
Duplicate (B210376-DUP2)		**Source: 2102140-07**		Prepared & Analyzed: 02/17/21						
pH	7.44		pH Units		7.44			0.00	20	
Reference (B210376-SRM1)				Prepared & Analyzed: 02/17/21						
pH	7.04		pH Units	7.00		101	98.57-101.42			
Batch B210396 - General Prep - Wet Chem										
Blank (B210396-BLK1)				Prepared & Analyzed: 02/19/21						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B210396-BS1)				Prepared & Analyzed: 02/19/21						
Chloride	24.0	1.00	mg/L	25.0		96.1	90-110			
Fluoride	2.51	0.100	mg/L	2.50		100	90-110			
Sulfate	24.4	1.00	mg/L	25.0		97.7	90-110			
LCS Dup (B210396-BSD1)				Prepared & Analyzed: 02/19/21						
Chloride	23.8	1.00	mg/L	25.0		95.1	90-110	1.00	20	
Fluoride	2.53	0.100	mg/L	2.50		101	90-110	0.675	20	
Sulfate	24.5	1.00	mg/L	25.0		98.0	90-110	0.384	20	
Batch B210403 - General Prep - Wet Chem										
Blank (B210403-BLK1)				Prepared & Analyzed: 02/19/21						
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B210403-DUP1)		**Source: 2102130-01**		Prepared & Analyzed: 02/19/21						
Total Dissolved Solids	1120	10.0	mg/L		1130			0.450	20	
Reference (B210403-SRM1)				Prepared & Analyzed: 02/19/21						
Total Dissolved Solids	615	10.0	mg/L	600		102	85-115			
Batch B210414 - General Prep - Wet Chem										
Blank (B210414-BLK1)				Prepared & Analyzed: 02/22/21						
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B210414-BS1)				Prepared & Analyzed: 02/22/21						
Alkalinity, Total as CaCO3	101	10.0	mg/L	100		101	85-115			
LCS Dup (B210414-BSD1)				Prepared & Analyzed: 02/22/21						
Alkalinity, Total as CaCO3	98.0	10.0	mg/L	100		98.0	85-115	3.02	20	
Batch B210427 - General Prep - Wet Chem										
Blank (B210427-BLK1)				Prepared: 02/25/21 Analyzed: 03/01/21						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210427 - General Prep - Wet Chem (Continued)										
LCS (B210427-BS1)				Prepared: 02/25/21 Analyzed: 03/01/21						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110			
LCS Dup (B210427-BSD1)				Prepared: 02/25/21 Analyzed: 03/01/21						
Nitrate/Nitrite as N	1.02	0.020	mg/L as N	1.00		102	90-110	0.0391	20	
Batch B210476 - General Prep - Wet Chem										
Blank (B210476-BLK1)				Prepared & Analyzed: 03/02/21						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B210476-BS1)				Prepared & Analyzed: 03/02/21						
Total Organic Carbon	9.02	0.500	mg/L	10.0		90.2	85-115			
LCS Dup (B210476-BSD1)				Prepared & Analyzed: 03/02/21						
Total Organic Carbon	9.16	0.500	mg/L	10.0		91.6	85-115	1.50	20	

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210419 - Diss. 200.7/200.8										
Blank (B210419-BLK1)				Prepared: 02/23/21 Analyzed: 02/24/21						
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 (B210419-BS1)				Prepared: 02/23/21 Analyzed: 02/24/21						
Aluminum	5.19	0.050	mg/L	5.00		104	85-115			
Calcium	5.37	0.100	mg/L	5.00		107	85-115			
Iron	5.28	0.050	mg/L	5.00		106	85-115			
Magnesium	27.5	0.100	mg/L	25.0		110	85-115			
Potassium	10.5	1.00	mg/L	10.0		105	85-115			
Silicon	5.32	0.500	mg/L	5.00		106	85-115			
Sodium	4.11	1.00	mg/L	4.05		102	85-115			
LCS Dup (B210419-BSD1)				Prepared: 02/23/21 Analyzed: 02/24/21						
Aluminum	5.21	0.050	mg/L	5.00		104	85-115	0.286	20	
Calcium	5.38	0.100	mg/L	5.00		108	85-115	0.0499	20	
Iron	5.26	0.050	mg/L	5.00		105	85-115	0.275	20	
Magnesium	27.5	0.100	mg/L	25.0		110	85-115	0.178	20	
Potassium	10.7	1.00	mg/L	10.0		107	85-115	1.49	20	
Silicon	5.30	0.500	mg/L	5.00		106	85-115	0.440	20	
Sodium	4.09	1.00	mg/L	4.05		101	85-115	0.465	20	

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210335 - Diss. 200.7/200.8										
Blank (B210335-BLK1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0001	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 (B210335-BS1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0503	0.0005	mg/L	0.0500		101	85-115			
Cadmium	0.0492	0.0001	mg/L	0.0500		98.4	85-115			
Copper	0.0486	0.0005	mg/L	0.0500		97.3	85-115			
Lead	0.0517	0.0005	mg/L	0.0500		103	85-115			
Manganese	0.0515	0.0005	mg/L	0.0500		103	85-115			
Molybdenum	0.0486	0.0005	mg/L	0.0500		97.2	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.6	85-115			
Uranium	0.0528	0.0005	mg/L	0.0500		106	85-115			
Zinc	0.0492	0.0020	mg/L	0.0500		98.4	85-115			
LCS Dup (B210335-BSD1)				Prepared: 02/17/21 Analyzed: 02/22/21						
Arsenic	0.0513	0.0005	mg/L	0.0500		103	85-115	1.92	20	
Cadmium	0.0508	0.0001	mg/L	0.0500		102	85-115	3.26	20	
Copper	0.0496	0.0005	mg/L	0.0500		99.2	85-115	1.92	20	
Lead	0.0505	0.0005	mg/L	0.0500		101	85-115	2.24	20	
Manganese	0.0505	0.0005	mg/L	0.0500		101	85-115	2.05	20	
Molybdenum	0.0494	0.0005	mg/L	0.0500		98.8	85-115	1.61	20	
Selenium	0.250	0.0010	mg/L	0.250		100	85-115	0.446	20	
Uranium	0.0505	0.0005	mg/L	0.0500		101	85-115	4.46	20	
Zinc	0.0493	0.0020	mg/L	0.0500		98.6	85-115	0.235	20	
Batch B210383 - Diss. 200.7/200.8										

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GCC Energy, LLC	Project: GCC GW & SW Baseline	
6473 CR 120	Project Name / Number: GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager: Tom Bird	03/03/21 11:20

Dissolved Metals by ICPMS - Quality Control (Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210383 - Diss. 200.7/200.8 (Continued)										
Blank (B210383-BLK1)				Prepared: 02/22/21 Analyzed: 02/23/21						
Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0001	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 (B210383-BS1)				Prepared: 02/22/21 Analyzed: 02/23/21						
Arsenic	0.0518	0.0005	mg/L	0.0500		104	85-115			
Cadmium	0.0493	0.0001	mg/L	0.0500		98.5	85-115			
Copper	0.0504	0.0005	mg/L	0.0500		101	85-115			
Lead	0.0527	0.0005	mg/L	0.0500		105	85-115			
Manganese	0.0515	0.0005	mg/L	0.0500		103	85-115			
Molybdenum	0.0507	0.0005	mg/L	0.0500		101	85-115			
Selenium	0.252	0.0010	mg/L	0.250		101	85-115			
Uranium	0.0507	0.0005	mg/L	0.0500		101	85-115			
Zinc	0.0510	0.0020	mg/L	0.0500		102	85-115			
LCS Dup (B210383-BSD1)				Prepared: 02/22/21 Analyzed: 02/23/21						
Arsenic	0.0445	0.0005	mg/L	0.0500		88.9	85-115	15.2	20	
Cadmium	0.0449	0.0001	mg/L	0.0500		89.7	85-115	9.33	20	
Copper	0.0470	0.0005	mg/L	0.0500		93.9	85-115	7.04	20	
Lead	0.0481	0.0005	mg/L	0.0500		96.1	85-115	9.27	20	
Manganese	0.0468	0.0005	mg/L	0.0500		93.7	85-115	9.40	20	
Molybdenum	0.0466	0.0005	mg/L	0.0500		93.3	85-115	8.44	20	
Selenium	0.219	0.0010	mg/L	0.250		87.6	85-115	14.2	20	
Uranium	0.0450	0.0005	mg/L	0.0500		90.1	85-115	11.8	20	
Zinc	0.0453	0.0020	mg/L	0.0500		90.6	85-115	11.8	20	

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Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

GCC Energy, LLC	Project:	GCC GW & SW Baseline	
6473 CR 120	Project Name / Number:	GCC SW Baseline	**Reported:**
Hesperus CO, 81326	Project Manager:	Tom Bird	03/03/21 11:20

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B210406 - EPA 245.1/7470										
Blank (B210406-BLK1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	ND	0.0002	mg/L							
LCS (B210406-BS1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	0.0057	0.0002	mg/L	0.00500		113	85-115			
LCS Dup (B210406-BSD1)				Prepared: 02/19/21 Analyzed: 02/24/21						
Mercury	0.0058	0.0002	mg/L	0.00500		115	85-115	1.52	20	BS1

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Notes and Definitions

M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.
BS1	Laboratory control sample recovery above laboratory acceptance criteria. Results for analyte potentially biased high.
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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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@GCC.COM
Email Report to: LANDON BECK / LBECK@RESOURCEHYDROGEOLOGIC.COM
Project Name(optional):
Sampler Name (Print): MICHAEL G. MCFARLAND & MARCUS BENALLY

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:	GCC GW BASELINE	GCC SW BASELINE
2102140-01	MW-8-LM	2-16-21	08:55	X							1	1		4			X	
-02	MW-8-PL	2-16-21	09:18	X							1	1		4			X	
-03	MW-8-MI	2-16-21	09:44	X							1	1		4			X	
-04	MW-8-EAA	2-16-21	10:28	X							1	1		4			X	
-05	MW-99-EAA	2-16-21	10:52	X							1	1		4			X	
-06	MW-7-EAA	2-16-21	11:15	X							1	1		4			X	
-07	SEEP #3	2-16-21	11:48		X						1	1		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:
Michael McFarland	2-16-21	1353	
	2-16-21	15:00	

ADDITIONAL REMARKS:
-07 NO O&G or TSS Bottle 2/16/21
Laser #3

Report to State? (Circle): Yes No

Temperature at receipt: 3.0°C
CHECKED BY
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.