



"Safety as a Value"

Telephone: 970.385.4528
Facsimile: 970.385.4638

GCC Energy, LLC
6473 County Road 120
Hesperus, CO 81326

September 28, 2020

State of Colorado
Division of Reclamation, Mining & Safety
1313 Sherman Street, Room 215
Denver, Colorado 80203-2273

Attn: Janet Binns, Environmental Protection Specialist III

Re: Field Well Water Analysis; King I & King II
3rd Quarter 2020

Ms. Binns:

Please find enclosed a copy of quarterly water analysis reports for the 3rd quarter of 2020 for the following water monitoring locations:

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

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

Please call Tom Bird at (970) 385-4528 x 6503 if you have any questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tom Bird', written over a horizontal line.

Tom Bird
GCC Energy, LLC

GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Upgradient																													
Year		2016										2017							2018				2019				2020		
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	5	8	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	140	19.5	
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	
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	
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	
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	
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	
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	
Alkalinity, Carbonate	mg/L	<10			<10			<10		<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	<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	<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	
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	
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	
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	
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	<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	
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	
Ammonia as N ^	mg/L																								<0.100				
Ortho-Phosphate as P ^	mg/L																								<0.0500				
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	<0.05	<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	
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	
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	
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	
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	
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	
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	
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	
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	
Silica (SiO2)	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					

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

GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Downgradient																												
Year		2016										2017						2018				2019				2020		
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	6	8
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
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
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	0.1
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
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
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
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	-88.9	125.6	50.6	111.6	-108.1	124.2	104.8	103.0
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
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
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
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
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	22.5	<4.00	4.20	17.5	28.6
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
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
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
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
Alkalinity, Total	mg/L	220			59			220		225				320	47.0	85.0		265	112	170	140	150	340	140	194	297	48	110
Alkalinity, Bicarbonate	mg/L	220			59			140		155				320	47.0	85.0		259	104	170	140	150	340	140	188	283	48	110
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
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
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
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
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
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
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
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
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
Ammonia as N ^	mg/L																								<0.100			
Ortho-Phosphate as P ^	mg/L																								<0.0500			
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
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
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
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
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
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
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
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
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
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
Silica (SiO2)	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
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
Uranium	mg/L	0.0004			0.0001			0.0006		0.																		

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.
- Page 2 of 27

GCC Energy Hydrologic Monitoring Data

Well #1 Upgradient																													
Year		2016										2017							2018				2019				2020		
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	6	8	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
Sodium	mg/L	199			196			210		189				167	189	203	195	183	191	154	212	196	172	167	198	183	178	193	
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	
Alkalinity, Total	mg/L	610			660			620		615				640	585	670	625	620	595	630	640	610	615	615	590	600	576	520	
Alkalinity, Bicarbonate	mg/L	570			660			620		615				640	585	670	625	620	595	630	640	610	615	615	590	600	576	520	
Alkalinity, Carbonate	mg/L	40.0			<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	<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	<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	
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	
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	
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	
Nitrate/Nitrite as N	mg/L	<0.02			<0.02			<0.02		<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	
Ammonia as N ^	mg/L																								0.931				
Ortho-Phosphate as P ^	mg/L																								0.0590				
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	<0.100	<0.25	<0.050	<0.150	
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	
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	
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	
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	
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	
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	
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	
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	
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	
Silica (SiO2)	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	
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	6.3	6.13	6.11	6.68	6.13	6.14	6.37	
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	
Zinc	mg/L	<0.001			<0.001			0.0023		0.0301				<0.0020	<0.0020	<0.0020	<0.0020	<0.0020	<0.002	<0.002	<0.002	<0.0020	<0.0020	<0.0020	<0.0040	<0.002	<0.0020	<0.0040	
Radium 226	pCi/L	<0.4			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		
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	8	11	2	5	8	11	2	6	8
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
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
Field Parameters:																													
Purge Flow Rate	gpm	0.5	0.5	0.5	0.5	0.5	0.5	0.5	NM	7.2	2	NM	NM	NM	NM	NM	NM	0.1	1	0.1	1	0.5	0.3	0.5	0.3	0.5	0.3	0.3	0.3
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
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
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
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
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
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
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
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	7.30
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
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
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
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
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
Alkalinity, Total	mg/L	342			280			380		380				375	285	395	375	333	350	380	328	340	395	460	365	348	324	324	345
Alkalinity, Bicarbonate	mg/L	338			280			380		380				375	285	395	375	333	350	380	328	340	395	460	365	348	324	324	345
Alkalinity, Carbonate	mg/L	<10			<10			<10		<10.0				<10.0	<10	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10
Alkalinity, Hydroxide	mg/L	<10			<10			<10		<10.0				<10.0	<10	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10
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
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
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
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
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
Ammonia as N ^	mg/L																									<0.100			
Ortho-Phosphate as P ^	mg/L																									<0.0500			
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	<0.10
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
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
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
Iron	mg/L	0.081			0.085			0.118		<0.050				0.213	<0.05	<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
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
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
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
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
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
Silica (SiO2)	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
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
Uranium	mg/L	0.																											

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.

<

GCC Energy Hydrologic Monitoring Data

Wiltse Well																													
Year		2016										2017						2018				2019				2020			
Quarter		Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month		3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	5	8	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
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	
Calcium	mg/L	197			208			206		186				205	211	219	226	211	216	221	230	226	214	214	208	191	206	206	
Magnesium	mg/L	121			128			126		121				128	129	143	142	136	150	139	147	143	132	132	132	123	132	136	
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	
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	
Alkalinity, Total	mg/L	460			500			470		450				410	445	510	475	445	435	463	505	515	469	474	460	460	431	475	
Alkalinity, Bicarbonate	mg/L	440			500			470		450				410	445	510	475	445	435	463	505	515	469	474	460	460	431	475	
Alkalinity, Carbonate	mg/L	20.0			<10			<10		<10.0				<10.0	<10	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10	
Alkalinity, Hydroxide	mg/L	<10			<10			<10		<10.0				<10.0	<10	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10	
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	
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	
Sulfate as SO4	mg/L	671			595			656		676				731	702	779	772	832	714	733	741	801	709	627	627	711	633	704	
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	
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	
Ammonia as N ^	mg/L																								<0.100				
Ortho-Phosphate as P ^	mg/L																								<0.0500				
Aluminum	mg/L	<0.05			<0.05			<0.05		<0.050				<0.050	<0.1	<0.050	<0.250	<0.100	<0.05	<0.05	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.250	<0.1	
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	<0.001	
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	
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	
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	<0.1	
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	
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	
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	
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	
Selenium	mg/L	<0.005			<0.005			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	
Silica (SiO2)	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	
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	
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	
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	
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

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				
Quarter	Q4	Q1			Q2			Q3			Q4			Q1		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	5	8	11	2	5	8	11	2	5	8	
Sample Date	12/12	1/26	2/28	3/22	4/27	5/31	6/13	7/27	8/16	9/21	10/27	11/28	12/12	1/3	2/22	5/15	8/9	11/8	2/28	5/23	8/16	11/13	2/13	5/13	8/26	
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	
Field Parameters:																										
Purge Flow Rate	gpm	0.5	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	
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
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
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
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
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
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
Lab Analytical Results:																										
Hardness as CaCO3	mg/L	724			611			616			522		595			561	555	524	625	613	563	544	624	563	528	571
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
Total Dissolved Solids (Lab)	mg/L	855			710			715			750		775			740	730	695	770	795	695	695	715	705	685	700
Calcium	mg/L	147			118			121			102		118			110	108	102	124	122	110	106	123	112	101	111
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
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
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
Alkalinity, Total	mg/L	545			465			415			465		475			460	425	410	460	455	445	455	432	435	416	485
Alkalinity, Bicarbonate	mg/L	545			465			415			465		475			460	425	410	460	455	445	455	432	435	416	485
Alkalinity, Carbonate	mg/L	ND			<10.0			<10			<10.0		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	ND			<10.0			<10			<10.0		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
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
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
Sulfate as SO4	mg/L	240			229			192			205		204			222	190	169	201	221	186	212	190	193	181	179
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
Nitrate/Nitrite as N	mg/L	<0.020			<0.020			<0.02			<0.020		<0.100			<0.020	<0.020	<0.020	<0.020	0.173	<0.020	<0.020	<0.020	<0.02	<0.100	<0.020
Ammonia as N ^	mg/L																						0.528			
Ortho-Phosphate as P ^	mg/L																						<0.0500			
Aluminum	mg/L	0.423			<0.050			<0.05			<0.050		<0.050			<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.1	<0.100	<0.1
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
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
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
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
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
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
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
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
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
Silica (SiO2)	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
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
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
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

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				
Quarter	Q2	Q3			Q4			Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3		
Month	6	7	8	9	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	
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	
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	
Field Parameters:																									
Purge Flow Rate	gpm	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	
Total Purged	gal	12.8	NM*	NM*	NM	NM	2	2	1	1.5	2	1.5	1	1.3		1.5	1.5	1.6	1.0	1.5	1.12	1.5	1.0	1.0	
Depth to Water	ft bgs	215.42	NM*	215.92	215.54	216.33	216.31	216.47	216.58	216.21	216.47	216.47	216.54	216.54		216.63	216.63	216.65	216.55	216.43	216.33	216.13	216.05	215.85	215.56
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
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
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
Oxygen Reduction Potential	mV	-34.6	NM*	NM*	-54.7	-46.5	-50	-48.3	-49.6	-44.6	-52.8	-37.5	142.4	0.4		-26.4	-33.2	101.4	-11.8	25.4	-18.71	3.59	12.7	4.24	-20.08
Lab Analytical Results:																									
Hardness as CaCO3	mg/L	124				133		130			159			156			160	174	159	153	148	150	159	165	161
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
Total Dissolved Solids (Lab)	mg/L	975				1080		1120			1100			1150			1040	1130	1160	1150	1150	1140	1190	1150	1150
Calcium	mg/L	24.7				25.8		24.9			30.5			29.7			30.9	34.0	31.2	29.8	27.9	29.0	30.9	31.6	30.6
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
Sodium	mg/L	324				329		325			348			327			333	358	357	319	348	333	337	349	348
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
Alkalinity, Total	mg/L	375				450		380			415			353			385	395	375	355	368	420	360	340	325
Alkalinity, Bicarbonate	mg/L	375				450		380			415			353			385	395	375	355	368	420	360	340	325
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
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
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
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
Sulfate as SO4	mg/L	427				432		511			518			522			515	511	508	494	537	495	506	532	510
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
Nitrate/Nitrite as N	mg/L	<0.200				<0.400		<0.100			<0.020			<0.02			<0.02	0.028	<0.020	<0.02	<0.020	0.020	<0.020	0.046	<0.020
Ammonia as N ^	mg/L																					0.387			
Ortho-Phosphate as P ^	mg/L																					<0.0500			
Aluminum	mg/L	<0.050				<0.050		<0.250			<0.250			<0.05			<0.05	<0.1	<0.100	<0.05	<0.050	<0.050	<0.100	<0.250	<0.050
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
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
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
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
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
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
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
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
Selenium	mg/L	<0.0010				<0.0010		<0.0050			<0.0050			<0.001			<0.001	<0.001	<0.0020	<0.001	<0.0010	<0.0010	<0.0020	<0.0020	<0.0050
Silica (SiO2)	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
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
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
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

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

[illegible]

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				
Quarter		Q2	Q3				Q4			Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		6	7	8	9	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9
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
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
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
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
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
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
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
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
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
Lab Analytical Results:																									
Hardness as CaCO3	mg/L	498				1290		1180			1190			1130			1120	1180	1010	1820	1840	1700	1600	1590	1400
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
Total Dissolved Solids (Lab)	mg/L	2020				2440		2360			2360			2340			2170	2200	1960	2880	2890	2750	2610	2460	2420
Calcium	mg/L	96.0				234		216			219			203			203	219	188	340	342	318	301	294	248
Magnesium	mg/L	62.8				172		155			156			150			148	154	131	237	240	219	207	207	189
Sodium	mg/L	506				242		253			260			239			239	255	265	146	119	119	143	155	168
Potassium	mg/L	11.4				3.81		<5.00			<5.00			3.07			3.04	2.65	3.13	<5	<5.00	<5.00	3.05	<5.00	2.82
Alkalinity, Total	mg/L	530				700		540			570			580			560	410	525	530	518	505	515	490	445
Alkalinity, Bicarbonate	mg/L	530				700		540			570			580			560	410	525	530	518	505	515	490	445
Alkalinity, Carbonate	mg/L	<10.0				<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10	<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	<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
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
Sulfate as SO4	mg/L	1090				1350		1230			1160			1210			1090	1080	1070	1630	1730	1520	1400	1370	1280
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
Nitrate/Nitrite as N	mg/L	<2.00				<0.400		<0.100			<0.020			<0.02			0.036	<0.02	<0.020	<0.02	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L																					0.140			
Ortho-Phosphate as P ^	mg/L																					<0.100			
Aluminum	mg/L	<0.050				<0.050		<0.250			<0.250			<0.05			<0.05	<0.10	<0.100	<0.25	<0.250	<0.250	<0.150	<0.250	<0.050
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
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
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
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
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
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
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
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
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
Silica (SiO2)	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
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
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
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

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		
Quarter	Q1	Q2	Q3		Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month	3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9
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
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
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
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 (SiO2)	mg/L																				
Silicon	mg/L																				
Uranium	mg/L																				
Zinc	mg/L																				

Notes & Definitions:		
Y/N	yes or no	1. "<i><</i>" 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.
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)	

GCC Energy Hydrologic Monitoring Data

MW-2-MI																					
Year	2017							2018							2019				2020		
Quarter	Q1	Q2	Q3		Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month	3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9
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
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
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
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 (SiO2)	mg/L																				
Silicon	mg/L																				
Uranium	mg/L																				
Zinc	mg/L																				

Notes & Definitions:																					
Y/N	yes or no	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.																			
gpm	gallons per minute	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.																			
deg C	degrees Celsius	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.																			
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)																				

GCC Energy Hydrologic Monitoring Data

MW-2-C																					
Year	2017							2018							2019				2020		
Quarter	Q1	Q2	Q3		Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month	3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9
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
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
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
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 (SiO2)	mg/L																				
Silicon	mg/L																				
Uranium	mg/L																				
Zinc	mg/L																				

Notes & Definitions:																					
Y/N	yes or no	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.																			
gpm	gallons per minute	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.																			
deg C	degrees Celsius	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.																			
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)																				

GCC Energy Hydrologic Monitoring Data

MW-3-A																							
Year		2017							2018							2019				2020			
Quarter		Q1	Q2	Q3			Q4		Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8
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
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
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
Total Purged	gal	30	2.0	NM	NM	NM	1.0	1.0	1.0	1.3	1.5	1.5	1	1.25	1	1.1	1.5	1.3	1.3	1.5	1.1	1.2	1.5
Depth to Water	ft bgs	297.35	298.24	297.45	298.24	298.11	298.12	298.01	298.05	298.37	298.04	297.86	297.76	298.17	298.55	298.27	297.85	296.79	297.27	297.33	296.47	296.87	297.21
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
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
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
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
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
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
Total Dissolved Solids (Lab)	mg/L	1630	1670			1630		1690			1680			1670	1600	1540	1500	1530	1520	1510	1500	1460	1380
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
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
Sodium	mg/L	566	585			589		551			562			542	562	605	543	525	553	528	520	507	510
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
Alkalinity, Total	mg/L	530	470			500		490			430			480	480	475	540	450	459	420	460	430	440
Alkalinity, Bicarbonate	mg/L	380	470			440		460			360			480	420	385	330	430	423	420	460	400	440
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
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10	<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
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
Sulfate as SO4	mg/L	729	802			840		730			812			756	706	682	716	699	724	633	637	656	624
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
Nitrate/Nitrite as N	mg/L	<0.100	<0.100			<0.020		<0.020			<0.020			<0.02	<0.02	<0.02	0.266	<0.02	<0.020	<0.020	0.024	0.026	0.039
Ammonia as N ^	mg/L																			0.354			
Ortho-Phosphate as P ^	mg/L																			0.0730			
Aluminum	mg/L	<0.050	<0.050			<0.050		<0.250			<0.100			<0.05	<0.05	<0.10	<0.100	<0.05	<0.100	<0.250	<0.150	<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
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
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
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
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
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
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
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
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
Silica (SiO2)	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
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
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
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

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		
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8
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
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
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
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
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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	mg/L	1550	1120			1140		1080			1170			1210	1110	1120	1120	1170	1010	1130	1130	1130	1060
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
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
Sodium	mg/L	420	430			440		411			459			417	446	476	434	419	454	437	437	427	431
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
Alkalinity, Total	mg/L	740	675			700		660			700			680	730	720	685	755	720	690	705	680	625
Alkalinity, Bicarbonate	mg/L	510	555			600		570			600			500	630	610	485	605	590	610	645	550	465
Alkalinity, Carbonate	mg/L	230	120			100		90.0			100			180	100	110	200	150	130	80.0	60.0	130	160
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	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
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
Sulfate as SO4	mg/L	165	241			247		254			245			250	226	230	232	229	236	224	227	231	222
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
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
Ammonia as N ^	mg/L																			0.317			
Ortho-Phosphate as P ^	mg/L																			0.348			
Aluminum	mg/L	<0.050	0.102			<0.050		<0.250			<0.100			<0.05	<0.05	<0.10	<0.050	<0.050	0.167	<0.250	<0.100	<0.250	<0.150
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
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
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
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
Lead	mg/L	0.0024	<0.0025			<0.0025		<0.0025			<0.0005			<0.0005	<0.0005	<0.001	<0.0005	<0.0025	<0.0005	<0.0010	<0.0010	<0.0025	<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
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
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
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
Silica (SiO2)	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
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
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
Zinc	mg/L	0.0405	<0.0100			<0.0100		<0.0100			<0.0020			0.0023	0.0023	<0.0040	0.0028	<0.01	0.0070	<0.0040	<0.0040	<0.0100	<0.0100

Notes & Definitions:		
^	one-time analysis	
Y/N	yes or no	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.
gpm	gallons per minute	
deg C	degrees Celsius	
SU	standard pH units	2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO ₃ .
µS/cm	microsiemens per centimeter	
mV	millivolts	
mg/L	milligram per liter	
pCi/L	picocuries per liter	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.
NM	not measured (field)	
NA	not analyzed (lab)	

GCC Energy Hydrologic Monitoring Data

MW-3-C																							
Year	2017								2018								2019				2020		
Quarter	Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month	3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	9	11	3	5	8	
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	
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	
Field Parameters:																							
Purge Flow Rate	gpm	0.5	NM	NM	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	0.1	0.10	0.06	0.06	0.13	0.13	0.10	0.03	0.08	
Total Purged	gal	20	2	NM	NM	NM	1	1	1	1.5	1.5	1.5	1	1.3	1.3	1.1	1.25	1.5	10	1.5	11	1.1	1.25
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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	mg/L	2130	2360			3070		3310			3540			3610	3520	3360	3300	3440	3500	3390	3220	3180	3170
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
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
Sodium	mg/L	796	890			1100		1130			1200			1350	1220	1460	1270	1100	1360	1300	1280	1240	1250
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
Alkalinity, Total	mg/L	1490	1570			1690		1880			1910			1760	1730	2050	2000	2110	2190	2130	2160	2050	1820
Alkalinity, Bicarbonate	mg/L	1360	1480			1650		1830			1810			1600	1670	1900	1830	2000	2020	2070	2000	1800	1690
Alkalinity, Carbonate	mg/L	130	90.0			40.0		50.0			100			160	60.0	150	170	110	170	60.0	160	250	130
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10	NA	<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
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
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
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
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
Ammonia as N ^	mg/L																			0.500			
Ortho-Phosphate as P ^	mg/L																			0.212			
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
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
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
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
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
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
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
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
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
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
Silica (SiO2)	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
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
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
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

Notes & Definitions:

- | | | |
|-------|-----------------------------|---|
| ^ | one-time analysis | |
| Y/N | yes or no | 1. " <i><</i> " 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. |
| gpm | gallons per minute | |
| deg C | degrees Celsius | |
| SU | standard pH units | 2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO ₃ . |
| µS/cm | microsiemens per centimeter | |
| mV | millivolts | |
| mg/L | milligram per liter | |
| pCi/L | picocuries per liter | 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. |
| NM | not measured (field) | |
| NA | not analyzed (lab) | |

GCC Energy Hydrologic Monitoring Data

MW-4-A																							
Year	2017								2018								2019				2020		
Quarter	Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month	3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	
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	
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	
Field Parameters:																							
Purge Flow Rate	gpm	NM	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.1	0.1	0.1	0.1	0.06	0.06	0.06	0.13	0.03	0.03	0.13	
Total Purged	gal	19.0	2.0	1.5	0.5	1.0	1.0	1.0	1.0	1.3	1.5	1.5	1	1.5	1.5	1.1	1.5	1.3	1.1	1.0	1.5	1.2	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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	mg/L	1470	1470			1450		1500			1490			1470	1430	1350	1450	1410	1540	1490	1500	1480	1460
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
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
Sodium	mg/L	515	537			513		511			507			528	531	568	535	515	548	529	551	498	533
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
Alkalinity, Total	mg/L	635	560			630		590			530			560	575	575	545	565	575	544	560	585	605
Alkalinity, Bicarbonate	mg/L	635	560			590		560			490			560	555	575	505	544	535	528	560	545	565
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
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	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
Fluoride	mg/L	<0.400	<0.400			<0.500		<0.500			<0.500			<0.5	<0.5	0.143	<0.200	<0.2	<0.200	<0.200	<0.200	<0.200	<0.5
Sulfate as SO4	mg/L	594	588			783		594			579			561	522	450	567	584	615	559	557	580	542
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
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
Ammonia as N ^	mg/L																			0.312			
Ortho-Phosphate as P ^	mg/L																			<0.0500			
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
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
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
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
Iron	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
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
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
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
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
Selenium	mg/L	0.0016	<0.0050			<0.0050		<0.0050			0.0014			0.0025	<0.0050	<0.0020	0.0036	<0.001	<0.0010	<0.0020	<0.0020	<0.0020	<0.0050
Silica (SiO2)	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
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
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
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

Notes & Definitions:

- | | | |
|-------|-----------------------------|---|
| ^ | one-time analysis | |
| Y/N | yes or no | 1. " <i><</i> " 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. |
| gpm | gallons per minute | |
| deg C | degrees Celsius | |
| SU | standard pH units | 2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO ₃ . |
| µS/cm | microsiemens per centimeter | |
| mV | millivolts | |
| mg/L | milligram per liter | |
| pCi/L | picocuries per liter | |
| NM | not measured (field) | 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. |
| NA | not analyzed (lab) | |

GCC Energy Hydrologic Monitoring Data

MW-4-MI																							
Year		2017							2018							2019				2020			
Quarter		Q1	Q2	Q3		Q4				Q1		Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8
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
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	
Field Parameters:																							
Purge Flow Rate	gpm	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	0.1	0.10	0.06	0.06	0.13	0.25	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	1.3	1.8	1.6	2.0	1.3	1.1	1.0	1.3	1.2	1.3
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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	mg/L	1160	1170			1180		1180			1220			1140	1120	1100	1130	1130	1140	1120	1110	1110	1070
Calcium	mg/L	1.53	2.32			1.88		1.68			1.64			1.55	1.56	1.60	1.44	1.3	1.51	1.32	1.21	1.22	1.32
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
Sodium	mg/L	408	458			449		452			447			471	470	500	462	458	496	477	441	460	459
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
Alkalinity, Total	mg/L	965	915			1100		985			965			955	968	995	510	890	970	978	985	1030	1020
Alkalinity, Bicarbonate	mg/L	775	825			880		885			875			865	896	885	420	650	880	886	895	935	940
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
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	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
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
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
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
Nitrate/Nitrite as N	mg/L	<0.020	<0.020			<0.020		<0.020			<0.020			<0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.040	<0.020	<0.020
Ammonia as N ^	mg/L																			0.240			
Ortho-Phosphate as P ^	mg/L																			0.280			
Aluminum	mg/L	<0.050	<0.100			<0.050		<0.250			<0.100			<0.05	<0.100	<0.100	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.15
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
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
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
Iron	mg/L	<0.050	<0.100			<0.050		<0.250			<0.100			<0.05	<0.100	<0.100	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.15
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
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
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
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
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
Silica (SiO2)	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
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
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
Zinc	mg/L	0.113	0.0697			<0.0100		<0.0100			<0.0020			<0.002	<0.002	<0.0040	<0.0020	<0.002	<0.0100	<0.0040	<0.0040	<0.0040	<0.0100

Notes & Definitions:		
^	one-time analysis	
Y/N	yes or no	1. " <i><</i> " 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.
gpm	gallons per minute	
deg C	degrees Celsius	
SU	standard pH units	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.
µS/cm	microsiemens per centimeter	
mV	millivolts	
mg/L	milligram per liter	
pCi/L	picocuries per liter	3. Industry
NM	not measured (field)	
NA	not analyzed (lab)	

GCC Energy Hydrologic Monitoring Data

MW-4-C																							
Year		2017							2018							2019				2020			
Quarter		Q1	Q2	Q3		Q4			Q1		Q2		Q3	Q4		Q1	Q2	Q3	Q4		Q1	Q2	Q3
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8
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
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
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
Total Purged	gal	7.0	1.5	NM	NM	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1	1.5	1	1.3	1.5	1.3	1.1	1.0	1.5	1.2	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
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
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
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
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
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
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
Total Dissolved Solids (Lab)	mg/L	3230	4050			3750		3780			3730			3660	3650	3590	3580	3590	3610	3610	3580	3570	3510
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
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
Sodium	mg/L	908	1510			1490		1400			1410			1400	1410	1590	1410	1370	1440	1430	1440	1390	1400
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
Alkalinity, Total	mg/L	1250	2360			2780		2680			2600			2410	2480	2450	2470	2550	2500	2470	2480	2460	2500
Alkalinity, Bicarbonate	mg/L	1250	2360			2780		2640			2600			2330	2480	2450	2470	2350	2390	2410	2420	2340	2390
Alkalinity, Carbonate	mg/L	<10.0	<10.0			<10.0		40.0			<10.0			80	<10.0	<10.0	<10.0	<10.0	200	110	60.0	60.0	120
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	181	550			587		608			592			573	533	590	575	554	580	525	528	555	543
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
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
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
Nitrate/Nitrite as N	mg/L	<2.00	<0.500			<0.400		<0.100			<0.020			<0.02	<0.02	<0.020	0.061	<0.020	<0.020	<0.020	<0.020	<0.020	<0.02
Ammonia as N ^	mg/L																			0.424			
Ortho-Phosphate as P ^	mg/L																			0.182			
Aluminum	mg/L	<0.050	<0.050			<0.050		<0.500			<0.500			<0.25	<0.25	<0.250	<0.250	<0.250	<0.250	<0.500	<0.250	<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
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
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
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
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
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
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
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
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
Silica (SiO2)	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
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
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
Zinc	mg/L	0.0156	0.0265			<0.0200		<0.0200			<0.0100			<0.01	<0.01	<0.0100	<0.0100	0.0038	<0.0100	<0.0100	<0.0100	<0.0100	<0.02

Notes & Definitions:		
^	one-time analysis	
Y/N	yes or no	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.
gpm	gallons per minute	
deg C	degrees Celsius	
SU	standard pH units	2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO ₃ .
µS/cm	microsiemens per centimeter	
mV	millivolts	
mg/L	milligram per liter	
pCi/L	picocuries per liter	3. Industry
NM	not measured (field)	
NA	not analyzed (lab)	

GCC Energy Hydrologic Monitoring Data

MW-6-A														
Year	2018	2019										2020		
Quarter	Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3
Month	12	1	2	3	4	5	6	7	8	9	11	2	5	8
Sample Date	12/28	1/31	2/21	3/21	4/23	5/20	6/19	7/23	8/15	9/24	11/7	2/5	5/14	8/11
Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	Y	Y	Y	Y
Field Parameters:														
Purge Flow Rate	gpm	NM	NM	0.10	2.00	0.03	0.03	0.06	0.03	0.02	0.01	0.05	0.13	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
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
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
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
Specific Conductance	µS/cm	6573	6053	6072	6107	6012	6057	5725	5598	5562	5451	5108	5043	4779
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
Lab Analytical Results:														
Hardness as CaCO3	mg/L	4360		4190			3920			3540		3070	3200	2780
pH (Lab)	SU	7.10		6.85			6.77			6.85		6.87	6.9	6.93
Total Dissolved Solids (Lab)	mg/L	6520		6520			120*			6080		5210	4980	4670
Calcium	mg/L	615		559			553			492		431	467	400
Magnesium	mg/L	687		678			617			560		484	495	431
Sodium	mg/L	294		283			296			304		276	296	274
Potassium	mg/L	15.0		14.4			12.4			12.8		11.1	<20	10.6
Alkalinity, Total	mg/L	160		160			143			183		220	215	233
Alkalinity, Bicarbonate	mg/L	160		160			143			183		220	215	233
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0		<10.0	<10	<10.0
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0		<10.0	<10	<10.0
Chloride	mg/L	97.4		28.6			27.3			29.9		29.6	28.4	29.0
Fluoride	mg/L	2.83		<0.500			<0.500			<0.500		<0.500	<0.5	<0.500
Sulfate as SO4	mg/L	205		4300			4280			4260		3460	3080	3020
Total Organic Carbon (TOC)	mg/L	3.45		3.08			2.91			3.57		3.10	3.16	3.39
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020		<0.020	0.049	0.154
Ammonia as N ^	mg/L											2.72		
Ortho-Phosphate as P ^	mg/L											<0.0500		
Aluminum	mg/L	<0.500		<0.250			<0.250			<0.250		<0.250	<1.00	<0.500
Arsenic	mg/L	<0.0025		<0.0025			0.0009			<0.0025		<0.0025	<0.0025	<0.0050
Cadmium	mg/L	<0.0005		<0.0005			0.0001			<0.0005		<0.0005	<0.0005	<0.0010
Copper	mg/L	0.0116		0.0081			0.0035			0.0039		0.0017	0.0028	<0.0050
Iron	mg/L	1.37		3.75			3.93			3.22		2.72	1.95	1.38
Lead	mg/L	<0.0025		<0.0025			<0.0005			<0.0025		<0.0025	<0.0025	<0.0050
Manganese	mg/L	0.788		0.802			0.724			0.690		0.585	0.551	0.526
Mercury	mg/L	<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
Selenium	mg/L	<0.0050		<0.0050			0.0028			<0.0050		<0.0050	<0.005	<0.0100
Silica (SiO2)	mg/L	12.3		11.9			14.3			13.4		12.5	<21.4	11.0
Silicon	mg/L	5.77		5.57			6.69			6.28		5.83	<10	5.17
Uranium	mg/L	<0.0005		<0.0005			<0.0001			<0.0005		<0.0005	<0.0025	<0.0050
Zinc	mg/L	0.0689		<0.0100			0.0082			0.0108		0.0117	0.0107	<0.0200

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			
Quarter	Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3	
Month	12	1	2	3	4	5	6	7	8	9	11	2	5	8	
Sample Date	12/24	1/30	2/21	3/21	4/23	5/20	6/19	7/23	8/15	9/24	11/7	2/5	5/12	8/11	
Lab Analysis (Y/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	
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 (SiO2)	mg/L														
Silicon	mg/L														
Uranium	mg/L														
Zinc	mg/L														

Notes & Definitions:															
Y/N	yes or no	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.													
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)														

GCC Energy Hydrologic Monitoring Data

MW-6-MI																
Year		2018	2019										2020			
Quarter		Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3	
Month		12	1	2	3	4	5	5	6	7	8	9	11	2	5	8
Sample Date		12/29	1/31	2/25	3/21	4/19	5/20	5/30	6/19	7/23	8/15	9/24	11/7	2/5	5/14	8/11
Lab Analysis (Y/N)		Y	N	Y	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
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 (SiO2)	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	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.
gpm	gallons per minute	
deg C	degrees Celsius	
SU	standard pH units	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.
µS/cm	microsiemens per centimeter	
mV	millivolts	
mg/L	milligram per liter	
pCi/L	picocuries per liter	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.
NM	not measured (field)	
NA	not analyzed (lab)	

GCC Energy Hydrologic Monitoring Data

MW-6-LM																	
Year		2018	2019											2020			
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	
Sample Date		12/30	1/31	2/25	3/21	4/23	5/20	6/19	7/23	8/15	9/24	10/28	11/7	2/5	5/14	8/11	
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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	
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	
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	
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	
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	
Specific Conductance	µS/cm	6011	3784	3503	1461	1164	1296	1400	1272	1532	2104	2267	2113	2283	2287	2442	
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	
Lab Analytical Results:																	
Hardness as CaCO3	mg/L	2260		1270			431			621			843	1060	965	1130	
pH (Lab)	SU	7.60		7.52			7.47			7.59			7.32	7.43	7.18	6.95	
Total Dissolved Solids (Lab)	mg/L	5100		2840			875			1150			1630	1840	1840	2040	
Calcium	mg/L	367		216			75.9			103			136	173	150	179	
Magnesium	mg/L	325		177			58.7			88.3			122	153	143	165	
Sodium	mg/L	459		248			129			153			172	203	188	194	
Potassium	mg/L	173		64.5			14.0			13.7			11.3	11	7.82	7.20	
Alkalinity, Total	mg/L	205		315			371			381			355	320	353	335	
Alkalinity, Bicarbonate	mg/L	205		315			371			381			355	320	353	335	
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10	<10.0	<10.0	
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10	<10.0	<10.0	
Chloride	mg/L	256		43.7			5.73			8.70			11.4	11	11.7	12.2	
Fluoride	mg/L	0.530		<0.500			0.324			<0.500			<0.500	0.352	<0.500	0.346	
Sulfate as SO4	mg/L	3050		1790			338			492			830	951	904	1260	
Total Organic Carbon (TOC)	mg/L	3.46		2.61			1.57			1.78			1.85	1.76	1.84	1.87	
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.02	<0.020	<0.020	
Ammonia as N ^	mg/L												1.99				
Ortho-Phosphate as P ^	mg/L												<0.0500				
Aluminum	mg/L	<0.250		<0.250			<0.050			<0.050			<0.100	<0.25	<0.250	<0.150	
Arsenic	mg/L	0.0039		0.0049			0.0036			0.0038			0.0035	0.0044	0.0034	0.0038	
Cadmium	mg/L	<0.0005		<0.0005			<0.0001			<0.0001			<0.0002	<0.0002	<0.0005	<0.0003	
Copper	mg/L	0.0135		0.0064			0.0017			0.0018			0.0069	0.0014	<0.0025	<0.0015	
Iron	mg/L	<0.250		<0.250			<0.050			<0.050			<0.100	<0.25	<0.250	<0.150	
Lead	mg/L	<0.0025		<0.0025			<0.0005			<0.0005			<0.0010	<0.001	<0.0025	<0.0015	
Manganese	mg/L	0.383		0.223			0.0692			0.148			0.166	0.184	0.171	0.267	
Mercury	mg/L	<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	
Selenium	mg/L	0.0080		<0.0050			<0.0010			<0.0010			<0.0020	<0.002	<0.0050	<0.0030	
Silica (SiO2)	mg/L	10.5		13.5			17.0			17.4			15.9	17.1	15.1	14.7	
Silicon	mg/L	4.91		6.29			7.96			8.12			7.43	7.97	7.07	6.88	
Uranium	mg/L	0.0230		0.0075			0.0039			0.0054			0.0047	0.0055	0.0043	0.0046	
Zinc	mg/L	0.0323		<0.0100			<0.0020			<0.0040			<0.0040	<0.004	<0.0100	0.0069	

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				
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3		
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8		
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		
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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		
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		
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		
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		
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		
Specific Conductance	µS/cm	2001	1910	1910	1926	1912	1767	1836	1885	1890	1913	1936	1922	1993	1890	1772		
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		
Lab Analytical Results:																		
Hardness as CaCO3	mg/L	936		1030			982			997			1020	963	1020	1080		
pH (Lab)	SU	7.2		7.37			7.17			7.09			6.99	6.92	6.89	7.23		
Total Dissolved Solids (Lab)	mg/L	1460		1480			1490			1480			1530	1520	1430	1480		
Calcium	mg/L	170		179			171			173			162	165	175	183		
Magnesium	mg/L	124		142			135			137			144	134	142	150		
Sodium	mg/L	75.3		81.3			75.0			75.2			74.9	73.7	76.0	80.9		
Potassium	mg/L	3.87		3.9			<5.00			3.74			3.74	3.82	<5.00	<5.00		
Alkalinity, Total	mg/L	380		367			405			392			350	357	355	268		
Alkalinity, Bicarbonate	mg/L	380		367			405			392			425	357	355	268		
Alkalinity, Carbonate	mg/L	<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		
Chloride	mg/L	11.9		10.7			10.8			10.9			11.6	10.3	10.7	10.2		
Fluoride	mg/L	<0.500		0.332			0.322			0.322			<0.500	0.354	0.330	0.322		
Sulfate as SO4	mg/L	732		736			733			844			746	774	803	767		
Total Organic Carbon (TOC)	mg/L	3.72		3.57			3.73			3.70			3.45	3.42	3.63	4.01		
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.02	<0.020	<0.02		
Ammonia as N ^	mg/L												0.178					
Ortho-Phosphate as P ^	mg/L												<0.0500					
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.100			<0.050	<0.1	<0.250	<0.25		
Arsenic	mg/L	0.0014		0.0015			0.0013			0.0016			0.0013	0.0013	0.0011	<0.0015		
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0002	<0.0002	<0.0002	<0.0003		
Copper	mg/L	0.0003		0.0018			0.0011			0.0008			0.0006	<0.001	<0.0010	<0.0015		
Iron	mg/L	1.82		1.95			1.81			2.12			2.00	1.84	1.71	2.16		
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.001	<0.0010	<0.0015		
Manganese	mg/L	3.72		4.49			4.01			4.22			4.76	4.86	3.63	4.49		
Mercury	mg/L	<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		
Selenium	mg/L	<0.0020		<0.0020			<0.0010			0.0011			<0.0020	<0.002	<0.0020	<0.003		
Silica (SiO2)	mg/L	16.6		16.1			16.1			16.9			16.8	16.4	15.8	16.9		
Silicon	mg/L	7.75		7.52			7.55			7.90			7.83	7.67	7.37	7.91		
Uranium	mg/L	0.0021		0.0018			0.0017			0.0018			0.0020	0.0019	0.0016	0.0018		
Zinc	mg/L	<0.0050		<0.0040			0.0021			0.0020			<0.0040	<0.004	<0.0040	<0.006		

Notes & Definitions:			
^	one-time analysis		
Y/N	yes or no		
gpm	gallons per minute		1. "
deg C	degrees Celsius		<" 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.
SU	standard pH units		
µS/cm	microsiemens per centimeter		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.
mV	millivolts		
mg/L	milligram per liter		
pCi/L	picocuries per liter		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.
NM	not measured (field)		
NA	not analyzed (lab)		

GCC Energy Hydrologic Monitoring Data

MW-8-EAA																		
Year		2018	2019											2020				
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3		
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8		
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		
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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		
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		
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		
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		
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		
Specific Conductance	µS/cm	1781	1696	1720	1725	1729	1628	1676	1699	172	1739	1774	1739	1758	1760	1675		
Oxygen Reduction Potential	mV	-65	-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		
Lab Analytical Results:																		
Hardness as CaCO3	mg/L	870		861			864			883			867	861	907	937		
pH (Lab)	SU	7.28		7.36			7.13			7.05			7.01	7.11	6.96	7.18		
Total Dissolved Solids (Lab)	mg/L	1220		1290			1240			1280			1380	1290	1260	1280		
Calcium	mg/L	152		151			148			154			143	149	153	160		
Magnesium	mg/L	119		118			120			121			124	119	127	130		
Sodium	mg/L	81.7		82.6			77.2			78.6			77.1	77.2	77.7	82.9		
Potassium	mg/L	3.80		3.27			3.55			3.18			3.52	3.8	<5.00	<5		
Alkalinity, Total	mg/L	400		435			450			431			445	404	385	288		
Alkalinity, Bicarbonate	mg/L	400		435			450			431			445	404	385	288		
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10	<10.0	<10		
Alkalinity, Hydroxide	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10	<10.0	<10		
Chloride	mg/L	9.83		10.5			10.3			11.1			11.0	10.2	10.3	10.1		
Fluoride	mg/L	0.380		0.370			0.338			0.342			<0.500	0.33	0.346	0.336		
Sulfate as SO4	mg/L	533		559			606			643			577	602	625	605		
Total Organic Carbon (TOC)	mg/L	3.77		3.59			3.77			3.68			3.52	3.49	3.56	3.82		
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.02	<0.020	<0.02		
Ammonia as N ^	mg/L												0.216					
Ortho-Phosphate as P ^	mg/L												<0.0500					
Aluminum	mg/L	<0.100		<0.100			<0.050			<0.100			<0.050	<0.1	<0.250	<0.25		
Arsenic	mg/L	0.0020		0.0018			0.0018			0.0021			0.0018	0.0017	0.0017	0.0018		
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0003		
Copper	mg/L	0.0004		0.0024			0.0023			0.0008			0.0010	0.001	<0.0010	<0.0015		
Iron	mg/L	2.12		2.13			2.42			2.46			2.30	2.28	2.29	2.31		
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.001	<0.0010	<0.0015		
Manganese	mg/L	3.17		3.52			3.06			3.37			3.39	3.7	3.36	3.54		
Mercury	mg/L	<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	<0.001	<0.0010	<0.0015		
Selenium	mg/L	<0.0020		<0.0020			0.0010			0.0013			<0.0010	<0.002	<0.0020	<0.003		
Silica (SiO2)	mg/L	16.3		15.3			15.7			16.1			15.9	15.7	15.0	16.1		
Silicon	mg/L	7.63		7.15			7.32			7.52			7.42	7.32	7.02	7.53		
Uranium	mg/L	0.0021		0.0017			0.0016			0.0018			0.0019	0.0019	0.0017	0.0017		
Zinc	mg/L	<0.0050		<0.0040			<0.0020			<0.0020			<0.0020	<0.004	<0.0040	<0.006		

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			
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	
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	
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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	
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	
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	
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	
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	
Specific Conductance	µS/cm	1786	1667	1651	1658	1643	1595	1639	1645	1658	1637	1689	1642	1651	1659	1598	
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	
Lab Analytical Results:																	
Hardness as CaCO3	mg/L	167		249			273			253			267	254	309	355	
pH (Lab)	SU	7.73		7.54			7.24			7.46			7.44	7.53	7.25	7.34	
Total Dissolved Solids (Lab)	mg/L	1050		1030			1100			1110			1050	1060	1040	1010	
Calcium	mg/L	34.0		48.5			52.4			49.7			51.3	48.7	58.5	65.9	
Magnesium	mg/L	19.9		31.0			34.5			31.4			33.8	32.1	39.6	46.2	
Sodium	mg/L	344		312			289			289			275	269	272	260	
Potassium	mg/L	4.47		5.25			<5.00			4.55			5.07	4.71	5.00	5.56	
Alkalinity, Total	mg/L	500		565			560			573			585	543	545	448	
Alkalinity, Bicarbonate	mg/L	500		565			560			573			585	543	545	448	
Alkalinity, Carbonate	mg/L	<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	
Chloride	mg/L	12.7		10.0			9.33			9.06			9.66	8.19	8.23	8.12	
Fluoride	mg/L	<0.500		<0.200			<0.200			<0.200			<0.500	<0.2	<0.200	<0.2	
Sulfate as SO4	mg/L	347		353			343			366			317	314	316	335	
Total Organic Carbon (TOC)	mg/L	2.73		2.83			2.81			2.74			2.65	2.6	2.94	2.87	
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.02	<0.020	<0.02	
Ammonia as N ^	mg/L												1.31				
Ortho-Phosphate as P ^	mg/L												<0.0500				
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.100			<0.050	<0.1	<0.250	<0.25	
Arsenic	mg/L	0.0008		<0.0010			0.0006			0.0005			0.0005	<0.001	<0.0010	<0.0015	
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0003	
Copper	mg/L	0.0031		0.0066			0.0036			0.0035			0.0037	0.0027	<0.0010	<0.0015	
Iron	mg/L	0.137		0.162			<0.250			0.129			0.130	0.108	<0.250	<0.250	
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.001	<0.0025	<0.0015	
Manganese	mg/L	0.0495		0.0383			0.0327			0.0351			0.0377	0.0391	0.0393	0.0551	
Mercury	mg/L	<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	
Selenium	mg/L	<0.0020		<0.0020			0.0010			0.0010			<0.0010	<0.002	0.0020	<0.003	
Silica (SiO2)	mg/L	12.1		12.4			12.8			12.5			12.6	12.2	11.9	12.9	
Silicon	mg/L	5.65		5.78			5.99			5.83			5.88	5.71	5.55	6.05	
Uranium	mg/L	0.0002		0.0002			0.0002			0.0001			0.0001	<0.001	<0.0025	<0.0015	
Zinc	mg/L	<0.0050		<0.0040			<0.0020			<0.0020			<0.0020	<0.004	<0.0040	<0.0060	

Notes & Definitions:		
^	one-time analysis	
Y/N	yes or no	1. " <i><</i> " 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.
gpm	gallons per minute	
deg C	degrees Celsius	
SU	standard pH units	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.
µS/cm	microsiemens per centimeter	
mV	millivolts	
mg/L	milligram per liter	
pCi/L	picocuries per liter	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.
NM	not measured (field)	
NA	not analyzed (lab)	

GCC Energy Hydrologic Monitoring Data

MW-8-LM																		
Year		2018	2019										2020					
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2		Q3	
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5		8	
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	
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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		
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		
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		
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		
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		
Specific Conductance	µS/cm	2306	1274	1265	1310	1262	1234	1264	1226	1269	1252	1299	1255	1294	1282	1055		
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		
Lab Analytical Results:																		
Hardness as CaCO3	mg/L	45.0		7.29			16.9			6.67			6.38	6.79	7.76	7.53		
pH (Lab)	SU	8.57		8.63			8.02			8.56			8.52	8.55	8.41	8.45		
Total Dissolved Solids (Lab)	mg/L	1420		770			780			785			780	840	730	740		
Calcium	mg/L	10.8		1.93			3.84			1.78			1.68	1.77	2.09	2.05		
Magnesium	mg/L	4.39		0.600			1.77			0.541			0.528	0.574	0.620	0.587		
Sodium	mg/L	382		341			317			306			305	309	315	337		
Potassium	mg/L	45.7		3.49			<5.00			2.27			2.18	2.06	<5.00	<5.00		
Alkalinity, Total	mg/L	615		720			745			731			745	685	630	675		
Alkalinity, Bicarbonate	mg/L	535		610			645			645			685	595	530	585		
Alkalinity, Carbonate	mg/L	80.0		110			100			86.0			60.0	90	100	90		
Alkalinity, Hydroxide	mg/L	<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		
Fluoride	mg/L	2.06		3.91			3.95			3.97			3.88	3.61	3.63	3.53		
Sulfate as SO4	mg/L	190		3.79			9.58			1.02			<1.00	<2.00	<2.00	<2.00		
Total Organic Carbon (TOC)	mg/L	2.80		1.80			3.33			1.94			1.69	1.69	1.92	1.82		
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020		
Ammonia as N ^	mg/L												0.282					
Ortho-Phosphate as P ^	mg/L												<0.0500					
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.100	<0.250	<0.250		
Arsenic	mg/L	0.0106		<0.0010			0.0006			0.0007			0.0006	<0.0005	<0.0010	<0.0015		
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0001	<0.0002	<0.0003		
Copper	mg/L	0.0337		0.0077			0.0047			0.0041			0.0051	0.0033	0.0012	0.0017		
Iron	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.100	<0.250	<0.250		
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.0005	<0.0010	<0.0015		
Manganese	mg/L	0.0258		0.0038			0.0150			0.0020			0.0026	0.0025	0.0029	0.0026		
Mercury	mg/L	<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		
Selenium	mg/L	0.0020		<0.0020			<0.0010			<0.0010			<0.0010	<0.001	<0.0020	<0.003		
Silica (SiO2)	mg/L	9.09		8.45			8.68			8.28			7.77	7.62	7.40	7.84		
Silicon	mg/L	4.25		3.95			4.06			3.87			3.63	3.56	3.46	3.67		
Uranium	mg/L	0.0044		<0.0002			0.0001			0.0001			<0.0002	<0.0005	<0.0010	<0.0015		
Zinc	mg/L	0.0080		<0.0040			0.0023			<0.0020			<0.0020	<0.002	<0.0040	<0.0060		

Notes & Definitions:		
^	one-time analysis	
Y/N	yes or no	1. " <i><</i> " 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.
gpm	gallons per minute	
deg C	degrees Celsius	
SU	standard pH units	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.
µS/cm	microsiemens per centimeter	
mV	millivolts	
mg/L	milligram per liter	
pCi/L	picocuries per liter	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.
NM	not measured (field)	
NA	not analyzed (lab)	

GCC Energy Hydrologic Monitoring Data

MW-8-PL																	
Year		2018	2019											2020			
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	
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	
Lab Analysis (Y/N)		Y	N	Y	N	N	Y	N	N	Y	N	N	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		
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	
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	
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	
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	
Specific Conductance	µS/cm	1690	1531	1571	1558	1554	1411	1326	1165	1083	947	940	900	862	844	792	
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	
Lab Analytical Results:																	
Hardness as CaCO3	mg/L	617		644			596			411			294	278	298	292	
pH (Lab)	SU	7.28		7.40			7.26			7.22			7.39	7.47	7.19	7.16	
Total Dissolved Solids (Lab)	mg/L	1150		1090			995			705			620	500	490	525	
Calcium	mg/L	112		120			105			73.1			52.1	49.3	53.8	53.3	
Magnesium	mg/L	82.1		83.8			81.4			55.4			39.7	37.6	39.7	38.5	
Sodium	mg/L	106		124			102			91.7			83.3	78.5	80.4	81.6	
Potassium	mg/L	5.14		5.62			<5.00			2.80			2.35	2.32	2.11	<2.00	
Alkalinity, Total	mg/L	370		415			435			393			390	339	340	315	
Alkalinity, Bicarbonate	mg/L	370		415			435			393			390	339	340	315	
Alkalinity, Carbonate	mg/L	<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	
Chloride	mg/L	18.8		18.5			9.03			5.61			5.66	3.51	3.38	3.33	
Fluoride	mg/L	0.505		0.474			0.290			0.291			<0.500	0.258	0.240	0.233	
Sulfate as SO4	mg/L	478		471			390			232			127	109	103	99.2	
Total Organic Carbon (TOC)	mg/L	4.17		4.02			2.92			2.21			1.75	1.63	1.63	1.61	
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	
Ammonia as N ^	mg/L												0.199				
Ortho-Phosphate as P ^	mg/L												<0.0500				
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.05	<0.100	<0.100	
Arsenic	mg/L	0.0074		0.0124			0.0190			0.0156			0.0104	0.0073	0.0075	0.0064	
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0001	<0.0002	
Copper	mg/L	0.0016		0.0025			0.0017			0.0011			0.0004	0.001	<0.0025	<0.001	
Iron	mg/L	<0.050		0.352			<0.250			0.129			0.075	0.054	<0.100	<0.100	
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.0005	<0.0005	<0.001	
Manganese	mg/L	1.31		1.22			0.697			0.505			0.313	0.303	0.307	0.259	
Mercury	mg/L	<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	<0.001	
Selenium	mg/L	0.0012		<0.0020			<0.0010			<0.0010			<0.0010	<0.001	<0.0010	<0.002	
Silica (SiO2)	mg/L	14.1		16.3			17.7			18.5			18.0	18.9	18.7	19.9	
Silicon	mg/L	6.58		7.64			8.28			8.67			8.42	8.82	8.75	9.28	
Uranium	mg/L	0.0052		0.0040			0.0010			0.0009			0.0004	<0.0005	<0.0005	<0.001	
Zinc	mg/L	0.0344		<0.0040			<0.0020			<0.0080			<0.0020	<0.002	<0.0100	<0.004	

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.	



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

15 September 2020

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/26/20 15:00.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Debbie Zufelt'. The script is cursive and fluid, with the first name 'Debbie' and last name 'Zufelt' clearly legible.

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 14:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Well #2	2008327-01	Water	08/26/20 10:25	08/26/20 15:00	
MW-99-C	2008327-02	Water	08/26/20 10:45	08/26/20 15:00	
MW-HGA-4	2008327-03	Water	08/26/20 11:50	08/26/20 15:00	
MW-99-B	2008327-04	Water	08/26/20 13:00	08/26/20 15:00	

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 14:26

Well #2

2008327-01 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	345	10.0	7.16	mg/L	1	09/01/20 14:07	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	1	09/01/20 14:07	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	1	09/01/20 14:07	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	345	10.0	7.16	mg/L	1	09/01/20 14:07	2320 B		VJW
Chloride*	44.8	5.00	0.443	mg/L	5	09/04/20 14:41	EPA300.0		AES
Fluoride*	0.254	0.100	0.00971	mg/L	1	09/03/20 22:09	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 16:02	EPA353.2		LLG
pH*	7.30			pH Units	1	08/27/20 11:10	EPA150.1		VJW
Total Dissolved Solids*	665	10.0		mg/L	1	08/31/20 16:17	EPA160.1		VJW
Sulfate*	204	5.00	0.762	mg/L	5	09/04/20 14:41	EPA300.0		AES
Total Organic Carbon*	1.87	0.500	0.135	mg/L	1	09/01/20 18:34	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.025	mg/L	2	09/03/20 15:05	EPA200.7		AES
Calcium*	90.1	0.200	0.033	mg/L	2	09/03/20 15:05	EPA200.7		AES
Hardness as CaCO ₃	560	1.32	0.276	mg/L	2	09/03/20 15:05	2340 B		AES
Iron*	0.109	0.100	0.037	mg/L	2	09/03/20 15:05	EPA200.7		AES
Magnesium*	81.3	0.200	0.047	mg/L	2	09/03/20 15:05	EPA200.7		AES
Potassium*	2.06	2.00	0.260	mg/L	2	09/03/20 15:05	EPA200.7		AES
Silica (SiO ₂)	11.5	2.14	0.0708	mg/L	2	09/03/20 15:05	Calculation		AES
Silicon	5.39	1.00	0.033	mg/L	2	09/03/20 15:05	EPA200.7		AES
Sodium*	23.8	2.00	0.201	mg/L	2	09/03/20 15:05	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0002	mg/L	2	09/11/20 12:57	EPA200.8		AES
Cadmium*	<0.0002	0.0002	0.0001	mg/L	2	09/11/20 12:57	EPA200.8		AES
Copper*	<0.0010	0.0010	0.0004	mg/L	2	09/11/20 12:57	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	09/11/20 12:57	EPA200.8		AES
Manganese*	0.412	0.0010	0.0002	mg/L	2	09/11/20 12:57	EPA200.8		AES
Molybdenum*	0.0024	0.0010	0.0002	mg/L	2	09/11/20 12:57	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0011	mg/L	2	09/11/20 12:57	EPA200.8		AES
Uranium	0.0013	0.0010	0.0004	mg/L	2	09/11/20 12:57	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0006	mg/L	2	09/11/20 12:57	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance -59

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.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 14:26

MW-99-C

2008327-02 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	344	10.0	7.16	mg/L	1	09/01/20 14:07	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	1	09/01/20 14:07	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	1	09/01/20 14:07	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	344	10.0	7.16	mg/L	1	09/01/20 14:07	2320 B		VJW
Chloride*	45.5	5.00	0.443	mg/L	5	09/04/20 15:02	EPA300.0		AES
Fluoride*	0.248	0.100	0.00971	mg/L	1	09/03/20 22:30	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 16:03	EPA353.2		LLG
pH*	7.58			pH Units	1	08/27/20 11:10	EPA150.1		VJW
Total Dissolved Solids*	705	10.0		mg/L	1	08/28/20 16:20	EPA160.1		VJW
Sulfate*	204	5.00	0.762	mg/L	5	09/04/20 15:02	EPA300.0		AES
Total Organic Carbon*	1.85	0.500	0.135	mg/L	1	09/01/20 19:29	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.025	mg/L	2	09/03/20 15:07	EPA200.7		AES
Calcium*	88.7	0.200	0.033	mg/L	2	09/03/20 15:07	EPA200.7		AES
Hardness as CaCO ₃	559	1.32	0.276	mg/L	2	09/03/20 15:07	2340 B		AES
Iron*	0.119	0.100	0.037	mg/L	2	09/03/20 15:07	EPA200.7		AES
Magnesium*	82.0	0.200	0.047	mg/L	2	09/03/20 15:07	EPA200.7		AES
Potassium*	2.16	2.00	0.260	mg/L	2	09/03/20 15:07	EPA200.7		AES
Silica (SiO ₂)	11.6	2.14	0.0708	mg/L	2	09/03/20 15:07	Calculation		AES
Silicon	5.42	1.00	0.033	mg/L	2	09/03/20 15:07	EPA200.7		AES
Sodium*	23.6	2.00	0.201	mg/L	2	09/03/20 15:07	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0002	mg/L	2	09/11/20 13:01	EPA200.8		AES
Cadmium*	<0.0002	0.0002	0.0001	mg/L	2	09/11/20 13:01	EPA200.8		AES
Copper*	<0.0010	0.0010	0.0004	mg/L	2	09/11/20 13:01	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	09/11/20 13:01	EPA200.8		AES
Manganese*	0.358	0.0010	0.0002	mg/L	2	09/11/20 13:01	EPA200.8		AES
Molybdenum*	0.0021	0.0010	0.0002	mg/L	2	09/11/20 13:01	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0011	mg/L	2	09/11/20 13:01	EPA200.8		AES
Uranium	0.0012	0.0010	0.0004	mg/L	2	09/11/20 13:01	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0006	mg/L	2	09/11/20 13:01	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance -66

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.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 14:26

MW-HGA-4

2008327-03 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	485	10.0	7.16	mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	485	10.0	7.16	mg/L	5	09/01/20 14:07	2320 B		VJW
Chloride*	8.78	1.00	0.0886	mg/L	1	09/03/20 23:31	EPA300.0		AES
Fluoride*	0.431	0.100	0.00971	mg/L	1	09/03/20 23:31	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 16:04	EPA353.2		LLG
pH*	7.07			pH Units	1	08/27/20 11:10	EPA150.1		VJW
Total Dissolved Solids*	700	10.0		mg/L	1	08/28/20 16:20	EPA160.1		VJW
Sulfate*	179	5.00	0.762	mg/L	5	09/04/20 15:22	EPA300.0		AES
Total Organic Carbon*	4.56	0.500	0.135	mg/L	1	09/01/20 20:14	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.025	mg/L	2	09/03/20 15:09	EPA200.7		AES
Calcium*	111	0.200	0.033	mg/L	2	09/03/20 15:09	EPA200.7		AES
Hardness as CaCO ₃	571	1.32	0.276	mg/L	2	09/03/20 15:09	2340 B		AES
Iron*	8.95	0.100	0.037	mg/L	2	09/03/20 15:09	EPA200.7		AES
Magnesium*	71.7	0.200	0.047	mg/L	2	09/03/20 15:09	EPA200.7		AES
Potassium*	2.08	2.00	0.260	mg/L	2	09/03/20 15:09	EPA200.7		AES
Silica (SiO ₂)	15.4	2.14	0.0708	mg/L	2	09/03/20 15:09	Calculation		AES
Silicon	7.21	1.00	0.033	mg/L	2	09/03/20 15:09	EPA200.7		AES
Sodium*	30.5	2.00	0.201	mg/L	2	09/03/20 15:09	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0026	0.0010	0.0002	mg/L	2	09/11/20 13:04	EPA200.8		AES
Cadmium*	<0.0002	0.0002	0.0001	mg/L	2	09/11/20 13:04	EPA200.8		AES
Copper*	<0.0010	0.0010	0.0004	mg/L	2	09/11/20 13:04	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	09/11/20 13:04	EPA200.8		AES
Manganese*	1.66	0.0010	0.0002	mg/L	2	09/11/20 13:04	EPA200.8		AES
Molybdenum*	0.0032	0.0010	0.0002	mg/L	2	09/11/20 13:04	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0011	mg/L	2	09/11/20 13:04	EPA200.8		AES
Uranium	<0.0010	0.0010	0.0004	mg/L	2	09/11/20 13:04	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0006	mg/L	2	09/11/20 13:04	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance -2.07

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 14:26

MW-99-B

2008327-04 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	<10.0	10.0	7.16	mg/L	1	09/01/20 14:07	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	1	09/01/20 14:07	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	1	09/01/20 14:07	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	<10.0	10.0	7.16	mg/L	1	09/01/20 14:07	2320 B		VJW
Chloride*	<1.00	1.00	0.0886	mg/L	1	09/03/20 23:51	EPA300.0		AES
Fluoride*	<0.100	0.100	0.00971	mg/L	1	09/03/20 23:51	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 16:06	EPA353.2		LLG
pH*	6.32			pH Units	1	08/27/20 11:10	EPA150.1		VJW
Total Dissolved Solids*	30.0	10.0		mg/L	1	08/28/20 16:20	EPA160.1		VJW
Sulfate*	<1.00	1.00	0.152	mg/L	1	09/03/20 23:51	EPA300.0		AES
Total Organic Carbon*	<0.500	0.500	0.135	mg/L	1	09/01/20 20:33	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.012	mg/L	1	09/03/20 15:11	EPA200.7		AES
Calcium*	<0.100	0.100	0.017	mg/L	1	09/03/20 15:11	EPA200.7		AES
Hardness as CaCO ₃	<0.662	0.662	0.138	mg/L	1	09/03/20 15:11	2340 B		AES
Iron*	<0.050	0.050	0.018	mg/L	1	09/03/20 15:11	EPA200.7		AES
Magnesium*	<0.100	0.100	0.023	mg/L	1	09/03/20 15:11	EPA200.7		AES
Potassium*	<1.00	1.00	0.130	mg/L	1	09/03/20 15:11	EPA200.7		AES
Silica (SiO ₂)	<1.07	1.07	0.0354	mg/L	1	09/03/20 15:11	Calculation		AES
Silicon	<0.500	0.500	0.017	mg/L	1	09/03/20 15:11	EPA200.7		AES
Sodium*	<1.00	1.00	0.101	mg/L	1	09/03/20 15:11	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0005	0.0005	0.0001	mg/L	1	09/11/20 13:08	EPA200.8		AES
Cadmium*	<0.0001	0.0001	0.00007	mg/L	1	09/11/20 13:08	EPA200.8		AES
Copper*	0.0019	0.0005	0.0002	mg/L	1	09/11/20 13:08	EPA200.8		AES
Lead*	<0.0005	0.0005	0.0001	mg/L	1	09/11/20 13:08	EPA200.8		AES
Manganese*	<0.0005	0.0005	0.0001	mg/L	1	09/11/20 13:08	EPA200.8		AES
Molybdenum*	<0.0005	0.0005	0.0001	mg/L	1	09/11/20 13:08	EPA200.8		AES
Selenium*	<0.0010	0.0010	0.0005	mg/L	1	09/11/20 13:08	EPA200.8		AES
Uranium	<0.0005	0.0005	0.0002	mg/L	1	09/11/20 13:08	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0003	mg/L	1	09/11/20 13:08	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 14:26

Cation/Anion Balance

-75.26

Green Analytical Laboratories

A handwritten signature in black ink that reads 'Debbie Zufelt'.

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 14:26

General Chemistry - Quality Control

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

Batch B201725 - General Prep - Wet Chem

Blank (B201725-BLK1) Prepared & Analyzed: 08/28/20

Total Dissolved Solids ND 10.0 mg/L

Reference (B201725-SRM1) Prepared & Analyzed: 08/28/20

Total Dissolved Solids 360 10.0 mg/L 380 94.7 85-115

Batch B201732 - General Prep - Wet Chem

Duplicate (B201732-DUP2) Source: 2008327-04 Prepared & Analyzed: 08/27/20

pH 6.22 pH Units 6.32 1.59 20

Reference (B201732-SRM1) Prepared & Analyzed: 08/27/20

pH 6.99 pH Units 7.00 99.9 98.5-101.4

Batch B201742 - General Prep - Wet Chem

Blank (B201742-BLK1) Prepared & Analyzed: 08/31/20

Total Dissolved Solids ND 10.0 mg/L

Duplicate (B201742-DUP1) Source: 2008308-01 Prepared & Analyzed: 08/31/20

Total Dissolved Solids 450 10.0 mg/L 460 2.18 20

Reference (B201742-SRM1) Prepared & Analyzed: 08/31/20

Total Dissolved Solids 300 10.0 mg/L 306 98.0 85-115

Batch B201753 - General Prep - Wet Chem

Blank (B201753-BLK1) Prepared & Analyzed: 09/01/20

Nitrate/Nitrite as N ND 0.020 mg/L as N

LCS (B201753-BS1) Prepared & Analyzed: 09/01/20

Nitrate/Nitrite as N 0.962 0.020 mg/L as N 1.00 96.2 90-110

LCS Dup (B201753-BSD1) Prepared & Analyzed: 09/01/20

Nitrate/Nitrite as N 0.963 0.020 mg/L as N 1.00 96.3 90-110 0.0520 20

Batch B201754 - General Prep - Wet Chem

Blank (B201754-BLK1) Prepared & Analyzed: 09/01/20

Alkalinity, Bicarbonate as CaCO₃ ND 10.0 mg/LAlkalinity, Carbonate as CaCO₃ ND 10.0 mg/LAlkalinity, Hydroxide as CaCO₃ ND 10.0 mg/LAlkalinity, Total as CaCO₃ ND 10.0 mg/L

LCS (B201754-BS1) Prepared & Analyzed: 09/01/20

Alkalinity, Bicarbonate as CaCO₃ 103 10.0 mg/L 85-115Alkalinity, Carbonate as CaCO₃ ND 10.0 mg/L 85-115Alkalinity, Hydroxide as CaCO₃ ND 10.0 mg/L 85-115Alkalinity, Total as CaCO₃ 103 10.0 mg/L 100 103 85-115

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 14:26

**General Chemistry - Quality Control
(Continued)**

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

Batch B201754 - General Prep - Wet Chem (Continued)

LCS Dup (B201754-BSD1)		Prepared & Analyzed: 09/01/20								
Alkalinity, Bicarbonate as CaCO ₃	101	10.0	mg/L				85-115	1.96	20	
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L				85-115		20	
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L				85-115		20	
Alkalinity, Total as CaCO ₃	101	10.0	mg/L	100		101	85-115	1.96	20	

Batch B201759 - General Prep - Wet Chem

Blank (B201759-BLK1)		Prepared & Analyzed: 09/01/20								
Total Organic Carbon	ND	0.500	mg/L							

LCS (B201759-BS1)		Prepared & Analyzed: 09/01/20								
Total Organic Carbon	9.61	0.500	mg/L	10.0		96.1	85-115			

LCS Dup (B201759-BSD1)		Prepared & Analyzed: 09/01/20								
Total Organic Carbon	9.68	0.500	mg/L	10.0		96.8	85-115	0.695	20	

Batch B201782 - General Prep - Wet Chem

Blank (B201782-BLK1)		Prepared & Analyzed: 09/03/20								
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							

LCS (B201782-BS1)		Prepared & Analyzed: 09/03/20								
Chloride	23.6	1.00	mg/L	25.0		94.4	90-110			
Fluoride	2.51	0.100	mg/L	2.50		100	90-110			
Sulfate	23.9	1.00	mg/L	25.0		95.4	90-110			

LCS Dup (B201782-BSD1)		Prepared & Analyzed: 09/03/20								
Chloride	23.7	1.00	mg/L	25.0		94.6	90-110	0.228	20	
Fluoride	2.63	0.100	mg/L	2.50		105	90-110	4.60	20	
Sulfate	23.9	1.00	mg/L	25.0		95.5	90-110	0.134	20	

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 14:26

Dissolved Metals by ICP - Quality Control

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

Batch B201783 - Diss. 200.7/200.8

Blank (B201783-BLK1)

Prepared & Analyzed: 09/03/20

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 (B201783-BS1)

Prepared & Analyzed: 09/03/20

Aluminum	5.11	0.050	mg/L	5.00	102	85-115
Calcium	5.09	0.100	mg/L	5.00	102	85-115
Iron	4.84	0.050	mg/L	5.00	96.7	85-115
Magnesium	25.8	0.100	mg/L	25.0	103	85-115
Potassium	10.3	1.00	mg/L	10.0	103	85-115
Silicon	5.01	0.500	mg/L	5.00	100	85-115
Sodium	4.22	1.00	mg/L	4.05	104	85-115

LCS Dup (B201783-BSD1)

Prepared & Analyzed: 09/03/20

Aluminum	5.09	0.050	mg/L	5.00	102	85-115	0.415	20
Calcium	5.03	0.100	mg/L	5.00	101	85-115	1.22	20
Iron	4.79	0.050	mg/L	5.00	95.8	85-115	0.962	20
Magnesium	25.6	0.100	mg/L	25.0	103	85-115	0.554	20
Potassium	9.94	1.00	mg/L	10.0	99.4	85-115	3.25	20
Silicon	5.00	0.500	mg/L	5.00	100	85-115	0.167	20
Sodium	4.12	1.00	mg/L	4.05	102	85-115	2.40	20

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 14:26

Dissolved Metals by ICPMS - Quality Control

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

Batch B201817 - Diss. 200.7/200.8

Blank (B201817-BLK1)

Prepared: 09/09/20 Analyzed: 09/11/20

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 (B201817-BS1)

Prepared: 09/09/20 Analyzed: 09/11/20

Arsenic	0.0440	0.0005	mg/L	0.0500	88.0	85-115
Cadmium	0.0458	0.0001	mg/L	0.0500	91.5	85-115
Copper	0.0449	0.0005	mg/L	0.0500	89.9	85-115
Lead	0.0431	0.0005	mg/L	0.0500	86.3	85-115
Manganese	0.0453	0.0005	mg/L	0.0500	90.6	85-115
Molybdenum	0.0446	0.0005	mg/L	0.0500	89.1	85-115
Selenium	0.217	0.0010	mg/L	0.250	86.9	85-115
Uranium	0.0447	0.0005	mg/L	0.0500	89.4	85-115
Zinc	0.0435	0.0020	mg/L	0.0500	87.0	85-115

LCS Dup (B201817-BSD1)

Prepared: 09/09/20 Analyzed: 09/11/20

Arsenic	0.0436	0.0005	mg/L	0.0500	87.1	85-115	1.08	20
Cadmium	0.0430	0.0001	mg/L	0.0500	86.0	85-115	6.29	20
Copper	0.0461	0.0005	mg/L	0.0500	92.3	85-115	2.63	20
Lead	0.0445	0.0005	mg/L	0.0500	89.0	85-115	3.07	20
Manganese	0.0459	0.0005	mg/L	0.0500	91.7	85-115	1.26	20
Molybdenum	0.0459	0.0005	mg/L	0.0500	91.8	85-115	3.02	20
Selenium	0.220	0.0010	mg/L	0.250	88.1	85-115	1.45	20
Uranium	0.0437	0.0005	mg/L	0.0500	87.4	85-115	2.18	20
Zinc	0.0439	0.0020	mg/L	0.0500	87.9	85-115	1.01	20

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 14:26

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B201747 - EPA 245.1/7470									
Blank (B201747-BLK1)				Prepared: 09/01/20 Analyzed: 09/03/20					
Mercury	ND	0.0002	mg/L						
LCS (B201747-BS1)				Prepared: 09/01/20 Analyzed: 09/03/20					
Mercury	0.0053	0.0002	mg/L	0.00500		107	85-115		
LCS Dup (B201747-BSD1)				Prepared: 09/01/20 Analyzed: 09/03/20					
Mercury	0.0051	0.0002	mg/L	0.00500		103	85-115	3.99	20

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 14:26

Notes and Definitions

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

Green Analytical Laboratories

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.



(970) 247-4220

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

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006

COC - Revision 6.0

[illegible]



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

26 August 2020

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: GCC SW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/13/20 12:20.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, reading 'Jeremy D. Allen', is written in a cursive style.

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 16:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Haygulch Ditch Downgradient	2008169-01	Water	08/13/20 10:02	08/13/20 12:20	
Haygulch Ditch upgradient	2008169-02	Water	08/13/20 10:42	08/13/20 12:20	

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom BirdReported:
08/26/20 16:43

Haygulch Ditch Downgradient

2008169-01 (Surface Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	110	10.0	7.16	mg/L	5	08/24/20 14:45	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	08/24/20 14:45	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	08/24/20 14:45	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	110	10.0	7.16	mg/L	5	08/24/20 14:45	2320 B		VJW
Chloride*	4.42	1.00	0.0886	mg/L	1	08/25/20 19:39	EPA300.0		AES
Fluoride*	0.224	0.100	0.00971	mg/L	1	08/25/20 19:39	EPA300.0		AES
Nitrate/Nitrite as N*	0.053	0.020	0.006	mg/L as N	1	08/18/20 13:14	EPA353.2		LLG
Oil & Grease (HEM)	<5.00	5.00	1.16	mg/L	1	08/25/20 10:00	EPA1664 A		VJW
pH*	7.59			pH Units	1	08/14/20 08:25	EPA150.1		VJW
SAR	0.14			No Unit	1	08/21/20 15:33	Calculation		AES
Total Dissolved Solids*	135	10.0		mg/L	1	08/20/20 17:16	EPA160.1		VJW
Total Suspended Solids*	28.6	4.00		mg/L	1	08/19/20 16:40	EPA160.2		VJW
Sulfate*	32.4	1.00	0.152	mg/L	1	08/25/20 19:39	EPA300.0		AES
Total Organic Carbon*	1.47	0.500	0.135	mg/L	1	08/20/20 18:46	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.012	mg/L	1	08/20/20 16:07	EPA200.7		AES
Calcium*	34.2	0.100	0.017	mg/L	1	08/20/20 16:07	EPA200.7		AES
Hardness as CaCO ₃	120	0.662	0.138	mg/L	1	08/20/20 16:07	2340 B		AES
Iron*	<0.050	0.050	0.018	mg/L	1	08/20/20 16:07	EPA200.7		AES
Magnesium*	8.38	0.100	0.023	mg/L	1	08/20/20 16:07	EPA200.7		AES
Potassium*	1.36	1.00	0.130	mg/L	1	08/20/20 16:07	EPA200.7		AES
Silica (SiO ₂)	7.14	1.07	0.0354	mg/L	1	08/20/20 16:07	Calculation		AES
Silicon	3.34	0.500	0.017	mg/L	1	08/20/20 16:07	EPA200.7		AES
Sodium*	3.68	1.00	0.101	mg/L	1	08/20/20 16:07	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0007	0.0005	0.0001	mg/L	1	08/21/20 14:41	EPA200.8		AES
Cadmium*	<0.0001	0.0001	0.00007	mg/L	1	08/21/20 14:41	EPA200.8		AES
Copper*	0.0009	0.0005	0.0002	mg/L	1	08/21/20 14:41	EPA200.8		AES
Lead*	<0.0005	0.0005	0.0001	mg/L	1	08/21/20 14:41	EPA200.8		AES
Manganese*	0.0046	0.0005	0.0001	mg/L	1	08/21/20 14:41	EPA200.8		AES
Molybdenum*	0.0012	0.0005	0.0001	mg/L	1	08/21/20 14:41	EPA200.8		AES
Selenium*	<0.0010	0.0010	0.0005	mg/L	1	08/21/20 14:41	EPA200.8		AES
Uranium	<0.0005	0.0005	0.0002	mg/L	1	08/21/20 14:41	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0003	mg/L	1	08/21/20 14:41	EPA200.8		AES

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 16:43

Haygulch Ditch Downgradient

2008169-01 (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	08/21/20 11:17	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom BirdReported:
08/26/20 16:43

Haygulch Ditch upgradient

2008169-02 (Surface Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO3*	220	10.0	7.16	mg/L	5	08/24/20 14:45	2320 B		VJW
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	5	08/24/20 14:45	2320 B		VJW
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	5	08/24/20 14:45	2320 B		VJW
Alkalinity, Total as CaCO3*	220	10.0	7.16	mg/L	5	08/24/20 14:45	2320 B		VJW
Chloride*	24.5	1.00	0.0886	mg/L	1	08/25/20 19:59	EPA300.0		AES
Fluoride*	0.226	0.100	0.00971	mg/L	1	08/25/20 19:59	EPA300.0		AES
Nitrate/Nitrite as N*	0.042	0.020	0.006	mg/L as N	1	08/18/20 13:15	EPA353.2		LLG
Oil & Grease (HEM)	<5.00	5.00	1.16	mg/L	1	08/24/20 08:35	EPA1664 A		VJW
pH*	8.01			pH Units	1	08/14/20 08:25	EPA150.1		VJW
SAR	0.29			No Unit	1	08/21/20 15:35	Calculation		AES
Total Dissolved Solids*	340	10.0		mg/L	1	08/20/20 17:16	EPA160.1		VJW
Total Suspended Solids*	19.5	4.00		mg/L	1	08/19/20 16:40	EPA160.2		VJW
Sulfate*	86.3	5.00	0.762	mg/L	5	08/26/20 09:37	EPA300.0		AES
Total Organic Carbon*	1.65	0.500	0.135	mg/L	1	08/20/20 19:01	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.012	mg/L	1	08/20/20 16:09	EPA200.7		AES
Calcium*	63.2	0.100	0.017	mg/L	1	08/20/20 16:09	EPA200.7		AES
Hardness as CaCO3	287	0.662	0.138	mg/L	1	08/20/20 16:09	2340 B		AES
Iron*	<0.050	0.050	0.018	mg/L	1	08/20/20 16:09	EPA200.7		AES
Magnesium*	31.3	0.100	0.023	mg/L	1	08/20/20 16:09	EPA200.7		AES
Potassium*	1.85	1.00	0.130	mg/L	1	08/20/20 16:09	EPA200.7		AES
Silica (SiO2)	7.36	1.07	0.0354	mg/L	1	08/20/20 16:09	Calculation		AES
Silicon	3.44	0.500	0.017	mg/L	1	08/20/20 16:09	EPA200.7		AES
Sodium*	10.9	1.00	0.101	mg/L	1	08/20/20 16:09	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0007	0.0005	0.0001	mg/L	1	08/21/20 14:45	EPA200.8		AES
Cadmium*	<0.0001	0.0001	0.00007	mg/L	1	08/21/20 14:45	EPA200.8		AES
Copper*	0.0006	0.0005	0.0002	mg/L	1	08/21/20 14:45	EPA200.8		AES
Lead*	<0.0005	0.0005	0.0001	mg/L	1	08/21/20 14:45	EPA200.8		AES
Manganese*	0.0087	0.0005	0.0001	mg/L	1	08/21/20 14:45	EPA200.8		AES
Molybdenum*	0.0009	0.0005	0.0001	mg/L	1	08/21/20 14:45	EPA200.8		AES
Selenium*	<0.0010	0.0010	0.0005	mg/L	1	08/21/20 14:45	EPA200.8		AES
Uranium	0.0006	0.0005	0.0002	mg/L	1	08/21/20 14:45	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0003	mg/L	1	08/21/20 14:45	EPA200.8		AES

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 16:43

Haygulch Ditch upgradient

2008169-02 (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	08/21/20 11:17	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 16:43

General Chemistry - Quality Control

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

Batch B201389 - General Prep - Wet Chem

Blank (B201389-BLK1) Prepared: 07/23/20 Analyzed: 07/24/20

Oil & Grease (HEM)	ND	5.00	mg/L
--------------------	----	------	------

LCS (B201389-BS1) Prepared: 07/23/20 Analyzed: 07/27/20

Oil & Grease (HEM)	39.5	5.00	mg/L	40.0	98.8	85-115
--------------------	------	------	------	------	------	--------

LCS Dup (B201389-BSD1) Prepared: 07/23/20 Analyzed: 07/27/20

Oil & Grease (HEM)	35.4	5.00	mg/L	40.0	88.5	85-115	10.9	20
--------------------	------	------	------	------	------	--------	------	----

Batch B201594 - General Prep - Wet Chem

Reference (B201594-SRM1) Prepared & Analyzed: 08/14/20

pH	7.09		pH Units	7.00	101	98.5-101.4
----	------	--	----------	------	-----	------------

Batch B201599 - General Prep - Wet Chem

Blank (B201599-BLK1) Prepared: 08/17/20 Analyzed: 08/18/20

Nitrate/Nitrite as N	ND	0.020	mg/L as N
----------------------	----	-------	-----------

LCS (B201599-BS1) Prepared: 08/17/20 Analyzed: 08/18/20

Nitrate/Nitrite as N	0.903	0.020	mg/L as N	1.00	90.3	90-110
----------------------	-------	-------	-----------	------	------	--------

LCS Dup (B201599-BSD1) Prepared: 08/17/20 Analyzed: 08/18/20

Nitrate/Nitrite as N	0.901	0.020	mg/L as N	1.00	90.1	90-110	0.155	20
----------------------	-------	-------	-----------	------	------	--------	-------	----

Batch B201615 - Total Rec. 200.7/200.8/200.2

Blank (B201615-BLK1) Prepared: 08/18/20 Analyzed: 08/21/20

SAR	0.00		No Unit
-----	------	--	---------

Batch B201623 - General Prep - Wet Chem

Blank (B201623-BLK1) Prepared & Analyzed: 08/20/20

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

LCS (B201623-BS1) Prepared & Analyzed: 08/20/20

Total Organic Carbon	9.55	0.500	mg/L	10.0	95.5	85-115
----------------------	------	-------	------	------	------	--------

LCS Dup (B201623-BSD1) Prepared & Analyzed: 08/20/20

Total Organic Carbon	9.70	0.500	mg/L	10.0	97.0	85-115	1.57	20
----------------------	------	-------	------	------	------	--------	------	----

Batch B201634 - General Prep - Wet Chem

Blank (B201634-BLK1) Prepared & Analyzed: 08/19/20

Total Suspended Solids	ND	4.00	mg/L
------------------------	----	------	------

Reference (B201634-SRM1) Prepared & Analyzed: 08/19/20

Total Suspended Solids	94.0	4.00	mg/L	100	94.0	85-115
------------------------	------	------	------	-----	------	--------

Batch B201655 - General Prep - Wet Chem

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 16:43

**General Chemistry - Quality Control
(Continued)**

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

Batch B201655 - General Prep - Wet Chem (Continued)

Blank (B201655-BLK1)

Prepared & Analyzed: 08/20/20

Total Dissolved Solids	ND	10.0	mg/L
------------------------	----	------	------

Reference (B201655-SRM1)

Prepared & Analyzed: 08/20/20

Total Dissolved Solids	295	10.0	mg/L	306	96.4	85-115
------------------------	-----	------	------	-----	------	--------

Batch B201660 - General Prep - Wet Chem

Blank (B201660-BLK1)

Prepared: 08/21/20 Analyzed: 08/25/20

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

LCS (B201660-BS1)

Prepared: 08/21/20 Analyzed: 08/25/20

Chloride	24.0	1.00	mg/L	25.0	96.0	90-110
Fluoride	2.53	0.100	mg/L	2.50	101	90-110
Sulfate	24.3	1.00	mg/L	25.0	97.0	90-110

LCS Dup (B201660-BSD1)

Prepared: 08/21/20 Analyzed: 08/25/20

Chloride	24.0	1.00	mg/L	25.0	96.0	90-110	0.0667	20
Fluoride	2.56	0.100	mg/L	2.50	103	90-110	1.26	20
Sulfate	24.2	1.00	mg/L	25.0	97.0	90-110	0.0742	20

Batch B201671 - General Prep - Wet Chem

Blank (B201671-BLK1)

Prepared & Analyzed: 08/24/20

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

LCS (B201671-BS1)

Prepared & Analyzed: 08/24/20

Alkalinity, Bicarbonate as CaCO ₃	103	10.0	mg/L			85-115
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L			85-115
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L			85-115
Alkalinity, Total as CaCO ₃	103	10.0	mg/L	100	103	85-115

LCS Dup (B201671-BSD1)

Prepared & Analyzed: 08/24/20

Alkalinity, Bicarbonate as CaCO ₃	98.0	10.0	mg/L			85-115	4.98	20
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L			85-115		20
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L			85-115		20
Alkalinity, Total as CaCO ₃	98.0	10.0	mg/L	100	98.0	85-115	4.98	20

Batch B201682 - General Prep - Wet Chem

Blank (B201682-BLK1)

Prepared & Analyzed: 08/25/20

Oil & Grease (HEM)	ND	5.00	mg/L
--------------------	----	------	------

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 16:43

**General Chemistry - Quality Control
(Continued)**

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

Batch B201682 - General Prep - Wet Chem (Continued)

LCS (B201682-BS1)

Prepared & Analyzed: 08/25/20

Oil & Grease (HEM)	36.2	5.00	mg/L	40.0		90.5	85-115			
--------------------	------	------	------	------	--	------	--------	--	--	--

LCS Dup (B201682-BSD1)

Prepared & Analyzed: 08/25/20

Oil & Grease (HEM)	38.2	5.00	mg/L	40.0		95.5	85-115	5.38	20	
--------------------	------	------	------	------	--	------	--------	------	----	--

Dissolved Metals by ICP - Quality Control

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

Batch B201640 - Diss. 200.7/200.8

Blank (B201640-BLK1)

Prepared: 08/19/20 Analyzed: 08/20/20

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 (B201640-BS1)

Prepared: 08/19/20 Analyzed: 08/20/20

Aluminum	4.84	0.050	mg/L	5.00		96.9	85-115			
Calcium	4.86	0.100	mg/L	5.00		97.2	85-115			
Iron	4.66	0.050	mg/L	5.00		93.1	85-115			
Magnesium	25.1	0.100	mg/L	25.0		100	85-115			
Potassium	9.86	1.00	mg/L	10.0		98.6	85-115			
Silicon	4.79	0.500	mg/L	5.00		95.7	85-115			
Sodium	3.97	1.00	mg/L	4.05		98.1	85-115			

LCS Dup (B201640-BSD1)

Prepared: 08/19/20 Analyzed: 08/20/20

Aluminum	4.88	0.050	mg/L	5.00		97.6	85-115	0.734	20	
Calcium	4.91	0.100	mg/L	5.00		98.3	85-115	1.08	20	
Iron	4.69	0.050	mg/L	5.00		93.8	85-115	0.676	20	
Magnesium	25.4	0.100	mg/L	25.0		102	85-115	1.38	20	
Potassium	9.92	1.00	mg/L	10.0		99.2	85-115	0.578	20	
Silicon	4.78	0.500	mg/L	5.00		95.7	85-115	0.0257	20	
Sodium	3.97	1.00	mg/L	4.05		98.1	85-115	0.0514	20	

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom BirdReported:
08/26/20 16:43

Dissolved Metals by ICPMS - Quality Control

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

Batch B201643 - Diss. 200.7/200.8

Blank (B201643-BLK1)

Prepared: 08/19/20 Analyzed: 08/21/20

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 (B201643-BS1)

Prepared: 08/19/20 Analyzed: 08/21/20

Arsenic	0.0459	0.0005	mg/L	0.0500	91.8	85-115
Cadmium	0.0451	0.0001	mg/L	0.0500	90.3	85-115
Copper	0.0472	0.0005	mg/L	0.0500	94.5	85-115
Lead	0.0490	0.0005	mg/L	0.0500	98.0	85-115
Manganese	0.0481	0.0005	mg/L	0.0500	96.3	85-115
Molybdenum	0.0466	0.0005	mg/L	0.0500	93.2	85-115
Selenium	0.233	0.0010	mg/L	0.250	93.3	85-115
Uranium	0.0453	0.0005	mg/L	0.0500	90.5	85-115
Zinc	0.0482	0.0020	mg/L	0.0500	96.5	85-115

LCS Dup (B201643-BSD1)

Prepared: 08/19/20 Analyzed: 08/21/20

Arsenic	0.0556	0.0005	mg/L	0.0500	111	85-115	19.1	20
Cadmium	0.0503	0.0001	mg/L	0.0500	101	85-115	10.8	20
Copper	0.0559	0.0005	mg/L	0.0500	112	85-115	16.8	20
Lead	0.0505	0.0005	mg/L	0.0500	101	85-115	3.10	20
Manganese	0.0569	0.0005	mg/L	0.0500	114	85-115	16.6	20
Molybdenum	0.0496	0.0005	mg/L	0.0500	99.2	85-115	6.24	20
Selenium	0.281	0.0010	mg/L	0.250	112	85-115	18.4	20
Uranium	0.0547	0.0005	mg/L	0.0500	109	85-115	18.9	20
Zinc	0.0561	0.0020	mg/L	0.0500	112	85-115	15.1	20

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 16:43

Total Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B201625 - EPA 245.1/7470										
Blank (B201625-BLK1)				Prepared: 08/18/20 Analyzed: 08/21/20						
Mercury	ND	0.0002	mg/L							
LCS (B201625-BS1)				Prepared: 08/18/20 Analyzed: 08/21/20						
Mercury	0.0048	0.0002	mg/L	0.00500		96.3	85-115			
LCS Dup (B201625-BSD1)				Prepared: 08/18/20 Analyzed: 08/21/20						
Mercury	0.0053	0.0002	mg/L	0.00500		107	85-115	10.5	20	

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 16:43

Notes and Definitions

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

Green Analytical Laboratories

Jeremy D Allen For 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.



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

FORM-006
COC - Revision 6.0
ANALYSIS REQUIRE

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 13 of 13 2008169 GAL FINAL 08 26 20 1643 08/26/20 16:43:17



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

18 September 2020

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 09/01/20 14:55.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jeremy D. Allen', is written in a cursive style.

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/18/20 15:20

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1-A	2009027-01	Water	09/01/20 08:28	09/01/20 14:55	
MW-1-C	2009027-02	Water	09/01/20 09:27	09/01/20 14:55	

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/18/20 15:20

MW-1-A

2009027-01 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	325	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	325	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Chloride*	2.74	2.00	0.177	mg/L	2	09/08/20 23:25	EPA300.0		AES
Fluoride*	0.240	0.200	0.0194	mg/L	2	09/08/20 23:25	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/03/20 15:30	EPA353.2		LLG
pH*	7.23			pH Units	1	09/02/20 16:00	EPA150.1		VJW
Total Dissolved Solids*	1150	10.0		mg/L	1	09/02/20 12:45	EPA160.1		VJW
Sulfate*	510	20.0	3.05	mg/L	20	09/08/20 23:45	EPA300.0		AES
Total Organic Carbon*	1.49	0.500	0.135	mg/L	1	09/10/20 21:37	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.012	mg/L	1	09/16/20 10:55	EPA200.7		JDA
Calcium*	30.6	0.100	0.017	mg/L	1	09/16/20 10:54	EPA200.7		JDA
Hardness as CaCO ₃	161	0.662	0.138	mg/L	1	09/16/20 10:55	2340 B		JDA
Iron*	0.637	0.050	0.018	mg/L	1	09/16/20 10:55	EPA200.7		JDA
Magnesium*	20.6	0.100	0.023	mg/L	1	09/16/20 10:55	EPA200.7		JDA
Potassium*	2.29	1.00	0.130	mg/L	1	09/16/20 10:54	EPA200.7		JDA
Silica (SiO ₂)	11.1	1.07	0.0354	mg/L	1	09/16/20 10:55	Calculation		JDA
Silicon	5.17	0.500	0.017	mg/L	1	09/16/20 10:55	EPA200.7		JDA
Sodium*	348	1.00	0.101	mg/L	1	09/16/20 10:54	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	<0.0025	0.0025	0.0005	mg/L	5	09/11/20 14:29	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0004	mg/L	5	09/11/20 14:29	EPA200.8		AES
Copper*	0.0040	0.0025	0.0011	mg/L	5	09/11/20 14:29	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 14:29	EPA200.8		AES
Manganese*	0.0320	0.0025	0.0006	mg/L	5	09/11/20 14:29	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 14:29	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0027	mg/L	5	09/11/20 14:29	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0010	mg/L	5	09/11/20 14:29	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0016	mg/L	5	09/11/20 14:29	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/09/20 10:15	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/18/20 15:20

MW-1-C

2009027-02 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	445	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	445	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Chloride*	8.15	5.00	0.443	mg/L	5	09/09/20 00:43	EPA300.0		AES
Fluoride*	0.705	0.500	0.0486	mg/L	5	09/09/20 00:43	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/03/20 15:31	EPA353.2		LLG
pH*	6.83			pH Units	1	09/02/20 16:00	EPA150.1		VJW
Total Dissolved Solids*	2420	10.0		mg/L	1	09/02/20 12:45	EPA160.1		VJW
Sulfate*	1280	50.0	7.62	mg/L	50	09/09/20 01:02	EPA300.0		AES
Total Organic Carbon*	2.20	0.500	0.135	mg/L	1	09/10/20 23:05	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.012	mg/L	1	09/16/20 10:59	EPA200.7		JDA
Calcium*	248	0.100	0.017	mg/L	1	09/16/20 10:59	EPA200.7		JDA
Hardness as CaCO ₃	1400	4.37	1.01	mg/L	10	09/17/20 11:49	2340 B		AES
Iron*	0.619	0.050	0.018	mg/L	1	09/16/20 10:59	EPA200.7		JDA
Magnesium*	189	1.00	0.235	mg/L	10	09/17/20 11:49	EPA200.7		AES
Potassium*	2.82	1.00	0.130	mg/L	1	09/16/20 10:59	EPA200.7		JDA
Silica (SiO ₂)	14.1	1.07	0.0354	mg/L	1	09/16/20 10:59	Calculation		JDA
Silicon	6.60	0.500	0.017	mg/L	1	09/16/20 10:59	EPA200.7		JDA
Sodium*	168	1.00	0.101	mg/L	1	09/16/20 10:59	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	<0.0025	0.0025	0.0005	mg/L	5	09/11/20 14:33	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0004	mg/L	5	09/11/20 14:33	EPA200.8		AES
Copper*	<0.0025	0.0025	0.0011	mg/L	5	09/11/20 14:33	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 14:33	EPA200.8		AES
Manganese*	0.0445	0.0025	0.0006	mg/L	5	09/11/20 14:33	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 14:33	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0027	mg/L	5	09/11/20 14:33	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0010	mg/L	5	09/11/20 14:33	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0016	mg/L	5	09/11/20 14:33	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/09/20 10:15	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/18/20 15:20

General Chemistry - Quality Control

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

Batch B201772 - General Prep - Wet Chem

Blank (B201772-BLK1)

Prepared & Analyzed: 09/02/20

Total Dissolved Solids	ND	10.0	mg/L
------------------------	----	------	------

Reference (B201772-SRM1)

Prepared & Analyzed: 09/02/20

Total Dissolved Solids	300	10.0	mg/L	306	98.0	85-115
------------------------	-----	------	------	-----	------	--------

Batch B201773 - General Prep - Wet Chem

Blank (B201773-BLK1)

Prepared: 09/02/20 Analyzed: 09/03/20

Alkalinity, Total as CaCO ₃	ND	10.0	mg/L
--	----	------	------

LCS (B201773-BS1)

Prepared: 09/02/20 Analyzed: 09/03/20

Alkalinity, Total as CaCO ₃	101	10.0	mg/L	100	101	85-115
--	-----	------	------	-----	-----	--------

LCS Dup (B201773-BSD1)

Prepared: 09/02/20 Analyzed: 09/03/20

Alkalinity, Total as CaCO ₃	101	10.0	mg/L	100	101	85-115	0.00	20
--	-----	------	------	-----	-----	--------	------	----

Batch B201778 - General Prep - Wet Chem

Blank (B201778-BLK1)

Prepared: 09/02/20 Analyzed: 09/03/20

Nitrate/Nitrite as N	ND	0.020	mg/L as N
----------------------	----	-------	-----------

LCS (B201778-BS1)

Prepared: 09/02/20 Analyzed: 09/03/20

Nitrate/Nitrite as N	0.953	0.020	mg/L as N	1.00	95.3	90-110
----------------------	-------	-------	-----------	------	------	--------

LCS Dup (B201778-BSD1)

Prepared: 09/02/20 Analyzed: 09/03/20

Nitrate/Nitrite as N	0.948	0.020	mg/L as N	1.00	94.8	90-110	0.505	20
----------------------	-------	-------	-----------	------	------	--------	-------	----

Batch B201786 - General Prep - Wet Chem

Reference (B201786-SRM1)

Prepared & Analyzed: 09/02/20

pH	7.05		pH Units	7.00	101	98.5-101.4
----	------	--	----------	------	-----	------------

Batch B201810 - General Prep - Wet Chem

Blank (B201810-BLK1)

Prepared & Analyzed: 09/08/20

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

LCS (B201810-BS1)

Prepared & Analyzed: 09/08/20

Chloride	23.8	1.00	mg/L	25.0	95.2	90-110
Fluoride	2.51	0.100	mg/L	2.50	100	90-110
Sulfate	24.7	1.00	mg/L	25.0	98.9	90-110

LCS Dup (B201810-BSD1)

Prepared & Analyzed: 09/08/20

Chloride	24.3	1.00	mg/L	25.0	97.0	90-110	1.89	20
Fluoride	2.52	0.100	mg/L	2.50	101	90-110	0.756	20
Sulfate	23.9	1.00	mg/L	25.0	95.7	90-110	3.31	20

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/18/20 15:20**General Chemistry - Quality Control
(Continued)**

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

Batch B201825 - General Prep - Wet Chem**Blank (B201825-BLK1)**

Prepared & Analyzed: 09/10/20

Total Organic Carbon ND 0.500 mg/L

LCS (B201825-BS1)

Prepared & Analyzed: 09/10/20

Total Organic Carbon 9.61 0.500 mg/L 10.0 96.1 85-115

LCS Dup (B201825-BSD1)

Prepared & Analyzed: 09/10/20

Total Organic Carbon 9.53 0.500 mg/L 10.0 95.3 85-115 0.752 20

Dissolved Metals by ICP - Quality Control

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

Batch B201816 - Diss. 200.7/200.8**Blank (B201816-BLK1)**

Prepared: 09/09/20 Analyzed: 09/16/20

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 (B201816-BS1)

Prepared: 09/09/20 Analyzed: 09/16/20

Aluminum	4.91	0.050	mg/L	5.00	98.1	85-115
Calcium	5.00	0.100	mg/L	5.00	99.9	85-115
Iron	4.97	0.050	mg/L	5.00	99.5	85-115
Magnesium	25.7	0.100	mg/L	25.0	103	85-115
Potassium	9.95	1.00	mg/L	10.0	99.5	85-115
Silicon	4.89	0.500	mg/L	5.00	97.9	85-115
Sodium	4.05	1.00	mg/L	4.05	100	85-115

LCS Dup (B201816-BSD1)

Prepared: 09/09/20 Analyzed: 09/16/20

Aluminum	4.85	0.050	mg/L	5.00	97.0	85-115	1.15	20
Calcium	4.91	0.100	mg/L	5.00	98.3	85-115	1.69	20
Iron	4.90	0.050	mg/L	5.00	98.0	85-115	1.44	20
Magnesium	25.4	0.100	mg/L	25.0	102	85-115	1.37	20
Potassium	9.86	1.00	mg/L	10.0	98.6	85-115	0.923	20
Silicon	4.82	0.500	mg/L	5.00	96.4	85-115	1.52	20
Sodium	3.97	1.00	mg/L	4.05	98.1	85-115	2.05	20

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/18/20 15:20

Dissolved Metals by ICPMS - Quality Control

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

Batch B201817 - Diss. 200.7/200.8

Blank (B201817-BLK1)

Prepared: 09/09/20 Analyzed: 09/11/20

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 (B201817-BS1)

Prepared: 09/09/20 Analyzed: 09/11/20

Arsenic	0.0440	0.0005	mg/L	0.0500	88.0	85-115
Cadmium	0.0458	0.0001	mg/L	0.0500	91.5	85-115
Copper	0.0449	0.0005	mg/L	0.0500	89.9	85-115
Lead	0.0431	0.0005	mg/L	0.0500	86.3	85-115
Manganese	0.0453	0.0005	mg/L	0.0500	90.6	85-115
Molybdenum	0.0446	0.0005	mg/L	0.0500	89.1	85-115
Selenium	0.217	0.0010	mg/L	0.250	86.9	85-115
Uranium	0.0447	0.0005	mg/L	0.0500	89.4	85-115
Zinc	0.0435	0.0020	mg/L	0.0500	87.0	85-115

LCS Dup (B201817-BSD1)

Prepared: 09/09/20 Analyzed: 09/11/20

Arsenic	0.0436	0.0005	mg/L	0.0500	87.1	85-115	1.08	20
Cadmium	0.0430	0.0001	mg/L	0.0500	86.0	85-115	6.29	20
Copper	0.0461	0.0005	mg/L	0.0500	92.3	85-115	2.63	20
Lead	0.0445	0.0005	mg/L	0.0500	89.0	85-115	3.07	20
Manganese	0.0459	0.0005	mg/L	0.0500	91.7	85-115	1.26	20
Molybdenum	0.0459	0.0005	mg/L	0.0500	91.8	85-115	3.02	20
Selenium	0.220	0.0010	mg/L	0.250	88.1	85-115	1.45	20
Uranium	0.0437	0.0005	mg/L	0.0500	87.4	85-115	2.18	20
Zinc	0.0439	0.0020	mg/L	0.0500	87.9	85-115	1.01	20

Green Analytical Laboratories

Jeremy D Allen For 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.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/18/20 15:20

Dissolved Mercury by CVAA - Quality Control

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

Batch B201788 - EPA 245.1/7470

Blank (B201788-BLK1)

Prepared: 09/03/20 Analyzed: 09/09/20

Mercury	ND	0.0002	mg/L							
---------	----	--------	------	--	--	--	--	--	--	--

LCS (B201788-BS1)

Prepared: 09/03/20 Analyzed: 09/09/20

Mercury	0.0053	0.0002	mg/L	0.00500	107	85-115				
---------	--------	--------	------	---------	-----	--------	--	--	--	--

LCS Dup (B201788-BSD1)

Prepared: 09/03/20 Analyzed: 09/09/20

Mercury	0.0053	0.0002	mg/L	0.00500	107	85-115	0.0187	20		
---------	--------	--------	------	---------	-----	--------	--------	----	--	--

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/18/20 15:20

Notes and Definitions

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

Green Analytical Laboratories

Jeremy D Allen For 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.



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

15 September 2020

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/31/20 15:15.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Debbie Zufelt'. The script is cursive and fluid, with the first name 'Debbie' and last name 'Zufelt' clearly legible.

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-3-MI	2009011-01	Water	08/31/20 09:04	08/31/20 15:15	
MW-3-A	2009011-02	Water	08/31/20 09:38	08/31/20 15:15	
MW-3-C	2009011-03	Water	08/31/20 10:33	08/31/20 15:15	
Well #1 Upgradient	2009011-04	Water	08/31/20 11:59	08/31/20 15:15	

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 15:41

MW-3-MI

2009011-01 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	465	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	160	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	625	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Chloride*	9.45	2.00	0.177	mg/L	2	09/09/20 17:46	EPA300.0		AES
Fluoride*	1.09	0.200	0.0194	mg/L	2	09/09/20 17:46	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/03/20 15:24	EPA353.2		LLG
pH*	8.87			pH Units	1	09/01/20 15:47	EPA150.1		VJW
Total Dissolved Solids*	1060	10.0		mg/L	1	09/02/20 12:45	EPA160.1		VJW
Sulfate*	222	10.0	1.52	mg/L	10	09/09/20 18:05	EPA300.0		AES
Total Organic Carbon*	5.79	0.500	0.135	mg/L	1	09/01/20 22:27	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.150	0.150	0.037	mg/L	3	09/03/20 15:45	EPA200.7		AES
Calcium*	1.62	0.300	0.050	mg/L	3	09/03/20 15:45	EPA200.7		AES
Hardness as CaCO ₃	6.39	1.98	0.414	mg/L	3	09/03/20 15:45	2340 B		AES
Iron*	<0.150	0.150	0.055	mg/L	3	09/03/20 15:45	EPA200.7		AES
Magnesium*	0.570	0.300	0.070	mg/L	3	09/03/20 15:45	EPA200.7		AES
Potassium*	<3.00	3.00	0.390	mg/L	3	09/03/20 15:45	EPA200.7		AES
Silica (SiO ₂)	8.84	3.21	0.106	mg/L	3	09/03/20 15:45	Calculation		AES
Silicon	4.13	1.50	0.050	mg/L	3	09/03/20 15:45	EPA200.7		AES
Sodium*	431	3.00	0.302	mg/L	3	09/03/20 15:45	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0061	0.0025	0.0005	mg/L	5	09/11/20 13:22	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0004	mg/L	5	09/11/20 13:22	EPA200.8		AES
Copper*	0.0046	0.0025	0.0011	mg/L	5	09/11/20 13:22	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 13:22	EPA200.8		AES
Manganese*	0.0072	0.0025	0.0006	mg/L	5	09/11/20 13:22	EPA200.8		AES
Molybdenum*	0.0149	0.0025	0.0006	mg/L	5	09/11/20 13:22	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0027	mg/L	5	09/11/20 13:22	EPA200.8		AES
Uranium	0.0043	0.0025	0.0010	mg/L	5	09/11/20 13:22	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0016	mg/L	5	09/11/20 13:22	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/09/20 10:15	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance 4.04

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 15:41

MW-3-A

2009011-02 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	440	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	440	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Chloride*	13.5	2.00	0.177	mg/L	2	09/09/20 18:25	EPA300.0		AES
Fluoride*	0.366	0.200	0.0194	mg/L	2	09/09/20 18:25	EPA300.0		AES
Nitrate/Nitrite as N*	0.039	0.020	0.006	mg/L as N	1	09/03/20 15:25	EPA353.2		LLG
pH*	8.16			pH Units	1	09/01/20 15:47	EPA150.1		VJW
Total Dissolved Solids*	1380	10.0		mg/L	1	09/02/20 12:45	EPA160.1		VJW
Sulfate*	624	20.0	3.05	mg/L	20	09/09/20 18:44	EPA300.0		AES
Total Organic Carbon*	3.39	0.500	0.135	mg/L	1	09/01/20 23:55	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.062	mg/L	5	09/03/20 15:47	EPA200.7		AES
Calcium*	3.02	0.500	0.083	mg/L	5	09/03/20 15:47	EPA200.7		AES
Hardness as CaCO ₃	11.1	3.31	0.690	mg/L	5	09/03/20 15:47	2340 B		AES
Iron*	<0.250	0.250	0.092	mg/L	5	09/03/20 15:47	EPA200.7		AES
Magnesium*	0.866	0.500	0.117	mg/L	5	09/03/20 15:47	EPA200.7		AES
Potassium*	<5.00	5.00	0.651	mg/L	5	09/03/20 15:47	EPA200.7		AES
Silica (SiO ₂)	11.0	5.35	0.177	mg/L	5	09/03/20 15:47	Calculation		AES
Silicon	5.14	2.50	0.083	mg/L	5	09/03/20 15:47	EPA200.7		AES
Sodium*	510	5.00	0.503	mg/L	5	09/03/20 15:47	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0025	0.0025	0.0005	mg/L	5	09/11/20 13:36	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0004	mg/L	5	09/11/20 13:36	EPA200.8		AES
Copper*	0.0051	0.0025	0.0011	mg/L	5	09/11/20 13:36	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 13:36	EPA200.8		AES
Manganese*	0.0120	0.0025	0.0006	mg/L	5	09/11/20 13:36	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 13:36	EPA200.8		AES
Selenium*	0.0086	0.0050	0.0027	mg/L	5	09/11/20 13:36	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0010	mg/L	5	09/11/20 13:36	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0016	mg/L	5	09/11/20 13:36	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/09/20 10:15	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance .56

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 15:41

MW-3-C

2009011-03 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	1690	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	130	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	1820	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Chloride*	552	25.0	2.21	mg/L	25	09/09/20 21:20	EPA300.0		AES
Fluoride*	3.47	0.500	0.0486	mg/L	5	09/09/20 19:04	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/03/20 15:26	EPA353.2		LLG
pH*	8.36			pH Units	1	09/01/20 15:47	EPA150.1		VJW
Total Dissolved Solids*	3170	10.0		mg/L	1	09/02/20 12:45	EPA160.1		VJW
Sulfate*	<5.00	5.00	0.762	mg/L	5	09/09/20 19:04	EPA300.0		AES
Total Organic Carbon*	17.1	2.50	0.675	mg/L	5	09/02/20 09:02	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.500	0.500	0.124	mg/L	10	09/03/20 15:49	EPA200.7		AES
Calcium*	3.97	1.00	0.166	mg/L	10	09/03/20 15:49	EPA200.7		AES
Hardness as CaCO ₃	18.1	6.62	1.38	mg/L	10	09/03/20 15:49	2340 B		AES
Iron*	<0.500	0.500	0.184	mg/L	10	09/03/20 15:49	EPA200.7		AES
Magnesium*	1.98	1.00	0.235	mg/L	10	09/03/20 15:49	EPA200.7		AES
Potassium*	<10.0	10.0	1.30	mg/L	10	09/03/20 15:49	EPA200.7		AES
Silica (SiO ₂)	<10.7	10.7	0.354	mg/L	10	09/03/20 15:49	Calculation		AES
Silicon	<5.00	5.00	0.166	mg/L	10	09/03/20 15:49	EPA200.7		AES
Sodium*	1250	10.0	1.01	mg/L	10	09/03/20 15:49	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0106	0.0050	0.0011	mg/L	10	09/11/20 13:40	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0007	mg/L	10	09/11/20 13:40	EPA200.8		AES
Copper*	0.0136	0.0050	0.0022	mg/L	10	09/11/20 13:40	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0011	mg/L	10	09/11/20 13:40	EPA200.8		AES
Manganese*	0.0102	0.0050	0.0011	mg/L	10	09/11/20 13:40	EPA200.8		AES
Molybdenum*	0.0076	0.0050	0.0011	mg/L	10	09/11/20 13:40	EPA200.8		AES
Selenium*	0.0135	0.0100	0.0053	mg/L	10	09/11/20 13:40	EPA200.8		AES
Uranium	<0.0050	0.0050	0.0019	mg/L	10	09/11/20 13:40	EPA200.8		AES
Zinc*	<0.0200	0.0200	0.0032	mg/L	10	09/11/20 13:40	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/09/20 10:15	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance 2.48

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 15:41

Well #1 Upgradient

2009011-04 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	520	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	520	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Chloride*	4.62	2.00	0.177	mg/L	2	09/09/20 21:39	EPA300.0		AES
Fluoride*	0.356	0.200	0.0194	mg/L	2	09/09/20 21:39	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/03/20 15:28	EPA353.2		LLG
pH*	7.53			pH Units	1	09/01/20 15:47	EPA150.1		VJW
Total Dissolved Solids*	710	10.0		mg/L	1	09/02/20 12:45	EPA160.1		VJW
Sulfate*	79.6	2.00	0.305	mg/L	2	09/09/20 21:39	EPA300.0		AES
Total Organic Carbon*	3.32	0.500	0.135	mg/L	1	09/02/20 00:38	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.150	0.150	0.037	mg/L	3	09/03/20 15:51	EPA200.7		AES
Calcium*	49.6	0.300	0.050	mg/L	3	09/03/20 15:51	EPA200.7		AES
Hardness as CaCO ₃	255	1.98	0.414	mg/L	3	09/03/20 15:51	2340 B		AES
Iron*	1.24	0.150	0.055	mg/L	3	09/03/20 15:51	EPA200.7		AES
Magnesium*	31.7	0.300	0.070	mg/L	3	09/03/20 15:51	EPA200.7		AES
Potassium*	3.05	3.00	0.390	mg/L	3	09/03/20 15:51	EPA200.7		AES
Silica (SiO ₂)	13.6	3.21	0.106	mg/L	3	09/03/20 15:51	Calculation		AES
Silicon	6.37	1.50	0.050	mg/L	3	09/03/20 15:51	EPA200.7		AES
Sodium*	193	3.00	0.302	mg/L	3	09/03/20 15:51	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0002	mg/L	2	09/11/20 13:43	EPA200.8		AES
Cadmium*	<0.0002	0.0002	0.0001	mg/L	2	09/11/20 13:43	EPA200.8		AES
Copper*	0.0021	0.0010	0.0004	mg/L	2	09/11/20 13:43	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	09/11/20 13:43	EPA200.8		AES
Manganese*	0.297	0.0010	0.0002	mg/L	2	09/11/20 13:43	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0002	mg/L	2	09/11/20 13:43	EPA200.8		AES
Selenium*	0.0095	0.0020	0.0011	mg/L	2	09/11/20 13:43	EPA200.8		AES
Uranium	<0.0010	0.0010	0.0004	mg/L	2	09/11/20 13:43	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0006	mg/L	2	09/11/20 13:43	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/09/20 10:15	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance 5.41

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 15:41

General Chemistry - Quality Control

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

Batch B201759 - General Prep - Wet Chem

Blank (B201759-BLK1)

Prepared & Analyzed: 09/01/20

Total Organic Carbon ND 0.500 mg/L

LCS (B201759-BS1)

Prepared & Analyzed: 09/01/20

Total Organic Carbon 9.61 0.500 mg/L 10.0 96.1 85-115

LCS Dup (B201759-BSD1)

Prepared & Analyzed: 09/01/20

Total Organic Carbon 9.68 0.500 mg/L 10.0 96.8 85-115 0.695 20

Batch B201769 - General Prep - Wet Chem

Duplicate (B201769-DUP2)

Source: 2009014-01

Prepared & Analyzed: 09/01/20

pH 7.23 pH Units 7.15 1.11 20

Reference (B201769-SRM1)

Prepared & Analyzed: 09/01/20

pH 6.99 pH Units 7.00 99.9 98.5-101.4

Batch B201772 - General Prep - Wet Chem

Blank (B201772-BLK1)

Prepared & Analyzed: 09/02/20

Total Dissolved Solids ND 10.0 mg/L

Duplicate (B201772-DUP1)

Source: 2009002-01

Prepared & Analyzed: 09/02/20

Total Dissolved Solids 125 10.0 mg/L 130 3.89 20

Reference (B201772-SRM1)

Prepared & Analyzed: 09/02/20

Total Dissolved Solids 300 10.0 mg/L 306 98.0 85-115

Batch B201773 - General Prep - Wet Chem

Blank (B201773-BLK1)

Prepared: 09/02/20 Analyzed: 09/03/20

Alkalinity, Total as CaCO₃ ND 10.0 mg/L

LCS (B201773-BS1)

Prepared: 09/02/20 Analyzed: 09/03/20

Alkalinity, Total as CaCO₃ 101 10.0 mg/L 100 101 85-115

LCS Dup (B201773-BSD1)

Prepared: 09/02/20 Analyzed: 09/03/20

Alkalinity, Total as CaCO₃ 101 10.0 mg/L 100 101 85-115 0.00 20

Batch B201778 - General Prep - Wet Chem

Blank (B201778-BLK1)

Prepared: 09/02/20 Analyzed: 09/03/20

Nitrate/Nitrite as N ND 0.020 mg/L as N

LCS (B201778-BS1)

Prepared: 09/02/20 Analyzed: 09/03/20

Nitrate/Nitrite as N 0.953 0.020 mg/L as N 1.00 95.3 90-110

LCS Dup (B201778-BSD1)

Prepared: 09/02/20 Analyzed: 09/03/20

Nitrate/Nitrite as N 0.948 0.020 mg/L as N 1.00 94.8 90-110 0.505 20

Batch B201830 - General Prep - Wet Chem

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 15:41General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (B201830-BLK1) Prepared & Analyzed: 09/09/20										
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B201830-BS1) Prepared & Analyzed: 09/09/20										
Chloride	24.1	1.00	mg/L	25.0		96.2	90-110			
Fluoride	2.52	0.100	mg/L	2.50		101	90-110			
Sulfate	24.1	1.00	mg/L	25.0		96.5	90-110			
LCS Dup (B201830-BSD1) Prepared & Analyzed: 09/09/20										
Chloride	23.9	1.00	mg/L	25.0		95.5	90-110	0.764	20	
Fluoride	2.54	0.100	mg/L	2.50		102	90-110	0.829	20	
Sulfate	24.2	1.00	mg/L	25.0		96.8	90-110	0.290	20	

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:41

Dissolved Metals by ICP - Quality Control

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

Batch B201783 - Diss. 200.7/200.8

Blank (B201783-BLK1)

Prepared & Analyzed: 09/03/20

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 (B201783-BS1)

Prepared & Analyzed: 09/03/20

Aluminum	5.11	0.050	mg/L	5.00	102	85-115
Calcium	5.09	0.100	mg/L	5.00	102	85-115
Iron	4.84	0.050	mg/L	5.00	96.7	85-115
Magnesium	25.8	0.100	mg/L	25.0	103	85-115
Potassium	10.3	1.00	mg/L	10.0	103	85-115
Silicon	5.01	0.500	mg/L	5.00	100	85-115
Sodium	4.22	1.00	mg/L	4.05	104	85-115

LCS Dup (B201783-BSD1)

Prepared & Analyzed: 09/03/20

Aluminum	5.09	0.050	mg/L	5.00	102	85-115	0.415	20
Calcium	5.03	0.100	mg/L	5.00	101	85-115	1.22	20
Iron	4.79	0.050	mg/L	5.00	95.8	85-115	0.962	20
Magnesium	25.6	0.100	mg/L	25.0	103	85-115	0.554	20
Potassium	9.94	1.00	mg/L	10.0	99.4	85-115	3.25	20
Silicon	5.00	0.500	mg/L	5.00	100	85-115	0.167	20
Sodium	4.12	1.00	mg/L	4.05	102	85-115	2.40	20

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:41

Dissolved Metals by ICPMS - Quality Control

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

Batch B201817 - Diss. 200.7/200.8

Blank (B201817-BLK1)

Prepared: 09/09/20 Analyzed: 09/11/20

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 (B201817-BS1)

Prepared: 09/09/20 Analyzed: 09/11/20

Arsenic	0.0440	0.0005	mg/L	0.0500	88.0	85-115
Cadmium	0.0458	0.0001	mg/L	0.0500	91.5	85-115
Copper	0.0449	0.0005	mg/L	0.0500	89.9	85-115
Lead	0.0431	0.0005	mg/L	0.0500	86.3	85-115
Manganese	0.0453	0.0005	mg/L	0.0500	90.6	85-115
Molybdenum	0.0446	0.0005	mg/L	0.0500	89.1	85-115
Selenium	0.217	0.0010	mg/L	0.250	86.9	85-115
Uranium	0.0447	0.0005	mg/L	0.0500	89.4	85-115
Zinc	0.0435	0.0020	mg/L	0.0500	87.0	85-115

LCS Dup (B201817-BSD1)

Prepared: 09/09/20 Analyzed: 09/11/20

Arsenic	0.0436	0.0005	mg/L	0.0500	87.1	85-115	1.08	20
Cadmium	0.0430	0.0001	mg/L	0.0500	86.0	85-115	6.29	20
Copper	0.0461	0.0005	mg/L	0.0500	92.3	85-115	2.63	20
Lead	0.0445	0.0005	mg/L	0.0500	89.0	85-115	3.07	20
Manganese	0.0459	0.0005	mg/L	0.0500	91.7	85-115	1.26	20
Molybdenum	0.0459	0.0005	mg/L	0.0500	91.8	85-115	3.02	20
Selenium	0.220	0.0010	mg/L	0.250	88.1	85-115	1.45	20
Uranium	0.0437	0.0005	mg/L	0.0500	87.4	85-115	2.18	20
Zinc	0.0439	0.0020	mg/L	0.0500	87.9	85-115	1.01	20

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:41

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B201788 - EPA 245.1/7470									
Blank (B201788-BLK1)				Prepared: 09/03/20 Analyzed: 09/09/20					
Mercury	ND	0.0002	mg/L						
LCS (B201788-BS1)				Prepared: 09/03/20 Analyzed: 09/09/20					
Mercury	0.0053	0.0002	mg/L	0.00500	107	85-115			
LCS Dup (B201788-BSD1)				Prepared: 09/03/20 Analyzed: 09/09/20					
Mercury	0.0053	0.0002	mg/L	0.00500	107	85-115	0.0187	20	

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:41

Notes and Definitions

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

Green Analytical Laboratories

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.



dzufelt@greenanalytical.com
75 Suttle St Durango, CO

FORM-006
COC - Revision 6.0

[illegible]



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

15 September 2020

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/27/20 14:45.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Debbie Zufelt'. The script is cursive and fluid, with the first name 'Debbie' and last name 'Zufelt' clearly legible.

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:26

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-4-MI	2008343-01	Water	08/27/20 10:14	08/27/20 14:45	
MW-4-A	2008343-02	Water	08/27/20 11:17	08/27/20 14:45	
MW-4-C	2008343-03	Water	08/27/20 11:45	08/27/20 14:45	

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 15:26

MW-4-MI

2008343-01 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	940	10.0	7.16	mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	80.0	10.0		mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	1020	10.0	7.16	mg/L	5	09/01/20 14:07	2320 B		VJW
Chloride*	5.02	2.00	0.177	mg/L	2	09/08/20 14:40	EPA300.0		AES
Fluoride*	5.00	0.200	0.0194	mg/L	2	09/08/20 14:40	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 16:26	EPA353.2		LLG
pH*	8.28			pH Units	1	08/28/20 14:35	EPA150.1		VJW
Total Dissolved Solids*	1070	10.0		mg/L	1	08/31/20 16:17	EPA160.1		VJW
Sulfate*	20.0	2.00	0.305	mg/L	2	09/08/20 14:40	EPA300.0		AES
Total Organic Carbon*	5.93	0.500	0.135	mg/L	1	09/01/20 20:51	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.150	0.150	0.037	mg/L	3	09/03/20 15:17	EPA200.7		AES
Calcium*	1.32	0.300	0.050	mg/L	3	09/03/20 15:17	EPA200.7		AES
Hardness as CaCO ₃	5.19	1.98	0.414	mg/L	3	09/03/20 15:17	2340 B		AES
Iron*	<0.150	0.150	0.055	mg/L	3	09/03/20 15:17	EPA200.7		AES
Magnesium*	0.459	0.300	0.070	mg/L	3	09/03/20 15:17	EPA200.7		AES
Potassium*	<3.00	3.00	0.390	mg/L	3	09/03/20 15:17	EPA200.7		AES
Silica (SiO ₂)	8.39	3.21	0.106	mg/L	3	09/03/20 15:17	Calculation		AES
Silicon	3.92	1.50	0.050	mg/L	3	09/03/20 15:17	EPA200.7		AES
Sodium*	459	3.00	0.302	mg/L	3	09/03/20 15:17	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0084	0.0025	0.0005	mg/L	5	09/11/20 13:12	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0004	mg/L	5	09/11/20 13:12	EPA200.8		AES
Copper*	0.0052	0.0025	0.0011	mg/L	5	09/11/20 13:12	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 13:12	EPA200.8		AES
Manganese*	0.0086	0.0025	0.0006	mg/L	5	09/11/20 13:12	EPA200.8		AES
Molybdenum*	0.0081	0.0025	0.0006	mg/L	5	09/11/20 13:12	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0027	mg/L	5	09/11/20 13:12	EPA200.8		AES
Uranium	0.0121	0.0025	0.0010	mg/L	5	09/11/20 13:12	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0016	mg/L	5	09/11/20 13:12	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance -2.69

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 15:26

MW-4-A

2008343-02 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	2390	10.0	7.16	mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	110	10.0		mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	2500	10.0	7.16	mg/L	5	09/01/20 14:07	2320 B		VJW
Chloride*	543	25.0	2.21	mg/L	25	09/08/20 15:19	EPA300.0		AES
Fluoride*	2.34	0.500	0.0486	mg/L	5	09/08/20 15:00	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 16:27	EPA353.2		LLG
pH*	7.92			pH Units	1	08/28/20 14:35	EPA150.1		VJW
Total Dissolved Solids*	3510	10.0		mg/L	1	08/31/20 16:17	EPA160.1		VJW
Sulfate*	<5.00	5.00	0.762	mg/L	5	09/08/20 15:00	EPA300.0		AES
Total Organic Carbon*	2.31	0.500	0.135	mg/L	1	09/01/20 21:15	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.500	0.500	0.124	mg/L	10	09/03/20 15:22	EPA200.7		AES
Calcium*	5.30	1.00	0.166	mg/L	10	09/03/20 15:22	EPA200.7		AES
Hardness as CaCO ₃	23.0	6.62	1.38	mg/L	10	09/03/20 15:22	2340 B		AES
Iron*	<0.500	0.500	0.184	mg/L	10	09/03/20 15:22	EPA200.7		AES
Magnesium*	2.36	1.00	0.235	mg/L	10	09/03/20 15:22	EPA200.7		AES
Potassium*	<10.0	10.0	1.30	mg/L	10	09/03/20 15:22	EPA200.7		AES
Silica (SiO ₂)	<10.7	10.7	0.354	mg/L	10	09/03/20 15:22	Calculation		AES
Silicon	<5.00	5.00	0.166	mg/L	10	09/03/20 15:22	EPA200.7		AES
Sodium*	1400	10.0	1.01	mg/L	10	09/03/20 15:22	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0150	0.0050	0.0011	mg/L	10	09/11/20 13:15	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0007	mg/L	10	09/11/20 13:15	EPA200.8		AES
Copper*	0.0151	0.0050	0.0022	mg/L	10	09/11/20 13:15	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0011	mg/L	10	09/11/20 13:15	EPA200.8		AES
Manganese*	0.0080	0.0050	0.0011	mg/L	10	09/11/20 13:15	EPA200.8		AES
Molybdenum*	<0.0050	0.0050	0.0011	mg/L	10	09/11/20 13:15	EPA200.8		AES
Selenium*	0.0112	0.0100	0.0053	mg/L	10	09/11/20 13:15	EPA200.8		AES
Uranium	<0.0050	0.0050	0.0019	mg/L	10	09/11/20 13:15	EPA200.8		AES
Zinc*	<0.0200	0.0200	0.0032	mg/L	10	09/11/20 13:15	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance -3.14

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/15/20 15:26

MW-4-C

2008343-03 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	565	10.0	7.16	mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	40.0	10.0		mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/01/20 14:07	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	605	10.0	7.16	mg/L	5	09/01/20 14:07	2320 B		VJW
Chloride*	10.1	5.00	0.443	mg/L	5	09/08/20 15:39	EPA300.0		AES
Fluoride*	<0.500	0.500	0.0486	mg/L	5	09/08/20 15:39	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 16:28	EPA353.2		LLG
pH*	8.19			pH Units	1	08/28/20 14:35	EPA150.1		VJW
Total Dissolved Solids*	1460	10.0		mg/L	1	08/31/20 16:17	EPA160.1		VJW
Sulfate*	542	25.0	3.81	mg/L	25	09/08/20 15:58	EPA300.0		AES
Total Organic Carbon*	3.48	0.500	0.135	mg/L	1	09/01/20 21:37	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.062	mg/L	5	09/03/20 15:24	EPA200.7		AES
Calcium*	1.79	0.500	0.083	mg/L	5	09/03/20 15:24	EPA200.7		AES
Hardness as CaCO ₃	7.87	3.31	0.690	mg/L	5	09/03/20 15:24	2340 B		AES
Iron*	<0.250	0.250	0.092	mg/L	5	09/03/20 15:24	EPA200.7		AES
Magnesium*	0.826	0.500	0.117	mg/L	5	09/03/20 15:24	EPA200.7		AES
Potassium*	<5.00	5.00	0.651	mg/L	5	09/03/20 15:24	EPA200.7		AES
Silica (SiO ₂)	9.44	5.35	0.177	mg/L	5	09/03/20 15:24	Calculation		AES
Silicon	4.42	2.50	0.083	mg/L	5	09/03/20 15:24	EPA200.7		AES
Sodium*	533	5.00	0.503	mg/L	5	09/03/20 15:24	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0025	0.0025	0.0005	mg/L	5	09/11/20 13:19	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0004	mg/L	5	09/11/20 13:19	EPA200.8		AES
Copper*	0.0056	0.0025	0.0011	mg/L	5	09/11/20 13:19	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 13:19	EPA200.8		AES
Manganese*	0.0029	0.0025	0.0006	mg/L	5	09/11/20 13:19	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 13:19	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0027	mg/L	5	09/11/20 13:19	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0010	mg/L	5	09/11/20 13:19	EPA200.8		AES
Zinc*	<0.0100	0.0100	0.0016	mg/L	5	09/11/20 13:19	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance -63

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:26

General Chemistry - Quality Control

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

Batch B201733 - General Prep - Wet Chem

Duplicate (B201733-DUP1) Source: 2008348-01 Prepared & Analyzed: 08/28/20

pH	8.03		pH Units	7.91				1.51	20	
----	------	--	----------	------	--	--	--	------	----	--

Reference (B201733-SRM1) Prepared & Analyzed: 08/28/20

pH	7.04		pH Units	7.00		101	98.5-101.4			
----	------	--	----------	------	--	-----	------------	--	--	--

Batch B201742 - General Prep - Wet Chem

Blank (B201742-BLK1) Prepared & Analyzed: 08/31/20

Total Dissolved Solids	ND	10.0	mg/L							
------------------------	----	------	------	--	--	--	--	--	--	--

Duplicate (B201742-DUP1) Source: 2008308-01 Prepared & Analyzed: 08/31/20

Total Dissolved Solids	450	10.0	mg/L	460				2.18	20	
------------------------	-----	------	------	-----	--	--	--	------	----	--

Reference (B201742-SRM1) Prepared & Analyzed: 08/31/20

Total Dissolved Solids	300	10.0	mg/L	306		98.0	85-115			
------------------------	-----	------	------	-----	--	------	--------	--	--	--

Batch B201754 - General Prep - Wet Chem

Blank (B201754-BLK1) Prepared & Analyzed: 09/01/20

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

LCS (B201754-BS1) Prepared & Analyzed: 09/01/20

Alkalinity, Bicarbonate as CaCO ₃	103	10.0	mg/L				85-115			
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L				85-115			
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L				85-115			
Alkalinity, Total as CaCO ₃	103	10.0	mg/L	100		103	85-115			

LCS Dup (B201754-BSD1) Prepared & Analyzed: 09/01/20

Alkalinity, Bicarbonate as CaCO ₃	101	10.0	mg/L				85-115	1.96	20	
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L				85-115		20	
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L				85-115		20	
Alkalinity, Total as CaCO ₃	101	10.0	mg/L	100		101	85-115	1.96	20	

Batch B201755 - General Prep - Wet Chem

Blank (B201755-BLK1) Prepared & Analyzed: 09/01/20

Nitrate/Nitrite as N	ND	0.020	mg/L as N							
----------------------	----	-------	-----------	--	--	--	--	--	--	--

LCS (B201755-BS1) Prepared & Analyzed: 09/01/20

Nitrate/Nitrite as N	0.922	0.020	mg/L as N	1.00		92.2	90-110			
----------------------	-------	-------	-----------	------	--	------	--------	--	--	--

LCS Dup (B201755-BSD1) Prepared & Analyzed: 09/01/20

Nitrate/Nitrite as N	0.917	0.020	mg/L as N	1.00		91.7	90-110	0.479	20	
----------------------	-------	-------	-----------	------	--	------	--------	-------	----	--

Batch B201759 - General Prep - Wet Chem

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:26

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (B201759-BLK1)										
Prepared & Analyzed: 09/01/20										
Total Organic Carbon	ND	0.500	mg/L							
LCS (B201759-BS1)										
Prepared & Analyzed: 09/01/20										
Total Organic Carbon	9.61	0.500	mg/L	10.0		96.1	85-115			
LCS Dup (B201759-BSD1)										
Prepared & Analyzed: 09/01/20										
Total Organic Carbon	9.68	0.500	mg/L	10.0		96.8	85-115	0.695	20	
Batch B201810 - General Prep - Wet Chem										
Blank (B201810-BLK1)										
Prepared & Analyzed: 09/08/20										
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B201810-BS1)										
Prepared & Analyzed: 09/08/20										
Chloride	23.8	1.00	mg/L	25.0		95.2	90-110			
Fluoride	2.51	0.100	mg/L	2.50		100	90-110			
Sulfate	24.7	1.00	mg/L	25.0		98.9	90-110			
LCS Dup (B201810-BSD1)										
Prepared & Analyzed: 09/08/20										
Chloride	24.3	1.00	mg/L	25.0		97.0	90-110	1.89	20	
Fluoride	2.52	0.100	mg/L	2.50		101	90-110	0.756	20	
Sulfate	23.9	1.00	mg/L	25.0		95.7	90-110	3.31	20	

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:26

Dissolved Metals by ICP - Quality Control

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

Batch B201783 - Diss. 200.7/200.8

Blank (B201783-BLK1)

Prepared & Analyzed: 09/03/20

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 (B201783-BS1)

Prepared & Analyzed: 09/03/20

Aluminum	5.11	0.050	mg/L	5.00	102	85-115
Calcium	5.09	0.100	mg/L	5.00	102	85-115
Iron	4.84	0.050	mg/L	5.00	96.7	85-115
Magnesium	25.8	0.100	mg/L	25.0	103	85-115
Potassium	10.3	1.00	mg/L	10.0	103	85-115
Silicon	5.01	0.500	mg/L	5.00	100	85-115
Sodium	4.22	1.00	mg/L	4.05	104	85-115

LCS Dup (B201783-BSD1)

Prepared & Analyzed: 09/03/20

Aluminum	5.09	0.050	mg/L	5.00	102	85-115	0.415	20
Calcium	5.03	0.100	mg/L	5.00	101	85-115	1.22	20
Iron	4.79	0.050	mg/L	5.00	95.8	85-115	0.962	20
Magnesium	25.6	0.100	mg/L	25.0	103	85-115	0.554	20
Potassium	9.94	1.00	mg/L	10.0	99.4	85-115	3.25	20
Silicon	5.00	0.500	mg/L	5.00	100	85-115	0.167	20
Sodium	4.12	1.00	mg/L	4.05	102	85-115	2.40	20

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:26

Dissolved Metals by ICPMS - Quality Control

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

Batch B201817 - Diss. 200.7/200.8

Blank (B201817-BLK1)

Prepared: 09/09/20 Analyzed: 09/11/20

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 (B201817-BS1)

Prepared: 09/09/20 Analyzed: 09/11/20

Arsenic	0.0440	0.0005	mg/L	0.0500		88.0	85-115			
Cadmium	0.0458	0.0001	mg/L	0.0500		91.5	85-115			
Copper	0.0449	0.0005	mg/L	0.0500		89.9	85-115			
Lead	0.0431	0.0005	mg/L	0.0500		86.3	85-115			
Manganese	0.0453	0.0005	mg/L	0.0500		90.6	85-115			
Molybdenum	0.0446	0.0005	mg/L	0.0500		89.1	85-115			
Selenium	0.217	0.0010	mg/L	0.250		86.9	85-115			
Uranium	0.0447	0.0005	mg/L	0.0500		89.4	85-115			
Zinc	0.0435	0.0020	mg/L	0.0500		87.0	85-115			

LCS Dup (B201817-BSD1)

Prepared: 09/09/20 Analyzed: 09/11/20

Arsenic	0.0436	0.0005	mg/L	0.0500		87.1	85-115	1.08	20	
Cadmium	0.0430	0.0001	mg/L	0.0500		86.0	85-115	6.29	20	
Copper	0.0461	0.0005	mg/L	0.0500		92.3	85-115	2.63	20	
Lead	0.0445	0.0005	mg/L	0.0500		89.0	85-115	3.07	20	
Manganese	0.0459	0.0005	mg/L	0.0500		91.7	85-115	1.26	20	
Molybdenum	0.0459	0.0005	mg/L	0.0500		91.8	85-115	3.02	20	
Selenium	0.220	0.0010	mg/L	0.250		88.1	85-115	1.45	20	
Uranium	0.0437	0.0005	mg/L	0.0500		87.4	85-115	2.18	20	
Zinc	0.0439	0.0020	mg/L	0.0500		87.9	85-115	1.01	20	

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:26

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B201747 - EPA 245.1/7470									
Blank (B201747-BLK1)				Prepared: 09/01/20 Analyzed: 09/03/20					
Mercury	ND	0.0002	mg/L						
LCS (B201747-BS1)				Prepared: 09/01/20 Analyzed: 09/03/20					
Mercury	0.0053	0.0002	mg/L	0.00500	107	85-115			
LCS Dup (B201747-BSD1)				Prepared: 09/01/20 Analyzed: 09/03/20					
Mercury	0.0051	0.0002	mg/L	0.00500	103	85-115	3.99	20	

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/15/20 15:26

Notes and Definitions

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

Green Analytical Laboratories

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.



75 Suttle St Durango, CO

75 Suttle St Durango, CO 81303

FORM-006
COC - Revision 6.0

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]



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

18 September 2020

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 09/01/20 14:55.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, reading 'Jeremy D. Allen', is written in a cursive style.

Jeremy D Allen For 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.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/18/20 15:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-5-M1	2009028-01	Water	09/01/20 11:29	09/01/20 14:55	
MW-5-C	2009028-02	Water	09/01/20 12:08	09/01/20 14:55	

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/18/20 15:29

MW-5-M1

2009028-01 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	680	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	80.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/03/20 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	760	10.0	7.16	mg/L	5	09/03/20 10:40	2320 B		VJW
Chloride*	5.40	2.00	0.177	mg/L	2	09/09/20 01:22	EPA300.0		AES
Fluoride*	0.278	0.200	0.0194	mg/L	2	09/09/20 01:22	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/03/20 15:32	EPA353.2		LLG
pH*	8.34			pH Units	1	09/02/20 16:00	EPA150.1		VJW
Total Dissolved Solids*	980	10.0		mg/L	1	09/08/20 15:14	EPA160.1		JDA
Sulfate*	5.86	2.00	0.305	mg/L	2	09/09/20 01:22	EPA300.0		AES
Total Organic Carbon*	2.78	0.500	0.135	mg/L	1	09/10/20 23:25	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.012	mg/L	1	09/16/20 11:08	EPA200.7		JDA
Calcium*	2.30	0.100	0.017	mg/L	1	09/16/20 11:08	EPA200.7		JDA
Hardness as CaCO ₃	9.18	0.662	0.138	mg/L	1	09/16/20 11:08	2340 B		JDA
Iron*	<0.050	0.050	0.018	mg/L	1	09/16/20 11:08	EPA200.7		JDA
Magnesium*	0.837	0.100	0.023	mg/L	1	09/16/20 11:08	EPA200.7		JDA
Potassium*	1.21	1.00	0.130	mg/L	1	09/16/20 11:08	EPA200.7		JDA
Silica (SiO ₂)	8.54	1.07	0.0354	mg/L	1	09/16/20 11:08	Calculation		JDA
Silicon	3.99	0.500	0.017	mg/L	1	09/16/20 11:08	EPA200.7		JDA
Sodium*	405	10.0	1.01	mg/L	10	09/17/20 11:51	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0139	0.0025	0.0005	mg/L	5	09/11/20 14:36	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0004	mg/L	5	09/11/20 14:36	EPA200.8		AES
Copper*	0.0048	0.0025	0.0011	mg/L	5	09/11/20 14:36	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0006	mg/L	5	09/11/20 14:36	EPA200.8		AES
Manganese*	0.0203	0.0025	0.0006	mg/L	5	09/11/20 14:36	EPA200.8		AES
Molybdenum*	0.0027	0.0025	0.0006	mg/L	5	09/11/20 14:36	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0027	mg/L	5	09/11/20 14:36	EPA200.8		AES
Uranium	0.0068	0.0025	0.0010	mg/L	5	09/11/20 14:36	EPA200.8		AES
Zinc*	0.0746	0.0100	0.0016	mg/L	5	09/11/20 14:36	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/09/20 10:15	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/18/20 15:29

MW-5-C

2009028-02 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	1480	10.0	7.16	mg/L	5	09/14/20 08:50	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	110	10.0		mg/L	5	09/14/20 08:50	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/14/20 08:50	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	1590	10.0	7.16	mg/L	5	09/14/20 08:50	2320 B		VJW
Chloride*	6.02	5.00	0.443	mg/L	5	09/10/20 02:50	EPA300.0		AES
Fluoride*	2.01	0.500	0.0486	mg/L	5	09/10/20 02:50	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/03/20 15:34	EPA353.2		LLG
pH*	7.80			pH Units	1	09/02/20 16:00	EPA150.1		VJW
Total Dissolved Solids*	2750	10.0		mg/L	1	09/08/20 15:18	EPA160.1		JDA
Sulfate*	679	50.0	7.62	mg/L	50	09/10/20 03:49	EPA300.0		AES
Total Organic Carbon*	2.87	0.500	0.135	mg/L	1	09/10/20 23:46	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.012	mg/L	1	09/16/20 11:12	EPA200.7		JDA
Calcium*	6.78	0.100	0.017	mg/L	1	09/16/20 11:12	EPA200.7		JDA
Hardness as CaCO ₃	30.8	0.662	0.138	mg/L	1	09/16/20 11:12	2340 B		JDA
Iron*	0.113	0.050	0.018	mg/L	1	09/16/20 11:12	EPA200.7		JDA
Magnesium*	3.37	0.100	0.023	mg/L	1	09/16/20 11:12	EPA200.7		JDA
Potassium*	2.75	1.00	0.130	mg/L	1	09/16/20 11:12	EPA200.7		JDA
Silica (SiO ₂)	7.44	1.07	0.0354	mg/L	1	09/16/20 11:12	Calculation		JDA
Silicon	3.48	0.500	0.017	mg/L	1	09/16/20 11:12	EPA200.7		JDA
Sodium*	1010	10.0	1.01	mg/L	10	09/17/20 11:53	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0050	0.0050	0.0011	mg/L	10	09/11/20 14:50	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0007	mg/L	10	09/11/20 14:50	EPA200.8		AES
Copper*	0.0101	0.0050	0.0022	mg/L	10	09/11/20 14:50	EPA200.8		AES
Lead*	<0.0050	0.0050	0.0011	mg/L	10	09/11/20 14:50	EPA200.8		AES
Manganese*	<0.0050	0.0050	0.0011	mg/L	10	09/11/20 14:50	EPA200.8		AES
Molybdenum*	<0.0050	0.0050	0.0011	mg/L	10	09/11/20 14:50	EPA200.8		AES
Selenium*	<0.0100	0.0100	0.0053	mg/L	10	09/11/20 14:50	EPA200.8		AES
Uranium	<0.0050	0.0050	0.0019	mg/L	10	09/11/20 14:50	EPA200.8		AES
Zinc*	<0.0200	0.0200	0.0032	mg/L	10	09/11/20 14:50	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/09/20 10:15	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/18/20 15:29

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B201773 - General Prep - Wet Chem										
Blank (B201773-BLK1)				Prepared: 09/02/20 Analyzed: 09/03/20						
Alkalinity, Total as CaCO ₃	ND	10.0	mg/L							
LCS (B201773-BS1)				Prepared: 09/02/20 Analyzed: 09/03/20						
Alkalinity, Total as CaCO ₃	101	10.0	mg/L	100		101	85-115			
LCS Dup (B201773-BSD1)				Prepared: 09/02/20 Analyzed: 09/03/20						
Alkalinity, Total as CaCO ₃	101	10.0	mg/L	100		101	85-115	0.00	20	
Batch B201778 - General Prep - Wet Chem										
Blank (B201778-BLK1)				Prepared: 09/02/20 Analyzed: 09/03/20						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B201778-BS1)				Prepared: 09/02/20 Analyzed: 09/03/20						
Nitrate/Nitrite as N	0.953	0.020	mg/L as N	1.00		95.3	90-110			
LCS Dup (B201778-BSD1)				Prepared: 09/02/20 Analyzed: 09/03/20						
Nitrate/Nitrite as N	0.948	0.020	mg/L as N	1.00		94.8	90-110	0.505	20	
Batch B201786 - General Prep - Wet Chem										
Reference (B201786-SRM1)				Prepared & Analyzed: 09/02/20						
pH	7.05		pH Units	7.00		101	98.5-101.4			
Batch B201809 - General Prep - Wet Chem										
Blank (B201809-BLK1)				Prepared & Analyzed: 09/08/20						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B201809-SRM1)				Prepared & Analyzed: 09/08/20						
Total Dissolved Solids	400	10.0	mg/L	380		105	85-115			
Batch B201810 - General Prep - Wet Chem										
Blank (B201810-BLK1)				Prepared & Analyzed: 09/08/20						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B201810-BS1)				Prepared & Analyzed: 09/08/20						
Chloride	23.8	1.00	mg/L	25.0		95.2	90-110			
Fluoride	2.51	0.100	mg/L	2.50		100	90-110			
Sulfate	24.7	1.00	mg/L	25.0		98.9	90-110			
LCS Dup (B201810-BSD1)				Prepared & Analyzed: 09/08/20						
Chloride	24.3	1.00	mg/L	25.0		97.0	90-110	1.89	20	
Fluoride	2.52	0.100	mg/L	2.50		101	90-110	0.756	20	
Sulfate	23.9	1.00	mg/L	25.0		95.7	90-110	3.31	20	

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/18/20 15:29General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B201825 - General Prep - Wet Chem										
Blank (B201825-BLK1)				Prepared & Analyzed: 09/10/20						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B201825-BS1)				Prepared & Analyzed: 09/10/20						
Total Organic Carbon	9.61	0.500	mg/L	10.0		96.1	85-115			
LCS Dup (B201825-BSD1)				Prepared & Analyzed: 09/10/20						
Total Organic Carbon	9.53	0.500	mg/L	10.0		95.3	85-115	0.752	20	
Batch B201830 - General Prep - Wet Chem										
Blank (B201830-BLK1)				Prepared & Analyzed: 09/09/20						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B201830-BS1)				Prepared & Analyzed: 09/09/20						
Chloride	24.1	1.00	mg/L	25.0		96.2	90-110			
Fluoride	2.52	0.100	mg/L	2.50		101	90-110			
Sulfate	24.1	1.00	mg/L	25.0		96.5	90-110			
LCS Dup (B201830-BSD1)				Prepared & Analyzed: 09/09/20						
Chloride	23.9	1.00	mg/L	25.0		95.5	90-110	0.764	20	
Fluoride	2.54	0.100	mg/L	2.50		102	90-110	0.829	20	
Sulfate	24.2	1.00	mg/L	25.0		96.8	90-110	0.290	20	
Batch B201862 - General Prep - Wet Chem										
Blank (B201862-BLK1)				Prepared: 09/11/20 Analyzed: 09/14/20						
Alkalinity, Bicarbonate as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Total as CaCO ₃	ND	10.0	mg/L							
LCS (B201862-BS1)				Prepared: 09/11/20 Analyzed: 09/14/20						
Alkalinity, Bicarbonate as CaCO ₃	99.0	10.0	mg/L				85-115			
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L				85-115			
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L				85-115			
Alkalinity, Total as CaCO ₃	99.0	10.0	mg/L	100		99.0	85-115			
LCS Dup (B201862-BSD1)				Prepared: 09/11/20 Analyzed: 09/14/20						
Alkalinity, Bicarbonate as CaCO ₃	102	10.0	mg/L				85-115	2.99	20	
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L				85-115		20	
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L				85-115		20	
Alkalinity, Total as CaCO ₃	102	10.0	mg/L	100		102	85-115	2.99	20	

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/18/20 15:29

Dissolved Metals by ICP - Quality Control

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

Batch B201816 - Diss. 200.7/200.8

Blank (B201816-BLK1)

Prepared: 09/09/20 Analyzed: 09/16/20

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 (B201816-BS1)

Prepared: 09/09/20 Analyzed: 09/16/20

Aluminum	4.91	0.050	mg/L	5.00	98.1	85-115
Calcium	5.00	0.100	mg/L	5.00	99.9	85-115
Iron	4.97	0.050	mg/L	5.00	99.5	85-115
Magnesium	25.7	0.100	mg/L	25.0	103	85-115
Potassium	9.95	1.00	mg/L	10.0	99.5	85-115
Silicon	4.89	0.500	mg/L	5.00	97.9	85-115
Sodium	4.05	1.00	mg/L	4.05	100	85-115

LCS Dup (B201816-BSD1)

Prepared: 09/09/20 Analyzed: 09/16/20

Aluminum	4.85	0.050	mg/L	5.00	97.0	85-115	1.15	20
Calcium	4.91	0.100	mg/L	5.00	98.3	85-115	1.69	20
Iron	4.90	0.050	mg/L	5.00	98.0	85-115	1.44	20
Magnesium	25.4	0.100	mg/L	25.0	102	85-115	1.37	20
Potassium	9.86	1.00	mg/L	10.0	98.6	85-115	0.923	20
Silicon	4.82	0.500	mg/L	5.00	96.4	85-115	1.52	20
Sodium	3.97	1.00	mg/L	4.05	98.1	85-115	2.05	20

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/18/20 15:29

Dissolved Metals by ICPMS - Quality Control

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

Batch B201817 - Diss. 200.7/200.8

Blank (B201817-BLK1)

Prepared: 09/09/20 Analyzed: 09/11/20

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 (B201817-BS1)

Prepared: 09/09/20 Analyzed: 09/11/20

Arsenic	0.0440	0.0005	mg/L	0.0500	88.0	85-115
Cadmium	0.0458	0.0001	mg/L	0.0500	91.5	85-115
Copper	0.0449	0.0005	mg/L	0.0500	89.9	85-115
Lead	0.0431	0.0005	mg/L	0.0500	86.3	85-115
Manganese	0.0453	0.0005	mg/L	0.0500	90.6	85-115
Molybdenum	0.0446	0.0005	mg/L	0.0500	89.1	85-115
Selenium	0.217	0.0010	mg/L	0.250	86.9	85-115
Uranium	0.0447	0.0005	mg/L	0.0500	89.4	85-115
Zinc	0.0435	0.0020	mg/L	0.0500	87.0	85-115

LCS Dup (B201817-BSD1)

Prepared: 09/09/20 Analyzed: 09/11/20

Arsenic	0.0436	0.0005	mg/L	0.0500	87.1	85-115	1.08	20
Cadmium	0.0430	0.0001	mg/L	0.0500	86.0	85-115	6.29	20
Copper	0.0461	0.0005	mg/L	0.0500	92.3	85-115	2.63	20
Lead	0.0445	0.0005	mg/L	0.0500	89.0	85-115	3.07	20
Manganese	0.0459	0.0005	mg/L	0.0500	91.7	85-115	1.26	20
Molybdenum	0.0459	0.0005	mg/L	0.0500	91.8	85-115	3.02	20
Selenium	0.220	0.0010	mg/L	0.250	88.1	85-115	1.45	20
Uranium	0.0437	0.0005	mg/L	0.0500	87.4	85-115	2.18	20
Zinc	0.0439	0.0020	mg/L	0.0500	87.9	85-115	1.01	20

Batch B201849 - Diss. 200.7/200.8

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/18/20 15:29

Dissolved Metals by ICPMS - Quality Control
(Continued)

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

Batch B201849 - Diss. 200.7/200.8 (Continued)

Blank (B201849-BLK1)

Prepared: 09/10/20 Analyzed: 09/11/20

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 (B201849-BS1)

Prepared: 09/10/20 Analyzed: 09/11/20

Arsenic	0.0431	0.0005	mg/L	0.0500	86.1	85-115
Cadmium	0.0428	0.0001	mg/L	0.0500	85.6	85-115
Copper	0.0439	0.0005	mg/L	0.0500	87.8	85-115
Lead	0.0433	0.0005	mg/L	0.0500	86.7	85-115
Manganese	0.0458	0.0005	mg/L	0.0500	91.5	85-115
Molybdenum	0.0463	0.0005	mg/L	0.0500	92.5	85-115
Selenium	0.226	0.0010	mg/L	0.250	90.4	85-115
Uranium	0.0432	0.0005	mg/L	0.0500	86.4	85-115
Zinc	0.0425	0.0020	mg/L	0.0500	85.0	85-115

LCS Dup (B201849-BSD1)

Prepared: 09/10/20 Analyzed: 09/11/20

Arsenic	0.0433	0.0005	mg/L	0.0500	86.6	85-115	0.499	20
Cadmium	0.0432	0.0001	mg/L	0.0500	86.4	85-115	0.962	20
Copper	0.0435	0.0005	mg/L	0.0500	87.1	85-115	0.775	20
Lead	0.0441	0.0005	mg/L	0.0500	88.3	85-115	1.79	20
Manganese	0.0455	0.0005	mg/L	0.0500	91.0	85-115	0.609	20
Molybdenum	0.0450	0.0005	mg/L	0.0500	90.0	85-115	2.80	20
Selenium	0.221	0.0010	mg/L	0.250	88.2	85-115	2.44	20
Uranium	0.0442	0.0005	mg/L	0.0500	88.3	85-115	2.24	20
Zinc	0.0463	0.0020	mg/L	0.0500	92.5	85-115	8.47	20

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/18/20 15:29

Dissolved Mercury by CVAA - Quality Control

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

Batch B201788 - EPA 245.1/7470

Blank (B201788-BLK1)

Prepared: 09/03/20 Analyzed: 09/09/20

Mercury	ND	0.0002	mg/L							
---------	----	--------	------	--	--	--	--	--	--	--

LCS (B201788-BS1)

Prepared: 09/03/20 Analyzed: 09/09/20

Mercury	0.0053	0.0002	mg/L	0.00500	107	85-115				
---------	--------	--------	------	---------	-----	--------	--	--	--	--

LCS Dup (B201788-BSD1)

Prepared: 09/03/20 Analyzed: 09/09/20

Mercury	0.0053	0.0002	mg/L	0.00500	107	85-115	0.0187	20		
---------	--------	--------	------	---------	-----	--------	--------	----	--	--

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/18/20 15:29

Notes and Definitions

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

Green Analytical Laboratories

Jeremy D Allen For 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.



dzufelt@greenanalytical.com
75 Suttle St Durango, CO

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

FORM-006

COC - Revision 6.0

[illegible]



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

24 August 2020

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/11/20 15:10.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink that reads 'Jeremy D. Allen'.

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
08/24/20 16:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-6-A	2008124-01	Water	08/11/20 12:08	08/11/20 15:10	
MW-6-LM	2008124-02	Water	08/11/20 13:29	08/11/20 15:10	

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
08/24/20 16:37

MW-6-A

2008124-01 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	236	10.0	7.16	mg/L	1	08/14/20 11:00	2320 B		JDA
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	1	08/14/20 11:00	2320 B		JDA
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	1	08/14/20 11:00	2320 B		JDA
Alkalinity, Total as CaCO ₃ *	236	10.0	7.16	mg/L	1	08/14/20 11:00	2320 B		JDA
Chloride*	26.0	5.00	0.443	mg/L	5	08/20/20 16:12	EPA300.0		JDA
Fluoride*	<0.500	0.500	0.0486	mg/L	5	08/20/20 16:12	EPA300.0		JDA
Nitrate/Nitrite as N*	0.117	0.020	0.006	mg/L as N	1	08/18/20 11:01	EPA353.2		LLG
pH*	6.66			pH Units	1	08/11/20 16:20	EPA150.1		JDA
Total Dissolved Solids*	4490	10.0		mg/L	1	08/14/20 15:10	EPA160.1		VJW
Sulfate*	3160	100	15.2	mg/L	100	08/24/20 10:19	EPA300.0		AES
Total Organic Carbon*	3.31	0.500	0.135	mg/L	1	08/20/20 13:48	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.062	mg/L	5	08/14/20 13:31	EPA200.7		AES
Calcium*	398	0.500	0.083	mg/L	5	08/14/20 13:31	EPA200.7		AES
Hardness as CaCO ₃	2690	3.31	0.690	mg/L	5	08/14/20 13:31	2340 B		AES
Iron*	1.10	0.250	0.092	mg/L	5	08/14/20 13:31	EPA200.7		AES
Magnesium*	411	0.500	0.117	mg/L	5	08/14/20 13:31	EPA200.7		AES
Potassium*	10.3	5.00	0.651	mg/L	5	08/14/20 13:31	EPA200.7		AES
Silica (SiO ₂)	11.4	5.35	0.177	mg/L	5	08/14/20 13:31	Calculation		AES
Silicon	5.35	2.50	0.083	mg/L	5	08/14/20 13:31	EPA200.7		AES
Sodium*	261	5.00	0.503	mg/L	5	08/14/20 13:31	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0025	0.0025	0.0005	mg/L	5	08/17/20 14:38	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0004	mg/L	5	08/17/20 14:38	EPA200.8		AES
Copper*	<0.0025	0.0025	0.0011	mg/L	5	08/17/20 14:38	EPA200.8		AES
Lead*	<0.0025	0.0025	0.0006	mg/L	5	08/17/20 14:38	EPA200.8		AES
Manganese*	0.520	0.0025	0.0006	mg/L	5	08/17/20 14:38	EPA200.8		AES
Molybdenum*	<0.0025	0.0025	0.0006	mg/L	5	08/17/20 14:38	EPA200.8		AES
Selenium*	<0.0050	0.0050	0.0027	mg/L	5	08/17/20 14:38	EPA200.8		AES
Uranium	<0.0025	0.0025	0.0010	mg/L	5	08/17/20 14:38	EPA200.8		AES
Zinc*	0.0159	0.0100	0.0016	mg/L	5	08/17/20 14:38	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	08/13/20 12:05	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
08/24/20 16:37

MW-6-LM

2008124-02 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	335	10.0	7.16	mg/L	1	08/14/20 11:00	2320 B		JDA
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	1	08/14/20 11:00	2320 B		JDA
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	1	08/14/20 11:00	2320 B		JDA
Alkalinity, Total as CaCO ₃ *	335	10.0	7.16	mg/L	1	08/14/20 11:00	2320 B		JDA
Chloride*	12.2	2.00	0.177	mg/L	2	08/20/20 16:32	EPA300.0		JDA
Fluoride*	0.346	0.200	0.0194	mg/L	2	08/20/20 16:32	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	08/18/20 11:02	EPA353.2		LLG
pH*	6.95			pH Units	1	08/11/20 16:20	EPA150.1		JDA
Total Dissolved Solids*	2040	10.0		mg/L	1	08/14/20 15:10	EPA160.1		VJW
Sulfate*	1260	40.0	6.10	mg/L	40	08/24/20 10:39	EPA300.0		AES
Total Organic Carbon*	1.87	0.500	0.135	mg/L	1	08/20/20 14:09	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.150	0.150	0.037	mg/L	3	08/14/20 13:35	EPA200.7		AES
Calcium*	179	0.300	0.050	mg/L	3	08/14/20 13:35	EPA200.7		AES
Hardness as CaCO ₃	1130	1.98	0.414	mg/L	3	08/14/20 13:35	2340 B		AES
Iron*	<0.150	0.150	0.055	mg/L	3	08/14/20 13:35	EPA200.7		AES
Magnesium*	165	0.300	0.070	mg/L	3	08/14/20 13:35	EPA200.7		AES
Potassium*	7.20	3.00	0.390	mg/L	3	08/14/20 13:35	EPA200.7		AES
Silica (SiO ₂)	14.7	3.21	0.106	mg/L	3	08/14/20 13:35	Calculation		AES
Silicon	6.88	1.50	0.050	mg/L	3	08/14/20 13:35	EPA200.7		AES
Sodium*	194	3.00	0.302	mg/L	3	08/14/20 13:35	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0038	0.0015	0.0003	mg/L	3	08/17/20 14:42	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0002	mg/L	3	08/17/20 14:42	EPA200.8		AES
Copper*	<0.0015	0.0015	0.0007	mg/L	3	08/17/20 14:42	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0003	mg/L	3	08/17/20 14:42	EPA200.8		AES
Manganese*	0.267	0.0015	0.0003	mg/L	3	08/17/20 14:42	EPA200.8		AES
Molybdenum*	0.0023	0.0015	0.0003	mg/L	3	08/17/20 14:42	EPA200.8		AES
Selenium*	<0.0030	0.0030	0.0016	mg/L	3	08/17/20 14:42	EPA200.8		AES
Uranium	0.0046	0.0015	0.0006	mg/L	3	08/17/20 14:42	EPA200.8		AES
Zinc*	0.0069	0.0060	0.0010	mg/L	3	08/17/20 14:42	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	08/13/20 12:05	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
08/24/20 16:37

General Chemistry - Quality Control

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

Batch B201562 - General Prep - Wet Chem

Reference (B201562-SRM1)

Prepared & Analyzed: 08/11/20

pH	6.96		pH Units	7.00		99.4	98.5-101.4			
----	------	--	----------	------	--	------	------------	--	--	--

Batch B201564 - General Prep - Wet Chem

Blank (B201564-BLK1)

Prepared: 08/12/20 Analyzed: 08/14/20

Alkalinity, Total as CaCO ₃	ND	10.0	mg/L							
--	----	------	------	--	--	--	--	--	--	--

LCS (B201564-BS1)

Prepared: 08/12/20 Analyzed: 08/14/20

Alkalinity, Total as CaCO ₃	104	10.0	mg/L	100		104	85-115			
--	-----	------	------	-----	--	-----	--------	--	--	--

LCS Dup (B201564-BSD1)

Prepared: 08/12/20 Analyzed: 08/14/20

Alkalinity, Total as CaCO ₃	101	10.0	mg/L	100		101	85-115	2.93	20	
--	-----	------	------	-----	--	-----	--------	------	----	--

Batch B201583 - General Prep - Wet Chem

Blank (B201583-BLK1)

Prepared: 08/13/20 Analyzed: 08/14/20

Total Dissolved Solids	ND	10.0	mg/L							
------------------------	----	------	------	--	--	--	--	--	--	--

Reference (B201583-SRM1)

Prepared: 08/13/20 Analyzed: 08/14/20

Total Dissolved Solids	275	10.0	mg/L	306		89.9	85-115			
------------------------	-----	------	------	-----	--	------	--------	--	--	--

Batch B201596 - General Prep - Wet Chem

Blank (B201596-BLK1)

Prepared: 08/17/20 Analyzed: 08/18/20

Nitrate/Nitrite as N	ND	0.020	mg/L as N							
----------------------	----	-------	-----------	--	--	--	--	--	--	--

LCS (B201596-BS1)

Prepared: 08/17/20 Analyzed: 08/18/20

Nitrate/Nitrite as N	0.965	0.020	mg/L as N	1.00		96.5	90-110			
----------------------	-------	-------	-----------	------	--	------	--------	--	--	--

LCS Dup (B201596-BSD1)

Prepared: 08/17/20 Analyzed: 08/18/20

Nitrate/Nitrite as N	0.959	0.020	mg/L as N	1.00		95.9	90-110	0.551	20	
----------------------	-------	-------	-----------	------	--	------	--------	-------	----	--

Batch B201623 - General Prep - Wet Chem

Blank (B201623-BLK1)

Prepared & Analyzed: 08/20/20

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

LCS (B201623-BS1)

Prepared & Analyzed: 08/20/20

Total Organic Carbon	9.55	0.500	mg/L	10.0		95.5	85-115			
----------------------	------	-------	------	------	--	------	--------	--	--	--

LCS Dup (B201623-BSD1)

Prepared & Analyzed: 08/20/20

Total Organic Carbon	9.70	0.500	mg/L	10.0		97.0	85-115	1.57	20	
----------------------	------	-------	------	------	--	------	--------	------	----	--

Batch B201652 - General Prep - Wet Chem

Blank (B201652-BLK1)

Prepared & Analyzed: 08/20/20

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

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
08/24/20 16:37

**General Chemistry - Quality Control
(Continued)**

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

Batch B201652 - General Prep - Wet Chem (Continued)

LCS (B201652-BS1)

Prepared & Analyzed: 08/20/20

Chloride	23.9	1.00	mg/L	25.0		95.5	90-110			
Fluoride	2.57	0.100	mg/L	2.50		103	90-110			
Sulfate	23.8	1.00	mg/L	25.0		95.3	90-110			

LCS Dup (B201652-BSD1)

Prepared & Analyzed: 08/20/20

Chloride	23.8	1.00	mg/L	25.0		95.4	90-110	0.142	20	
Fluoride	2.58	0.100	mg/L	2.50		103	90-110	0.389	20	
Sulfate	23.8	1.00	mg/L	25.0		95.3	90-110	0.0168	20	

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
08/24/20 16:37

Dissolved Metals by ICP - Quality Control

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

Batch B201557 - Diss. 200.7/200.8

Blank (B201557-BLK1)

Prepared: 08/12/20 Analyzed: 08/14/20

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 (B201557-BS1)

Prepared: 08/12/20 Analyzed: 08/14/20

Aluminum	4.78	0.050	mg/L	5.00	95.5	85-115
Calcium	4.97	0.100	mg/L	5.00	99.5	85-115
Iron	4.72	0.050	mg/L	5.00	94.5	85-115
Magnesium	25.2	0.100	mg/L	25.0	101	85-115
Potassium	9.86	1.00	mg/L	10.0	98.6	85-115
Silicon	4.68	0.500	mg/L	5.00	93.6	85-115
Sodium	4.07	1.00	mg/L	4.05	100	85-115

LCS Dup (B201557-BSD1)

Prepared: 08/12/20 Analyzed: 08/14/20

Aluminum	4.75	0.050	mg/L	5.00	94.9	85-115	0.618	20
Calcium	4.90	0.100	mg/L	5.00	98.1	85-115	1.39	20
Iron	4.66	0.050	mg/L	5.00	93.1	85-115	1.41	20
Magnesium	24.9	0.100	mg/L	25.0	99.7	85-115	1.25	20
Potassium	9.59	1.00	mg/L	10.0	95.9	85-115	2.83	20
Silicon	4.64	0.500	mg/L	5.00	92.8	85-115	0.833	20
Sodium	4.00	1.00	mg/L	4.05	98.7	85-115	1.78	20

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
08/24/20 16:37

Dissolved Metals by ICPMS - Quality Control

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

Batch B201558 - Diss. 200.7/200.8

Blank (B201558-BLK1)

Prepared: 08/12/20 Analyzed: 08/17/20

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 (B201558-BS1)

Prepared: 08/12/20 Analyzed: 08/17/20

Arsenic	0.0489	0.0005	mg/L	0.0500	97.8	85-115
Cadmium	0.0498	0.0001	mg/L	0.0500	99.6	85-115
Copper	0.0511	0.0005	mg/L	0.0500	102	85-115
Lead	0.0499	0.0005	mg/L	0.0500	99.8	85-115
Manganese	0.0530	0.0005	mg/L	0.0500	106	85-115
Molybdenum	0.0512	0.0005	mg/L	0.0500	102	85-115
Selenium	0.250	0.0010	mg/L	0.250	99.8	85-115
Uranium	0.0489	0.0005	mg/L	0.0500	97.8	85-115
Zinc	0.0500	0.0020	mg/L	0.0500	100	85-115

LCS Dup (B201558-BSD1)

Prepared: 08/12/20 Analyzed: 08/17/20

Arsenic	0.0506	0.0005	mg/L	0.0500	101	85-115	3.40	20
Cadmium	0.0503	0.0001	mg/L	0.0500	101	85-115	0.903	20
Copper	0.0496	0.0005	mg/L	0.0500	99.1	85-115	2.95	20
Lead	0.0498	0.0005	mg/L	0.0500	99.6	85-115	0.215	20
Manganese	0.0520	0.0005	mg/L	0.0500	104	85-115	1.80	20
Molybdenum	0.0511	0.0005	mg/L	0.0500	102	85-115	0.324	20
Selenium	0.254	0.0010	mg/L	0.250	102	85-115	1.73	20
Uranium	0.0485	0.0005	mg/L	0.0500	97.1	85-115	0.766	20
Zinc	0.0497	0.0020	mg/L	0.0500	99.4	85-115	0.736	20

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
08/24/20 16:37

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B201543 - EPA 245.1/7470									
Blank (B201543-BLK1)				Prepared: 08/12/20 Analyzed: 08/13/20					
Mercury	ND	0.0002	mg/L						
LCS (B201543-BS1)				Prepared: 08/12/20 Analyzed: 08/13/20					
Mercury	0.0052	0.0002	mg/L	0.00500	104	85-115			
LCS Dup (B201543-BSD1)				Prepared: 08/12/20 Analyzed: 08/13/20					
Mercury	0.0050	0.0002	mg/L	0.00500	101	85-115	2.54	20	

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
08/24/20 16:37

Notes and Definitions

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

Green Analytical Laboratories

Jeremy D Allen For 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.



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 11 of 11 2008124 GAL FINAL 08 24 20 1637 08/24/20 16:37:42

† GAL cannot always accept verbal changes. Please fax or email written change requests.



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

11 September 2020

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/25/20 15:10.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in black ink that reads 'Debbie Zufelt'. The script is cursive and fluid, with the first name 'Debbie' and last name 'Zufelt' clearly legible.

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/11/20 07:36

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-7-EAA	2008300-01	Water	08/25/20 08:45	08/25/20 15:10	
MW-8-EAA	2008300-02	Water	08/25/20 10:30	08/25/20 15:10	
MW-8-MI	2008300-03	Water	08/25/20 11:10	08/25/20 15:10	
MW-8-PL	2008300-04	Water	08/25/20 11:56	08/25/20 15:10	
MW-8-LM	2008300-05	Water	08/25/20 11:32	08/25/20 15:10	
MW-99	2008300-06	Water	08/25/20 09:16	08/25/20 15:10	

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/11/20 07:36

MW-7-EAA

2008300-01 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	268	10.0	7.16	mg/L	1	09/02/20 09:20	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	1	09/02/20 09:20	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	1	09/02/20 09:20	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	268	10.0	7.16	mg/L	1	09/02/20 09:20	2320 B		VJW
Chloride*	10.2	2.00	0.177	mg/L	2	09/02/20 21:35	EPA300.0		AES
Fluoride*	0.322	0.200	0.0194	mg/L	2	09/02/20 21:35	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	08/27/20 15:17	EPA353.2		LLG
pH*	7.23			pH Units	1	08/26/20 07:55	EPA150.1		VJW
Total Dissolved Solids*	1480	10.0		mg/L	1	08/28/20 16:20	EPA160.1		VJW
Sulfate*	767	20.0	3.05	mg/L	20	09/02/20 21:56	EPA300.0		AES
Total Organic Carbon*	4.01	0.500	0.135	mg/L	1	08/26/20 20:45	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.062	mg/L	5	09/01/20 14:45	EPA200.7		AES
Calcium*	183	0.500	0.083	mg/L	5	09/01/20 14:45	EPA200.7		AES
Hardness as CaCO ₃	1080	3.31	0.690	mg/L	5	09/01/20 14:45	2340 B		AES
Iron*	2.16	0.250	0.092	mg/L	5	09/01/20 14:45	EPA200.7		AES
Magnesium*	150	0.500	0.117	mg/L	5	09/01/20 14:45	EPA200.7		AES
Potassium*	<5.00	5.00	0.651	mg/L	5	09/01/20 14:45	EPA200.7		AES
Silica (SiO ₂)	16.9	5.35	0.177	mg/L	5	09/01/20 14:45	Calculation		AES
Silicon	7.91	2.50	0.083	mg/L	5	09/01/20 14:45	EPA200.7		AES
Sodium*	80.9	5.00	0.503	mg/L	5	09/01/20 14:45	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:06	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0002	mg/L	3	08/28/20 16:06	EPA200.8		AES
Copper*	<0.0015	0.0015	0.0007	mg/L	3	08/28/20 16:06	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:06	EPA200.8		AES
Manganese*	4.49	0.0015	0.0003	mg/L	3	08/28/20 16:06	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:06	EPA200.8		AES
Selenium*	<0.0030	0.0030	0.0016	mg/L	3	08/28/20 16:06	EPA200.8		AES
Uranium	0.0018	0.0015	0.0006	mg/L	3	08/28/20 16:06	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0010	mg/L	3	08/28/20 16:06	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance 7.56

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/11/20 07:36

MW-8-EAA

2008300-02 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	288	10.0	7.16	mg/L	1	09/02/20 09:20	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	1	09/02/20 09:20	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	1	09/02/20 09:20	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	288	10.0	7.16	mg/L	1	09/02/20 09:20	2320 B		VJW
Chloride*	10.1	2.00	0.177	mg/L	2	09/02/20 22:57	EPA300.0		AES
Fluoride*	0.336	0.200	0.0194	mg/L	2	09/02/20 22:57	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	08/27/20 16:34	EPA353.2		LLG
pH*	7.18			pH Units	1	08/26/20 07:55	EPA150.1		VJW
Total Dissolved Solids*	1280	10.0		mg/L	1	08/28/20 16:20	EPA160.1		VJW
Sulfate*	605	20.0	3.05	mg/L	20	09/02/20 23:17	EPA300.0		AES
Total Organic Carbon*	3.82	0.500	0.135	mg/L	1	08/26/20 21:01	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.062	mg/L	5	09/01/20 14:49	EPA200.7		AES
Calcium*	160	0.500	0.083	mg/L	5	09/01/20 14:49	EPA200.7		AES
Hardness as CaCO ₃	937	3.31	0.690	mg/L	5	09/01/20 14:49	2340 B		AES
Iron*	2.31	0.250	0.092	mg/L	5	09/01/20 14:49	EPA200.7		AES
Magnesium*	130	0.500	0.117	mg/L	5	09/01/20 14:49	EPA200.7		AES
Potassium*	<5.00	5.00	0.651	mg/L	5	09/01/20 14:49	EPA200.7		AES
Silica (SiO ₂)	16.1	5.35	0.177	mg/L	5	09/01/20 14:49	Calculation		AES
Silicon	7.53	2.50	0.083	mg/L	5	09/01/20 14:49	EPA200.7		AES
Sodium*	82.9	5.00	0.503	mg/L	5	09/01/20 14:49	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0018	0.0015	0.0003	mg/L	3	08/28/20 16:10	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0002	mg/L	3	08/28/20 16:10	EPA200.8		AES
Copper*	<0.0015	0.0015	0.0007	mg/L	3	08/28/20 16:10	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:10	EPA200.8		AES
Manganese*	3.54	0.0015	0.0003	mg/L	3	08/28/20 16:10	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:10	EPA200.8		AES
Selenium*	<0.0030	0.0030	0.0016	mg/L	3	08/28/20 16:10	EPA200.8		AES
Uranium	0.0017	0.0015	0.0006	mg/L	3	08/28/20 16:10	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0010	mg/L	3	08/28/20 16:10	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance 9.26

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/11/20 07:36

MW-8-MI

2008300-03 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	448	10.0	7.16	mg/L	1	09/02/20 09:20	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	1	09/02/20 09:20	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	1	09/02/20 09:20	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	448	10.0	7.16	mg/L	1	09/02/20 09:20	2320 B		VJW
Chloride*	8.12	2.00	0.177	mg/L	2	09/02/20 23:38	EPA300.0		AES
Fluoride*	<0.200	0.200	0.0194	mg/L	2	09/02/20 23:38	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 15:41	EPA353.2		LLG
pH*	7.34			pH Units	1	08/26/20 07:55	EPA150.1		VJW
Total Dissolved Solids*	1010	10.0		mg/L	1	08/28/20 16:20	EPA160.1		VJW
Sulfate*	335	10.0	1.52	mg/L	10	09/02/20 23:58	EPA300.0		AES
Total Organic Carbon*	2.87	0.500	0.135	mg/L	1	08/26/20 21:46	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.062	mg/L	5	09/01/20 14:51	EPA200.7		AES
Calcium*	65.9	0.500	0.083	mg/L	5	09/01/20 14:51	EPA200.7		AES
Hardness as CaCO ₃	355	3.31	0.690	mg/L	5	09/01/20 14:51	2340 B		AES
Iron*	<0.250	0.250	0.092	mg/L	5	09/01/20 14:51	EPA200.7		AES
Magnesium*	46.2	0.500	0.117	mg/L	5	09/01/20 14:51	EPA200.7		AES
Potassium*	5.56	5.00	0.651	mg/L	5	09/01/20 14:51	EPA200.7		AES
Silica (SiO ₂)	12.9	5.35	0.177	mg/L	5	09/01/20 14:51	Calculation		AES
Silicon	6.05	2.50	0.083	mg/L	5	09/01/20 14:51	EPA200.7		AES
Sodium*	260	5.00	0.503	mg/L	5	09/01/20 14:51	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:13	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0002	mg/L	3	08/28/20 16:13	EPA200.8		AES
Copper*	<0.0015	0.0015	0.0007	mg/L	3	08/28/20 16:13	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:13	EPA200.8		AES
Manganese*	0.0551	0.0015	0.0003	mg/L	3	08/28/20 16:13	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:13	EPA200.8		AES
Selenium*	<0.0030	0.0030	0.0016	mg/L	3	08/28/20 16:13	EPA200.8		AES
Uranium	<0.0015	0.0015	0.0006	mg/L	3	08/28/20 16:13	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0010	mg/L	3	08/28/20 16:13	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance 6.85

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/11/20 07:36

MW-8-PL

2008300-04 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	315	10.0	7.16	mg/L	5	09/02/20 09:20	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	09/02/20 09:20	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/02/20 09:20	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	315	10.0	7.16	mg/L	5	09/02/20 09:20	2320 B		VJW
Chloride*	3.33	1.00	0.0886	mg/L	1	09/03/20 15:42	EPA300.0		AES
Fluoride*	0.233	0.100	0.00971	mg/L	1	09/03/20 15:42	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 15:42	EPA353.2		LLG
pH*	7.16			pH Units	1	08/26/20 07:55	EPA150.1		VJW
Total Dissolved Solids*	525	10.0		mg/L	1	08/28/20 16:20	EPA160.1		VJW
Sulfate*	99.2	5.00	0.762	mg/L	5	09/03/20 16:02	EPA300.0		AES
Total Organic Carbon*	1.61	0.500	0.135	mg/L	1	08/26/20 22:01	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.025	mg/L	2	09/01/20 14:54	EPA200.7		AES
Calcium*	53.3	0.200	0.033	mg/L	2	09/01/20 14:54	EPA200.7		AES
Hardness as CaCO ₃	292	1.32	0.276	mg/L	2	09/01/20 14:54	2340 B		AES
Iron*	<0.100	0.100	0.037	mg/L	2	09/01/20 14:54	EPA200.7		AES
Magnesium*	38.5	0.200	0.047	mg/L	2	09/01/20 14:54	EPA200.7		AES
Potassium*	<2.00	2.00	0.260	mg/L	2	09/01/20 14:54	EPA200.7		AES
Silica (SiO ₂)	19.9	2.14	0.0708	mg/L	2	09/01/20 14:54	Calculation		AES
Silicon	9.28	1.00	0.033	mg/L	2	09/01/20 14:54	EPA200.7		AES
Sodium*	81.6	2.00	0.201	mg/L	2	09/01/20 14:54	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0064	0.0010	0.0002	mg/L	2	08/28/20 16:17	EPA200.8		AES
Cadmium*	<0.0002	0.0002	0.0001	mg/L	2	08/28/20 16:17	EPA200.8		AES
Copper*	<0.0010	0.0010	0.0004	mg/L	2	08/28/20 16:17	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	08/28/20 16:17	EPA200.8		AES
Manganese*	0.259	0.0010	0.0002	mg/L	2	08/28/20 16:17	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.0002	mg/L	2	08/28/20 16:17	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0011	mg/L	2	08/28/20 16:17	EPA200.8		AES
Uranium	<0.0010	0.0010	0.0004	mg/L	2	08/28/20 16:17	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0006	mg/L	2	08/28/20 16:17	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance 5.36

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/11/20 07:36

MW-8-LM

2008300-05 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	585	10.0	7.16	mg/L	5	09/02/20 09:20	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	90.0	10.0		mg/L	5	09/02/20 09:20	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/02/20 09:20	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	675	10.0	7.16	mg/L	5	09/02/20 09:20	2320 B		VJW
Chloride*	2.98	2.00	0.177	mg/L	2	09/03/20 16:22	EPA300.0		AES
Fluoride*	3.53	0.200	0.0194	mg/L	2	09/03/20 16:22	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 15:45	EPA353.2		LLG
pH*	8.45			pH Units	1	08/26/20 07:55	EPA150.1		VJW
Total Dissolved Solids*	740	10.0		mg/L	1	08/28/20 16:20	EPA160.1		VJW
Sulfate*	<2.00	2.00	0.305	mg/L	2	09/03/20 16:22	EPA300.0		AES
Total Organic Carbon*	1.82	0.500	0.135	mg/L	1	08/26/20 22:21	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.062	mg/L	5	09/01/20 14:56	EPA200.7		AES
Calcium*	2.05	0.500	0.083	mg/L	5	09/01/20 14:56	EPA200.7		AES
Hardness as CaCO ₃	7.53	3.31	0.690	mg/L	5	09/01/20 14:56	2340 B		AES
Iron*	<0.250	0.250	0.092	mg/L	5	09/01/20 14:56	EPA200.7		AES
Magnesium*	0.587	0.500	0.117	mg/L	5	09/01/20 14:56	EPA200.7		AES
Potassium*	<5.00	5.00	0.651	mg/L	5	09/01/20 14:56	EPA200.7		AES
Silica (SiO ₂)	7.84	5.35	0.177	mg/L	5	09/01/20 14:56	Calculation		AES
Silicon	3.67	2.50	0.083	mg/L	5	09/01/20 14:56	EPA200.7		AES
Sodium*	337	5.00	0.503	mg/L	5	09/01/20 14:56	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:21	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0002	mg/L	3	08/28/20 16:21	EPA200.8		AES
Copper*	0.0017	0.0015	0.0007	mg/L	3	08/28/20 16:21	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:21	EPA200.8		AES
Manganese*	0.0026	0.0015	0.0003	mg/L	3	08/28/20 16:21	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:21	EPA200.8		AES
Selenium*	<0.0030	0.0030	0.0016	mg/L	3	08/28/20 16:21	EPA200.8		AES
Uranium	<0.0015	0.0015	0.0006	mg/L	3	08/28/20 16:21	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0010	mg/L	3	08/28/20 16:21	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance 3.76

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/11/20 07:36

MW-99

2008300-06 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	395	10.0	7.16	mg/L	5	09/02/20 09:20	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	09/02/20 09:20	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	09/02/20 09:20	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	395	10.0	7.16	mg/L	5	09/02/20 09:20	2320 B		VJW
Chloride*	10.1	2.00	0.177	mg/L	2	09/03/20 16:43	EPA300.0		AES
Fluoride*	0.316	0.200	0.0194	mg/L	2	09/03/20 16:43	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	09/01/20 15:47	EPA353.2		LLG
pH*	7.15			pH Units	1	08/26/20 07:55	EPA150.1		VJW
Total Dissolved Solids*	1480	10.0		mg/L	1	08/28/20 16:20	EPA160.1		VJW
Sulfate*	767	20.0	3.05	mg/L	20	09/03/20 17:03	EPA300.0		AES
Total Organic Carbon*	3.61	0.500	0.135	mg/L	1	08/26/20 22:37	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.062	mg/L	5	09/01/20 14:58	EPA200.7		AES
Calcium*	183	0.500	0.083	mg/L	5	09/01/20 14:58	EPA200.7		AES
Hardness as CaCO ₃	1070	3.31	0.690	mg/L	5	09/01/20 14:58	2340 B		AES
Iron*	2.13	0.250	0.092	mg/L	5	09/01/20 14:58	EPA200.7		AES
Magnesium*	149	0.500	0.117	mg/L	5	09/01/20 14:58	EPA200.7		AES
Potassium*	<5.00	5.00	0.651	mg/L	5	09/01/20 14:58	EPA200.7		AES
Silica (SiO ₂)	16.9	5.35	0.177	mg/L	5	09/01/20 14:58	Calculation		AES
Silicon	7.89	2.50	0.083	mg/L	5	09/01/20 14:58	EPA200.7		AES
Sodium*	81.2	5.00	0.503	mg/L	5	09/01/20 14:58	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:24	EPA200.8		AES
Cadmium*	<0.0003	0.0003	0.0002	mg/L	3	08/28/20 16:24	EPA200.8		AES
Copper*	<0.0015	0.0015	0.0007	mg/L	3	08/28/20 16:24	EPA200.8		AES
Lead*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:24	EPA200.8		AES
Manganese*	4.54	0.0015	0.0003	mg/L	3	08/28/20 16:24	EPA200.8		AES
Molybdenum*	<0.0015	0.0015	0.0003	mg/L	3	08/28/20 16:24	EPA200.8		AES
Selenium*	<0.0030	0.0030	0.0016	mg/L	3	08/28/20 16:24	EPA200.8		AES
Uranium	0.0018	0.0015	0.0006	mg/L	3	08/28/20 16:24	EPA200.8		AES
Zinc*	<0.0060	0.0060	0.0010	mg/L	3	08/28/20 16:24	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	09/03/20 11:50	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Cation/Anion Balance 1.89

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/11/20 07:36

General Chemistry - Quality Control

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

Batch B201691 - General Prep - Wet Chem

Blank (B201691-BLK1)

Prepared & Analyzed: 08/26/20

Total Organic Carbon ND 0.500 mg/L

LCS (B201691-BS1)

Prepared & Analyzed: 08/26/20

Total Organic Carbon 9.49 0.500 mg/L 10.0 94.9 85-115

LCS Dup (B201691-BSD1)

Prepared & Analyzed: 08/26/20

Total Organic Carbon 9.66 0.500 mg/L 10.0 96.6 85-115 1.76 20

Batch B201696 - General Prep - Wet Chem

Blank (B201696-BLK1)

Prepared: 08/25/20 Analyzed: 08/27/20

Nitrate/Nitrite as N ND 0.020 mg/L as N

LCS (B201696-BS1)

Prepared: 08/25/20 Analyzed: 08/27/20

Nitrate/Nitrite as N 0.961 0.020 mg/L as N 1.00 96.1 90-110

LCS Dup (B201696-BSD1)

Prepared: 08/25/20 Analyzed: 08/27/20

Nitrate/Nitrite as N 0.966 0.020 mg/L as N 1.00 96.6 90-110 0.529 20

Batch B201698 - General Prep - Wet Chem

Blank (B201698-BLK1)

Prepared: 08/25/20 Analyzed: 08/27/20

Nitrate/Nitrite as N ND 0.020 mg/L as N

LCS (B201698-BS1)

Prepared: 08/25/20 Analyzed: 08/27/20

Nitrate/Nitrite as N 0.913 0.020 mg/L as N 1.00 91.3 90-110

LCS Dup (B201698-BSD1)

Prepared: 08/25/20 Analyzed: 08/27/20

Nitrate/Nitrite as N 0.914 0.020 mg/L as N 1.00 91.4 90-110 0.120 20

Batch B201725 - General Prep - Wet Chem

Blank (B201725-BLK1)

Prepared & Analyzed: 08/28/20

Total Dissolved Solids ND 10.0 mg/L

Duplicate (B201725-DUP1)

Source: 2008269-02

Prepared & Analyzed: 08/28/20

Total Dissolved Solids 1720 10.0 mg/L 1760 2.58 20

Reference (B201725-SRM1)

Prepared & Analyzed: 08/28/20

Total Dissolved Solids 360 10.0 mg/L 380 94.7 85-115

Batch B201731 - General Prep - Wet Chem

Duplicate (B201731-DUP1)

Source: 2008264-01

Prepared & Analyzed: 08/26/20

pH 7.50 pH Units 7.40 1.34 20

Reference (B201731-SRM1)

Prepared & Analyzed: 08/26/20

pH 7.02 pH Units 7.00 100 98.5-101.4

Batch B201739 - General Prep - Wet Chem

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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
09/11/20 07:36General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Blank (B201739-BLK1) Prepared: 08/31/20 Analyzed: 09/02/20										
Alkalinity, Bicarbonate as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L							
Alkalinity, Total as CaCO ₃	ND	10.0	mg/L							
LCS (B201739-BS1) Prepared: 08/31/20 Analyzed: 09/02/20										
Alkalinity, Bicarbonate as CaCO ₃	102	10.0	mg/L				85-115			
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L				85-115			
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L				85-115			
Alkalinity, Total as CaCO ₃	102	10.0	mg/L	100		102	85-115			
LCS Dup (B201739-BSD1) Prepared: 08/31/20 Analyzed: 09/02/20										
Alkalinity, Bicarbonate as CaCO ₃	94.0	10.0	mg/L				85-115	8.16	20	
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L				85-115		20	
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L				85-115		20	
Alkalinity, Total as CaCO ₃	94.0	10.0	mg/L	100		94.0	85-115	8.16	20	
Batch B201746 - General Prep - Wet Chem										
Blank (B201746-BLK1) Prepared: 08/31/20 Analyzed: 09/02/20										
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B201746-BS1) Prepared: 08/31/20 Analyzed: 09/02/20										
Chloride	23.3	1.00	mg/L	25.0		93.3	90-110			
Fluoride	2.51	0.100	mg/L	2.50		100	90-110			
Sulfate	23.6	1.00	mg/L	25.0		94.4	90-110			
LCS Dup (B201746-BSD1) Prepared: 08/31/20 Analyzed: 09/02/20										
Chloride	24.0	1.00	mg/L	25.0		95.9	90-110	2.76	20	
Fluoride	2.52	0.100	mg/L	2.50		101	90-110	0.676	20	
Sulfate	23.8	1.00	mg/L	25.0		95.2	90-110	0.840	20	
Batch B201753 - General Prep - Wet Chem										
Blank (B201753-BLK1) Prepared & Analyzed: 09/01/20										
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B201753-BS1) Prepared & Analyzed: 09/01/20										
Nitrate/Nitrite as N	0.962	0.020	mg/L as N	1.00		96.2	90-110			
LCS Dup (B201753-BSD1) Prepared & Analyzed: 09/01/20										
Nitrate/Nitrite as N	0.963	0.020	mg/L as N	1.00		96.3	90-110	0.0520	20	
Batch B201782 - General Prep - Wet Chem										

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/11/20 07:36

**General Chemistry - Quality Control
(Continued)**

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

Batch B201782 - General Prep - Wet Chem (Continued)

Blank (B201782-BLK1)

Prepared & Analyzed: 09/03/20

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

LCS (B201782-BS1)

Prepared & Analyzed: 09/03/20

Chloride	23.6	1.00	mg/L	25.0	94.4	90-110
Fluoride	2.51	0.100	mg/L	2.50	100	90-110
Sulfate	23.9	1.00	mg/L	25.0	95.4	90-110

LCS Dup (B201782-BSD1)

Prepared & Analyzed: 09/03/20

Chloride	23.7	1.00	mg/L	25.0	94.6	90-110	0.228	20
Fluoride	2.63	0.100	mg/L	2.50	105	90-110	4.60	20
Sulfate	23.9	1.00	mg/L	25.0	95.5	90-110	0.134	20

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/11/20 07:36

Dissolved Metals by ICP - Quality Control

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

Batch B201713 - Diss. 200.7/200.8

Blank (B201713-BLK1)

Prepared: 08/27/20 Analyzed: 09/01/20

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 (B201713-BS1)

Prepared: 08/27/20 Analyzed: 09/01/20

Aluminum	4.94	0.050	mg/L	5.00	98.8	85-115
Calcium	4.92	0.100	mg/L	5.00	98.4	85-115
Iron	4.68	0.050	mg/L	5.00	93.6	85-115
Magnesium	25.4	0.100	mg/L	25.0	102	85-115
Potassium	9.95	1.00	mg/L	10.0	99.5	85-115
Silicon	5.26	0.500	mg/L	5.00	105	85-115
Sodium	4.13	1.00	mg/L	4.05	102	85-115

LCS Dup (B201713-BSD1)

Prepared: 08/27/20 Analyzed: 09/01/20

Aluminum	4.98	0.050	mg/L	5.00	99.6	85-115	0.754	20
Calcium	4.89	0.100	mg/L	5.00	97.8	85-115	0.574	20
Iron	4.68	0.050	mg/L	5.00	93.6	85-115	0.0387	20
Magnesium	25.5	0.100	mg/L	25.0	102	85-115	0.130	20
Potassium	10.0	1.00	mg/L	10.0	100	85-115	1.03	20
Silicon	5.19	0.500	mg/L	5.00	104	85-115	1.42	20
Sodium	4.15	1.00	mg/L	4.05	102	85-115	0.526	20

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/11/20 07:36

Dissolved Metals by ICPMS - Quality Control

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

Batch B201714 - Diss. 200.7/200.8

Blank (B201714-BLK1)

Prepared: 08/27/20 Analyzed: 08/28/20

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 (B201714-BS1)

Prepared: 08/27/20 Analyzed: 08/28/20

Arsenic	0.0431	0.0005	mg/L	0.0500	86.1	85-115
Cadmium	0.0444	0.0001	mg/L	0.0500	88.8	85-115
Copper	0.0444	0.0005	mg/L	0.0500	88.8	85-115
Lead	0.0464	0.0005	mg/L	0.0500	92.7	85-115
Manganese	0.0461	0.0005	mg/L	0.0500	92.3	85-115
Molybdenum	0.0458	0.0005	mg/L	0.0500	91.7	85-115
Selenium	0.224	0.0010	mg/L	0.250	89.6	85-115
Uranium	0.0462	0.0005	mg/L	0.0500	92.5	85-115
Zinc	0.0454	0.0020	mg/L	0.0500	90.8	85-115

LCS Dup (B201714-BSD1)

Prepared: 08/27/20 Analyzed: 09/09/20

Arsenic	0.0445	0.0005	mg/L	0.0500	89.0	85-115	3.25	20
Cadmium	0.0457	0.0001	mg/L	0.0500	91.4	85-115	2.88	20
Copper	0.0491	0.0005	mg/L	0.0500	98.3	85-115	10.2	20
Lead	0.0477	0.0005	mg/L	0.0500	95.4	85-115	2.88	20
Manganese	0.0510	0.0005	mg/L	0.0500	102	85-115	10.0	20
Molybdenum	0.0498	0.0005	mg/L	0.0500	99.6	85-115	8.28	20
Selenium	0.221	0.0010	mg/L	0.250	88.5	85-115	1.18	20
Uranium	0.0470	0.0005	mg/L	0.0500	94.0	85-115	1.63	20
Zinc	0.0485	0.0020	mg/L	0.0500	97.0	85-115	6.55	20

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.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/11/20 07:36

Dissolved Mercury by CVAA - Quality Control

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

Batch B201747 - EPA 245.1/7470

Blank (B201747-BLK1)

Prepared: 09/01/20 Analyzed: 09/03/20

Mercury	ND	0.0002	mg/L							
---------	----	--------	------	--	--	--	--	--	--	--

LCS (B201747-BS1)

Prepared: 09/01/20 Analyzed: 09/03/20

Mercury	0.0053	0.0002	mg/L	0.00500	107	85-115				
---------	--------	--------	------	---------	-----	--------	--	--	--	--

LCS Dup (B201747-BSD1)

Prepared: 09/01/20 Analyzed: 09/03/20

Mercury	0.0051	0.0002	mg/L	0.00500	103	85-115	3.99	20		
---------	--------	--------	------	---------	-----	--------	------	----	--	--

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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
09/11/20 07:36

Notes and Definitions

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

Green Analytical Laboratories

A handwritten signature in black ink that reads 'Debbie Zufelt'.

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.



(970) 247-4220
Fax: (970) 247-4227

jenna.emerick@greenanalytical.com or
dzufell@greenanalytical.com
75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCE ENERGY LLC		P.O. #:		Bill to (if different):		ANALYSIS REQUEST											
Address: 6473 COUNTRY ROAD 120		Company:															
City: Hesperus State: CO Zip: 81326		Attn:															
Phone #: 970-385-4528		Address:															
Contact Person: TONY BIRD / +BIRD@GCE.COM		City:															
Email Report to: LANDON BECK		State:		Zip:													
Project Name (optional): BECK RESOURCE HYDROGEOLOGIC.COM		Phone #:															
Sampler Name (Print): HARVEY BENKLEY & MICHAEL McFARLAND		Email:															
For Lab Use	Sample Name or Location	Collected		Matrix (check one)		# of containers											
		Date	Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER :	No preservation (general)	HNO ₃	HCl	H ₂ SO ₄	Other:	Other:	
2008-300-01	MW-7-EHA	8-25-20	8:45	X							1	1	4				X
-02	MW-8-EAD	8-25-20	1030	X							1	1	4				X
-03	MW-8-M1	8-25-20	1110	X							1	1	4				X
-04	MW-8-PL	8-25-20	1156	X							1	1	4				X
-05	MW-8-LM	8-25-20	1132	X							1	1	4				X
-06	MW-99	8-25-20	0916	X							1	1	4				X
Relinquished By: Michael McFarland		Date: 8-25-20	Time: 1357	Received By: [Signature]	ADDITIONAL REMARKS:		Report to State? (Circle)										
Relinquished By: [Signature]		Date: 8/25/20	Time: 3:10	Received By: [Signature]	Temperature at receipt: 6.8/6.9°C		CHECKED BY: [Signature]										
Relinquished By:		Date:	Time:	Received By:	Temperature at receipt:		CHECKED BY:										
Relinquished By:		Date:	Time:	Received By:	Temperature at receipt:		CHECKED BY:										



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

26 August 2020

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: GCC GW Baseline

Enclosed are the results of analyses for samples received by the laboratory on 08/12/20 15:30.
If you need any further assistance, please feel free to contact me.

Sincerely,

A handwritten signature in blue ink, reading 'Jeremy D. Allen', is written in a cursive style.

Jeremy D Allen For 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.



dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 17:01

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Wiltse Well	2008143-01	Water	08/12/20 14:02	08/12/20 15:30	

Green Analytical Laboratories

A handwritten signature in blue ink that reads 'Jeremy D. Allen'.

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
08/26/20 17:01

Wiltse Well

2008143-01 (Ground Water)

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

General Chemistry

Alkalinity, Bicarbonate as CaCO ₃ *	475	10.0	7.16	mg/L	1	08/24/20 14:45	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	1	08/24/20 14:45	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	1	08/24/20 14:45	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	475	10.0	7.16	mg/L	1	08/24/20 14:45	2320 B		VJW
Chloride*	58.1	2.00	0.177	mg/L	2	08/25/20 15:34	EPA300.0		AES
Fluoride*	0.304	0.200	0.0194	mg/L	2	08/25/20 15:34	EPA300.0		AES
Nitrate/Nitrite as N*	1.25	0.020	0.006	mg/L as N	1	08/18/20 11:58	EPA353.2		LLG
pH*	7.29			pH Units	1	08/13/20 08:25	EPA150.1		VJW
Total Dissolved Solids*	1580	10.0		mg/L	1	08/19/20 12:32	EPA160.1		VJW
Sulfate*	704	20.0	3.05	mg/L	20	08/26/20 01:05	EPA300.0		AES
Total Organic Carbon*	3.69	0.500	0.135	mg/L	1	08/20/20 16:50	5310C		LLG

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.025	mg/L	2	08/20/20 18:52	EPA200.7		AES
Calcium*	206	0.200	0.033	mg/L	2	08/20/20 18:52	EPA200.7		AES
Hardness as CaCO ₃	1070	1.32	0.276	mg/L	2	08/20/20 18:52	2340 B		AES
Iron*	<0.100	0.100	0.037	mg/L	2	08/20/20 18:52	EPA200.7		AES
Magnesium*	136	0.200	0.047	mg/L	2	08/20/20 18:52	EPA200.7		AES
Potassium*	4.48	2.00	0.260	mg/L	2	08/20/20 18:52	EPA200.7		AES
Silica (SiO ₂)	13.8	2.14	0.0708	mg/L	2	08/20/20 18:52	Calculation		AES
Silicon	6.43	1.00	0.033	mg/L	2	08/20/20 18:52	EPA200.7		AES
Sodium*	64.0	2.00	0.201	mg/L	2	08/20/20 18:52	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0002	mg/L	2	08/21/20 12:55	EPA200.8		AES
Cadmium*	<0.0002	0.0002	0.0001	mg/L	2	08/21/20 12:55	EPA200.8		AES
Copper*	0.0013	0.0010	0.0004	mg/L	2	08/21/20 12:55	EPA200.8		AES
Lead*	<0.0010	0.0010	0.0002	mg/L	2	08/21/20 12:55	EPA200.8		AES
Manganese*	1.03	0.0010	0.0002	mg/L	2	08/21/20 12:55	EPA200.8		AES
Molybdenum*	0.0018	0.0010	0.0002	mg/L	2	08/21/20 12:55	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0011	mg/L	2	08/21/20 12:55	EPA200.8		AES
Uranium	0.0024	0.0010	0.0004	mg/L	2	08/21/20 12:55	EPA200.8		AES
Zinc*	0.0118	0.0040	0.0006	mg/L	2	08/21/20 12:55	EPA200.8		AES

Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	08/21/20 09:39	EPA245.1		LLG
----------	---------	--------	---------	------	---	----------------	----------	--	-----

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
08/26/20 17:01

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B201581 - General Prep - Wet Chem										
Reference (B201581-SRM1)				Prepared & Analyzed: 08/13/20						
pH	6.96		pH Units	7.00		99.4	98.5-101.4			
Batch B201597 - General Prep - Wet Chem										
Blank (B201597-BLK1)				Prepared: 08/17/20 Analyzed: 08/18/20						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B201597-BS1)				Prepared: 08/17/20 Analyzed: 08/18/20						
Nitrate/Nitrite as N	0.930	0.020	mg/L as N	1.00		93.0	90-110			
LCS Dup (B201597-BSD1)				Prepared: 08/17/20 Analyzed: 08/18/20						
Nitrate/Nitrite as N	0.925	0.020	mg/L as N	1.00		92.5	90-110	0.507	20	
Batch B201618 - General Prep - Wet Chem										
Blank (B201618-BLK1)				Prepared: 08/18/20 Analyzed: 08/19/20						
Total Dissolved Solids	ND	10.0	mg/L							
Reference (B201618-SRM1)				Prepared: 08/18/20 Analyzed: 08/19/20						
Total Dissolved Solids	295	10.0	mg/L	306		96.4	85-115			
Batch B201623 - General Prep - Wet Chem										
Blank (B201623-BLK1)				Prepared & Analyzed: 08/20/20						
Total Organic Carbon	ND	0.500	mg/L							
LCS (B201623-BS1)				Prepared & Analyzed: 08/20/20						
Total Organic Carbon	9.55	0.500	mg/L	10.0		95.5	85-115			
LCS Dup (B201623-BSD1)				Prepared & Analyzed: 08/20/20						
Total Organic Carbon	9.70	0.500	mg/L	10.0		97.0	85-115	1.57	20	
Batch B201660 - General Prep - Wet Chem										
Blank (B201660-BLK1)				Prepared: 08/21/20 Analyzed: 08/25/20						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B201660-BS1)				Prepared: 08/21/20 Analyzed: 08/25/20						
Chloride	24.0	1.00	mg/L	25.0		96.0	90-110			
Fluoride	2.53	0.100	mg/L	2.50		101	90-110			
Sulfate	24.3	1.00	mg/L	25.0		97.0	90-110			
LCS Dup (B201660-BSD1)				Prepared: 08/21/20 Analyzed: 08/25/20						
Chloride	24.0	1.00	mg/L	25.0		96.0	90-110	0.0667	20	
Fluoride	2.56	0.100	mg/L	2.50		103	90-110	1.26	20	
Sulfate	24.2	1.00	mg/L	25.0		97.0	90-110	0.0742	20	

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
08/26/20 17:01General Chemistry - Quality Control
(Continued)

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

Batch B201671 - General Prep - Wet Chem

Blank (B201671-BLK1)

Prepared & Analyzed: 08/24/20

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

LCS (B201671-BS1)

Prepared & Analyzed: 08/24/20

Alkalinity, Bicarbonate as CaCO ₃	103	10.0	mg/L			85-115
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L			85-115
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L			85-115
Alkalinity, Total as CaCO ₃	103	10.0	mg/L	100	103	85-115

LCS Dup (B201671-BSD1)

Prepared & Analyzed: 08/24/20

Alkalinity, Bicarbonate as CaCO ₃	98.0	10.0	mg/L			85-115	4.98	20
Alkalinity, Carbonate as CaCO ₃	ND	10.0	mg/L			85-115		20
Alkalinity, Hydroxide as CaCO ₃	ND	10.0	mg/L			85-115		20
Alkalinity, Total as CaCO ₃	98.0	10.0	mg/L	100	98.0	85-115	4.98	20

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 17:01

Dissolved Metals by ICP - Quality Control

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

Batch B201639 - Diss. 200.7/200.8

Blank (B201639-BLK1)

Prepared: 08/19/20 Analyzed: 08/20/20

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 (B201639-BS1)

Prepared: 08/19/20 Analyzed: 08/20/20

Aluminum	4.76	0.050	mg/L	5.00	95.2	85-115
Calcium	4.62	0.100	mg/L	5.00	92.4	85-115
Iron	4.35	0.050	mg/L	5.00	87.0	85-115
Magnesium	24.4	0.100	mg/L	25.0	97.5	85-115
Potassium	9.59	1.00	mg/L	10.0	95.9	85-115
Silicon	4.62	0.500	mg/L	5.00	92.3	85-115
Sodium	3.94	1.00	mg/L	4.05	97.4	85-115

LCS Dup (B201639-BSD1)

Prepared: 08/19/20 Analyzed: 08/20/20

Aluminum	4.88	0.050	mg/L	5.00	97.6	85-115	2.50	20
Calcium	4.74	0.100	mg/L	5.00	94.8	85-115	2.55	20
Iron	4.48	0.050	mg/L	5.00	89.7	85-115	3.07	20
Magnesium	25.0	0.100	mg/L	25.0	100	85-115	2.51	20
Potassium	9.86	1.00	mg/L	10.0	98.6	85-115	2.70	20
Silicon	4.74	0.500	mg/L	5.00	94.9	85-115	2.73	20
Sodium	4.02	1.00	mg/L	4.05	99.3	85-115	1.91	20

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 17:01

Dissolved Metals by ICPMS - Quality Control

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

Batch B201642 - Diss. 200.7/200.8

Blank (B201642-BLK1)

Prepared: 08/19/20 Analyzed: 08/21/20

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 (B201642-BS1)

Prepared: 08/19/20 Analyzed: 08/21/20

Arsenic	0.0433	0.0005	mg/L	0.0500	86.6	85-115
Cadmium	0.0450	0.0001	mg/L	0.0500	90.0	85-115
Copper	0.0445	0.0005	mg/L	0.0500	89.1	85-115
Lead	0.0472	0.0005	mg/L	0.0500	94.4	85-115
Manganese	0.0462	0.0005	mg/L	0.0500	92.3	85-115
Molybdenum	0.0450	0.0005	mg/L	0.0500	90.0	85-115
Selenium	0.226	0.0010	mg/L	0.250	90.5	85-115
Uranium	0.0440	0.0005	mg/L	0.0500	88.0	85-115
Zinc	0.0444	0.0020	mg/L	0.0500	88.9	85-115

LCS Dup (B201642-BSD1)

Prepared: 08/19/20 Analyzed: 08/21/20

Arsenic	0.0442	0.0005	mg/L	0.0500	88.4	85-115	2.06	20
Cadmium	0.0442	0.0001	mg/L	0.0500	88.5	85-115	1.66	20
Copper	0.0430	0.0005	mg/L	0.0500	86.0	85-115	3.51	20
Lead	0.0460	0.0005	mg/L	0.0500	92.0	85-115	2.60	20
Manganese	0.0447	0.0005	mg/L	0.0500	89.4	85-115	3.25	20
Molybdenum	0.0452	0.0005	mg/L	0.0500	90.5	85-115	0.509	20
Selenium	0.228	0.0010	mg/L	0.250	91.3	85-115	0.816	20
Uranium	0.0439	0.0005	mg/L	0.0500	87.9	85-115	0.195	20
Zinc	0.0431	0.0020	mg/L	0.0500	86.3	85-115	3.00	20

Green Analytical Laboratories

Jeremy D Allen For 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.

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
08/26/20 17:01**Dissolved Mercury by CVAA - Quality Control**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B201624 - EPA 245.1/7470										
Blank (B201624-BLK1)			Prepared: 08/18/20 Analyzed: 08/21/20							
Mercury	ND	0.0002	mg/L							
LCS (B201624-BS1)			Prepared: 08/18/20 Analyzed: 08/21/20							
Mercury	0.0049	0.0002	mg/L	0.00500	98.2	85-115				
LCS Dup (B201624-BSD1)			Prepared: 08/18/20 Analyzed: 08/21/20							
Mercury	0.0049	0.0002	mg/L	0.00500	97.7	85-115	0.470	20		

Green Analytical Laboratories

Jeremy D Allen For 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.



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom Bird

Reported:
08/26/20 17:01

Notes and Definitions

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

Green Analytical Laboratories

Jeremy D Allen For 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.



ANALYSIS REQUEST

[illegible]