

11783 Highway 337 S.
PO Box 100, Tijeras, NM 87123

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January 6, 2022

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

Attn: Janet Binns, Environmental Protection Specialist III

Re: GCC Energy, LLC, King II Mine
CDRMS Permit # C-1981-035
Water Monitoring Analysis; King I & King II
4th Quarter 2021

Ms. Binns:

Please find enclosed a copy of quarterly water analysis reports for the 4th quarter of 2021 for the following water monitoring locations:

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

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

Please note that GCC is now utilizing a low-level mercury analysis method for the surface water (ditch) compliance samples as requested by DRMS during a 12/7/2020 conference call. Green Analytical Labs prepared method certification studies to analyze low-level mercury by EPA 200.8, submitted and received certification from CDPHE. The reporting limit (RL) is = 0.01 µg/L and the minimum detection limit (MDL) is = 0.00432 µg/L, so Green now has in-house capability to analyze mercury to meet the CDPHE surface water quality standard (0.01 µg/L) to which the King II mine is held to for the Alkali/Hay Gulch/La Plata River drainages. GCC collected Hay Gulch Ditch samples in Q3 for both the previous mercury method EPA 245.1 (which is still fine for the groundwater sites), as well as by the low-level mercury method 200.8, to provide a side-by-side comparison for this transition quarter. Both ditch sites, both methods were non-detect for mercury so we are now good to proceed with surface water compliance samples by 200.8 only going forward.

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

Sincerely,

📍 11783 Highway 337 S.
PO Box 100, Tijeras, NM 87123

☎ 505.286.6026
✉ svance@gcc.com



A handwritten signature in blue ink, appearing to read 'Sarah Vance'.

Sarah Vance
Environmental Manager
GCC Energy, LLC

GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Upgradient																																	
Year	2016										2017						2018				2019				2020				2021				
Quarter	Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	5	8	12	2	6	9	11	
Sample Date	3/31	4/22	5/26	6/23	7/20	8/25	9/21	10/19	11/29	12/13	1/26	2/27	3/22	6/28	9/21	11/28	2/22	5/14	8/9	11/8	2/28	5/23	8/16	11/13	2/13	5/13	8/13	12/3	2/22	6/3	9/1	11/15	
Lab Analysis (Y/N)	Y	N	N	Y	N	N	Y	Y	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																																	
Flow Rate	cfs	0.70	1.0	1.20	1.60	1.0	1.0	1.10	1.0	NM	1.0	NM	0.82	0.28	2.70	NM	NM	NM	0.60	0.70	0.70	0.25	3.63	1.17	NM	NM	0.92	0.13	1.02	0.06	0.16	NM	0.67
Temperature	deg C	9.8	20.9	11.3	21.1	20.8	16.8	14.9	16.4	5.9	7.0	1.5	4.7	10.7	20.2	19.7	8.8	4.7	11.3	22.1	1.1	5.9	5.9	16.9	5.7	1.5	16.5	18.1	2.0	5.8	11.3	15.5	7.1
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	8.08	7.83	7.75	8.07	6.94
Specific Conductance	µS/cm	247	323	197	141	189	207	233	210	258	234	687	455	454	106	549	868	1041	304	307	307	752	306	275	682	902	314	528	434	1024	189	280	252
Oxygen Reduction Potential	mV	76.4	114.7	97.2	51.6	53.6	82.8	72.5	105.9	92.4	116.3	66.3	-12	-10.6	23.8	86.1	95.10	-164.1	111.4	-181.3	13.9	103.7	-24.0	24.4	-22.4	-4.5	81.7	118.9	120.3	51.6	86.6	58.3	109.2
Dissolved Oxygen	mg/L	8.1	6.4	8.0	6.0	6.5	6.9	7.2	4.7	6.7	6.1	10.6	9.0	6.9	4.8	6.7	9.3	9.4	8.5	6.4	10.2	8.0	8.9	7.8	7.9	7.0	7.5	8.4	10.4	8.7	8.5	7.1	9.2
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	128			80.9			119		152				257	69.2	316	456	489	101	153	149	393	136	125	372	405	150	287	213	588	92.6	131	120
pH (Lab)	SU	8.17			8.04			8.16		8.19				8.06	8.06	8.22	8.31	8.39	7.99	9.07	7.86	7.45	7.69	7.83	7.40	7.22	7.60	8.01	7.92	7.57	7.72	7.44	7.52
Total Dissolved Solids (Lab)	mg/L	170			75			165		180				285	65.0	390	650	700	140	215	175	535	205	225	635	587	255	340	160	685	210	185	140
Total Suspended Solids	mg/L	30.0			117			17.0		4.8				2.50	63.5	2.00	5.75	6.01	106	6.25	14.8	22.0	113	20.0	5.38	<4.0	140	19.5	13.2	55	133	51	13.2
Calcium	mg/L	33.5			24			33.0		38.4				53.6	20.8	64.9	86.6	87.3	26.3	39.1	40.3	79.8	34.6	32.4	79.3	81.5	36.1	63.2	49.9	113	25.8	35.8	34.2
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	21.5	74.3	6.87	10.1	8.35
Sodium	mg/L	4.46			2.19			3.90		6				10.9	1.97	13.8	27.1	34.6	3.31	5.33	5.00	19.1	7.24	5.81	25.4	30.9	7.67	10.9	8.39	34.3	2.71	3.97	3.53
Potassium	mg/L	<1			<1			1.35		<1.00				<1.00	1.75	2.15	3.05	3.52	1.18	1.24	<1.00	3.89	1.57	1.07	3.25	3.65	1.86	1.85	1.53	4.74	<1.00	3.28	<1.00
Alkalinity, Total	mg/L	160			65			98.0		118				185	55.0	177	305	244	67	111	120	260	390	103	233	315	102	220	137	340	68	98	87.0
Alkalinity, Bicarbonate	mg/L	160			65			94.0		118				185	55.0	161	285	244	67	107	120	260	390	103	233	295	102	220	131	340	68	98	87.0
Alkalinity, Carbonate	mg/L	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	16.0	20.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Alkalinity, Hydroxide	mg/L	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	5.77			2.07			4.32		7.92				22.7	1.76	30.8	48.2	46.7	3.12	6.70	5.58	48.1	7.75	6.04	22.8	31.6	9.64	24.5	14.8	85.9	3.17	5.23	3.44
Fluoride	mg/L	0.213			0.208			0.223		0.208				0.215	0.195	0.265	0.283	0.285	0.224	0.272	0.224	0.252	0.208	0.214	<0.500	0.239	<0.500	0.226	0.226	0.235	0.188	0.227	0.179
Sulfate as SO4	mg/L	42.1			17.7			29.0		45.3				87.7	15.0	99.0	179	229	34	49.7	45.0	128	47.2	35.6	107	151	44.0	86.3	64.4	211	26.4	42.2	40.0
Total Organic Carbon (TOC)	mg/L	1.41			1.6			2.21		1.14				2.49	1.15	1.90	1.99	1.81	2.31	1.61	1.09	4.94	3.08	1.84	4.54	5.45	2.93	1.65	1.22	2.69	1.39	2.8	0.832
Oil & Grease	mg/L	<5.00			<5.00			<5.00		<5.00				<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	
Nitrate/Nitrite as N	mg/L	<0.02			0.028			<0.020		<0.020				0.053	<0.020	0.045	0.088	0.105	0.026	<0.020	<0.020	0.263	0.050	0.072	0.104	0.044	0.302	0.042	0.026	0.282	0.049	0.026	<0.02
Sodium Adsorption Ratio (SAR)	no unit	0.17			0.1			0.16		0.21				0.30	0.10	0.34	0.55	0.68	0.14	0.18	0.16	0.42	0.26	0.22	0.55	0.65	0.26	0.29	0.25	0.62	0.12	0.15	0.14
Ammonia as N ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.05			<0.05			<0.05		<0.050				<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Arsenic	mg/L	<0.0005			<0.0005			<0.0005		<0.0005				0.0005	<0.0005	0.0009	0.0007	<0.0025	<0.0005	0.0009	<0.0005	0.0007	0.0006	0.0007	0.0005	0.0006	<0.0005	0.0007	<0.0005	0.0012	<0.0005	0.001	<0.0005
Cadmium	mg/L	<0.0001			<0.0001			<0.0001		<0.0001				<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	
Copper	mg/L	0.0006			0.0011			0.0011		0.0005				0.0008	0.0013	0.0006	0.0005	0.0007	0.0011	0.0011	0.0013	0.0026	0.0013	0.0012	0.0005	0.0005	0.0010	0.0006	0.0005	0.0007	0.0009	0.0012	0.0006
Iron	mg/L	<0.05			<0.05			<0.05		<0.050				<0.0500	<0.0500																		

GCC Energy Hydrologic Monitoring Data

Hay Gulch Ditch Downgradient																																	
Year	2016										2017						2018				2019				2020				2021				
Quarter	Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	6	8	12	2	6	9	11	
Sample Date	3/31	4/22	5/26	6/23	7/20	8/25	9/21	10/19	11/29	12/13	1/26	2/27	3/22	6/28	9/21	11/28	2/22	5/7	8/9	11/7	2/28	5/23	8/16	11/13	2/6	6/1	8/13	12/3	2/22	6/3	9/1	11/15	
Lab Analysis (Y/N)	Y	N	N	Y	N	N	Y	N	Y	N	N	N	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																																	
Flow Rate	cfs	1.10	1.20	1.10	NM	1.10	1.10	NM	0.80	NM	NM	NM	0.80	0.30	0.30	NM	dry	NM	NM	NM	0.50	0.25	0.30	1.05	NM	NM	1.50	0.13	NM	0.001	0.40	NM	0.67
Temperature	deg C	11.8	17.6	10.9	21.9	21.3	18.8	16.1	11.8	7.0	6.6	7.2	5.0	12.7	17.6	18.7		6.3	11.3	20.6	4.7	6.88	8.23	15.15	3.51	3.73	14.21	20.4	6.83	10.37	13.35	10.47	4.00
pH	SU	8.57	8.55	8.14	8.14	8.55	8.37	8.3	8.36	8.64	8.06	7.28	8.06	9.00	8.53	8.66		8.33	7.58	7.43	7.48	6.42	7.77	7.61	8.38	7.94	8.24	8.00	7.7	7.76	8.12	8.26	7.00
Specific Conductance	µS/cm	429	530	297	116	308	257	1183	420	421	728	678	987	17	114	164		742	304	356	309	577	202	295	554	882	137	237	478	815	131	184	311
Oxygen Reduction Potential	mV	57.5	105.9	33.2	32.5	68.6	38.4	18.7	88.6	117.5	155.2	147.6	-15.5	137.8	185.3	48		51.6	111.4	-10.0	-88.9	125.6	50.6	111.6	-108.1	124.2	104.8	103.0	127.8	-26.5	85.1	119.5	122.7
Dissolved Oxygen	mg/L	7.9	7.7	8.7	6.0	6.7	5.6	6.8	7.1	6.5	7.2	7.6	9.8	5.6	6.4	7.1	9.8	8.5	6.3	9.1	7.6	8.8	7.2	9.6	9.5	8.0	6.4	9.6	6.8	7.8	6.7	9.8	
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	226			67.8			480		267				503	59.1	91.4		329	140	182	167	281	91.9	137	295	416	63.6	120	232	419	64.8	90.7	143
pH (Lab)	SU	8.42			8.13			8.25		8.24				8.15	7.98	7.98		8.17	8.05	8.09	7.95	7.84	7.68	7.73	7.73	7.80	7.49	7.59	7.85	7.83	7.74	7.58	7.39
Total Dissolved Solids (Lab)	mg/L	270			55			630		320				615	65.0	80.0		420	220	260	185	390	185	195	355	573	120	135	370	435	175	90	120
Total Suspended Solids	mg/L	27.3			18			4.20		12.4				12.7	3.00	<0.500		49.5	<2	5.67	4.40	18.4	153.0	22.5	<4.00	4.20	17.5	28.6	10.5	28.0	8.4	4.8	5.44
Calcium	mg/L	55.5			21.9			94.7		65.5				112	19.0	29.5		75.4	37.5	49.0	44.7	61.6	26.0	34.5	67.2	85.6	20.3	34.2	55.6	98.2	21.2	29.8	39.3
Magnesium	mg/L	21.1			3.15			59.1		25.2				54.6	2.86	4.31		34.2	11.2	14.4	13.4	31	6.54	12.3	30.8	49.0	3.15	8.38	22.7	42.2	2.86	3.94	11.0
Sodium	mg/L	8.69			1.57			16.8		10.7				22.5	1.49	2.37		18.1	5.42	6.49	5.15	16.5	5.03	6.62	17.0	28.5	1.90	3.68	9.03	15.8	1.14	1.75	4.71
Potassium	mg/L	1.49			<1			4.48		1.46				2.33	<1.00	<1.00		2.84	1.14	1.58	1.34	3.13	1.31	1.27	2.60	3.81	<1.00	1.36	1.89	3.75	<1.00	1.02	1.30
Alkalinity, Total	mg/L	220			59			220		225				320	47.0	85.0		265	112	170	140	150	340	140	194	297	48	110	158	315	52	72	116
Alkalinity, Bicarbonate	mg/L	220			59			140		155				320	47.0	85.0		259	104	170	140	150	340	140	188	283	48	110	154	315	52	72	116
Alkalinity, Carbonate	mg/L	<10			<10			80.0		70				<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	14.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Alkalinity, Hydroxide	mg/L	<10			<10			<10		<10.0				<10.0	<10.0	<10.0		<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	9.40			1.26			97.9		12				31.9	<1.00	1.54		23.1	7.54	7.47	5.69	40.2	16.9	7.65	14.8	30.7	1.87	4.42	17.1	59	1.16	1.21	5.07
Fluoride	mg/L	0.244			0.195			0.244		0.227				0.224	0.290	0.227		0.308	0.228	0.295	0.228	0.232	0.205	0.218	0.252	0.272	0.185	0.224	0.244	0.246	0.195	0.216	0.185
Sulfate as SO4	mg/L	68.1			13.5			144		89.5				204	11.3	17.9		86.5	40.2	46.8	45.0	91.4	18.5	42.7	83.3	143	14.2	32.4	70.2	90.1	17.3	25.7	46.3
Total Organic Carbon (TOC)	mg/L	1.53			1.4			3.48		1.65				2.31	2.16	0.932		1.56	1.28	1.33	1.76	2.90	2.37	2.10	3.26	4.53	1.39	1.47	1.55	2.31	1.18	1.48	1.12
Oil & Grease	mg/L	<5			<5			<5		<5.00				<5.00	<5.00	<5.00		<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	
Nitrate/Nitrite as N	mg/L	<0.02			0.026			0.027		<0.020				<0.020	<0.020	<0.020		<0.020	<0.020	<0.020	<0.020	0.17	0.146	0.090	<0.020	0.056	0.031	0.053	<0.020	0.148	0.021	<0.020	<0.020
Sodium Adsorption Ratio (SAR)	no unit	0.25			0.03			0.33		0.28				0.44	0.08	0.11		0.43	0.2	0.20	0.17	0.43	0.22	0.24	0.41	0.61	0.10	0.14	0.26	0.34	0.06	0.08	0.17
Ammonia as N ^	mg/L	NA			NA			NA		NA				NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	<0.100	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA			NA			NA		NA				NA	NA	NA		NA	NA	NA	NA	NA	NA	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.05			<0.05			<0.05		<0.050				<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Arsenic	mg/L	0.0005			<0.0005			0.0015		0.0006				0.0006	0.0005	0.0006		0.0005	0.0005	0.0008	<0.0005	0.0006	0.0006	0.0006	0.0005	0.0006	<0.0005	0.0007	<0.0005	0.0013	<0.0005	0.0007	<0.0005
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	<0.0005	<0.0005	<0.0005	
Copper	mg/L	0.0004			0.0016			0.0012		0.0005				0.0004	0.0020	0.0013		0.0005	0.0008	0.0008	0.0008	<0.0010	0.0021	0.0009	0.0007	0.0006	0.0014	0.0009	0.0005	0.0006	0.0011	0.001	0.0007
Iron	mg/L	<0.05			<0.05			<0.05		<0.050				<0.050	<0.050	<0.050		<0.050	<0.050	<0.050	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	
Lead	mg/L	<0.0005			<0.0005			<0.0005		<0.0005				<0.0005	<0.0005	<0.0005		<0.0005	<0.00050														

GCC Energy Hydrologic Monitoring Data

Well #1 Upgradient																																		
Year	2016										2017						2018				2019				2020				2021					
Quarter	Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Month	3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	6	8	12	2	5	8	11		
Sample Date	3/30	4/27	5/26	6/23	7/19	8/24	9/21	10/24	11/30	12/14	1/18	2/27	3/22	6/28	9/28	11/29	2/22	5/14	8/9	11/7	2/25	5/23	8/16	11/14	2/13	6/1	8/31	12/14	2/11	5/19	8/12	11/12		
Lab Analysis (Y/N)	Y	N	N	Y	N	N	Y	N	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																																		
Purge Flow Rate	gpm	1.5	7.9	7.1	5.8	7.1	7.4	6.8	7.5	9.3	7.5	7.7	7.5	8.2	7.0	7.1	7.5	7.2	7.2	10	7.2	10.0	8.3	11.0	6.5	8.0	10.0	8.0	8.0	8.0	8.0	4.0		
Total Purged	gal	306	522	870	297	280	284	288	300	280	295	298	297	291	286	259	287	268	280	267	305	300	321	327	293	314	300	291	280	302	324	300	400	
Depth to Water	ft bgs	4.40	5.07	4.60	4.95	5.55	6.30	6.03	5.73	5.69	5.08	4.30	3.80	3.82	4.50	5.51	5.50	5.40	5.77	5.65	6.50	5.98	4.50	5.68	6.08	5.55	4.17	6.25	3.72	6.48	5.82	7.25	6.55	
Temperature	deg C	8.8	13.1	11.9	14.2	14.1	12.7	12.5	12.6	10.6	11.3	10.9	10.4	11.2	11.9	11.8	11.6	11.5	11.7	12.0	12.5	11.7	11.5	11.8	12.9	11.6	12.1	12.3	11.5	11.6	12.2	12.3	12.0	
pH	SU	7.77	7.57	7.46	7.6	7.69	7.59	7.67	7.77	7.72	7.68	7.6	7.67	7.67	7.59	7.6	7.58	7.56	7.49	7.35	7.34	7.44	7.39	7.37	7.32	7.37	7.38	7.57	7.6	7.54	7.56	7.59	7.57	
Specific Conductance	µS/cm	1224	1199	1284	1246	1226	1143	1176	1223	1280	1305	1392	1415	1351	1159	1162	1241	1278	1218	1289	1204	1235	1308	1253	1232	1277	1268	1067	1190	1142	1235	1212	1301	
Oxygen Reduction Potential	mV	-123.1	-162.2	-142.5	-185.4	-156.6	-196.8	-140.6	-148.9	-152.9	-141.0	-143.6	-125.6	-132.2	-201	-176.9	-213.20	-185.3	-219.3	-251.6	-273.0	-232.0	-194.0	-192.0	-159.9	-193.0	-221.7	-187.2	-138.1	-153.4	-208.9	-202.5	-272.2	
Lab Analytical Results:																																		
Hardness as CaCO3	mg/L	230			306			216		271				391	277	215	280	274	275	369	287	252	350	303	263	290	319	255	247	298	313	236	286	
pH (Lab)	SU	7.73			7.57			7.58		7.59				7.46	7.74	7.66	7.56	7.75	7.95	7.48	7.50	7.77	7.56	7.23	7.35	7.12	7.26	7.53	7.72	7.39	7.33	7.47	7.23	
Total Dissolved Solids (Lab)	mg/L	760			745			735		725				775	725	705	790	745	770	835	730	735	860	780	705	700	775	710	690	755	785	750	745	
Calcium	mg/L	44.0			59.7			42.4		51.7				75.7	54.0	41.6	55.6	53.4	53.8	71.5	56.7	49.1	67.8	58.2	51.5	56.5	61.6	49.6	47.4	58.1	60.9	45.4	54.8	
Magnesium	mg/L	29.1			38.2			26.7		34.5				49.1	34.6	27.1	34.4	34.2	34.1	46.4	35.4	31.4	43.8	38.3	32.7	36.1	40.0	31.7	31.1	37.2	39.1	29.8	36.1	
Sodium	mg/L	199			196			210		189				167	189	203	195	183	191	154	212	196	172	167	198	183	178	193	196	204	172	177	182	
Potassium	mg/L	3.00			3.15			3.01		3.01				3.30	3.00	3.09	2.99	3.09	3.03	3.16	3.15	3.01	3.32	3.01	3.01	<5	3.05	3.05	3.02	<5.00	3.00	<5.00	<5.00	
Alkalinity, Total	mg/L	610			660			620		615				640	585	670	625	620	595	630	640	610	615	615	590	600	576	520	605	570	620	600	770	
Alkalinity, Bicarbonate	mg/L	570			660			620		615				640	585	670	625	620	595	630	640	610	615	615	590	600	576	520	587	570	620	600	770	
Alkalinity, Carbonate	mg/L	40.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	18	<10.0	<10.0	<10.0	<10.0	
Alkalinity, Hydroxide	mg/L	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	4.33			6.12			4.30		4.44				4.53	4.32	6.21	4.39	4.30	4.35	4.34	4.23	4.35	4.59	4.36	6.19	4.76	4.76	4.62	4.34	4.27	4.91	4.89	4.93	
Fluoride	mg/L	0.347			<0.5			0.353		0.337				0.337	0.362	<0.500	0.358	0.354	0.335	0.390	0.359	0.355	0.349	0.335	<0.500	0.348	0.366	0.356	0.342	0.311	0.338	0.35	0.284	
Sulfate as SO4	mg/L	90.1			108			83.8		117				156	97.4	74.0	101	106	97.2	147	89.9	91.4	131	112	92.1	104	110	79.6	87.9	102	110	98.5	122	
Total Organic Carbon (TOC)	mg/L	2.54			3.3			2.80		3.18				3.84	5.82	2.84	3.33	3.37	3.5	3.94	3.35	3.31	3.70	3.53	3.14	3.29	3.37	3.32	3.17	3.26	3.27	3.23	3.23	
Nitrate/Nitrite as N	mg/L	<0.020			<0.020			<0.020		<0.200				<0.020	<0.400	<0.400	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Ammonia as N ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.931	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0590	NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050			<0.050			<0.050		<0.050				<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.150	<0.050	<0.250	<0.050	<0.250	<0.250	<0.250	
Arsenic	mg/L	<0.0005			<0.0005			<0.0005		<0.0005				0.0009	<0.0005	<0.0005	<0.0005	0.0005	0.0005	0.0005	<0.0005	0.0005	0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	0.0008	<0.0025	0.0005	<0.0005	<0.0025	
Cadmium	mg/L	<0.0001			<0.0001			<0.0001		<0.0001				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0025	
Copper	mg/L	0.0035			0.003			0.0021		0.0041				0.0020	0.0020	0.0030	0.0027	0.0035	0.003	0.0022	0.0025	0.0042	0.0015	0.0019	0.0012	0.0017	0.0017	0.0021	0.0007	<0.0025	0.0039	0.0038	0.0059	
Iron	mg/L	1.20			1.51			0.946		1.64				2.01	1.34	0.101	1.44	1.44	1.39	1.98	1.52	1.26	1.74	1.58	1.41	1.49	1.53	1.24	1.7	1.66	1.69	1.19	1.43	
Lead	mg/L	<0.0005			<0.0005			<0.0005		<0.0005				<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0005	<0.0025	
Manganese	mg/L	0.267		</																														

GCC Energy Hydrologic Monitoring Data

Well #2 Downgradient																																		
Year	2016										2017						2018					2019				2020				2021				
Quarter	Q1		Q2		Q3			Q4			Q1		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
Month	3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	8	11	2	5	8	11	2	6	8	12	2	5	8	11	
Sample Date	3/30	4/21	5/25	6/23	7/19	8/24	9/20	10/19	11/30	12/14	1/26	2/27	3/22	6/13	9/21	11/28	2/22	5/7	8/8	8/9	11/7	2/27	5/22	8/16	11/13	2/6	6/1	8/26	12/14	2/11	5/19	8/12	11/10	
Lab Analysis (Y/N)	Y	N	N	Y	N	N	Y	N	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																																		
Purge Flow Rate	gpm	0.50	0.50	0.50	0.50	0.50	0.50	0.50	NM	7.20	2.00	NM	NM	NM	NM	NM	0.1	1.00	0.10	1.00	0.50	0.25	0.50	0.25	0.50	0.25	0.25	0.25	0.13	0.50	0.25	0.25	0.25	
Total Purged	gal	7	6	7	7	6	6	6	6	6	6	8	8	6	8	8	6	6	11	2	6.5	7.5	13	10	9	8	12	8	7	7	12	9	7	12
Depth to Water	ft bgs	3.69	3.17	4.25	1.42	4.17	4.17	5.50	6.4	4.7	5	3.95	2.74	6.35	0.95	4.85	5.68	6.68	7.4	6.65	6.59	5.17	5.85	0.92	3.60	5.20	5.60	4.00	6.29	7.48	8.10	8.70	8.32	8.75
Temperature	deg C	6.3	10.1	13.5	18.4	19.8	14.0	14.1	13.3	10.4	12.4	7.0	4.4	8.4	17.1	12.1	11.7	9.8	8.9	14.0	11.1	11.9	9.1	8.1	10.5	11.5	10.4	9.1	11.5	11.0	9.8	9.4	11.2	12.1
pH	SU	7.58	7.6	7.6	7.64	7.68	7.73	7.53	7.66	7.66	7.71	7.57	7.68	7.78	7.56	7.66	7.52	7.59	7.48	7.84	7.20	7.15	7.41	7.34	7.23	7.19	7.32	7.41	7.44	7.56	7.50	7.54	7.57	7.53
Specific Conductance	µS/cm	899	867	804	600	369	815	877	881	904	872	908	1193	921	633	852	879	887	847	828	895	955	960	1091	1051	1083	1083	1134	1017	1099	964	939	1038	1073
Oxygen Reduction Potential	mV	-9.4	-13.7	-35.7	-66.9	-112.1	-76.3	-88.3	-82	-72.7	-81.1	-66.8	-55.7	-67	-54.3	-53.7	-63.70	-44.9	-34	-75.6	-127	-91.9	48.4	-57.8	-30.1	-5.5	25.3	-51.3	19.9	3.2	-4.8	-48.3	-26.0	-33.5
Lab Analytical Results:																																		
Hardness as CaCO3	mg/L	444			314			452		432				485	352	378	449	412	415	422	415	465	488	537	513	603	540	575	560	569	624	529	503	521
pH (Lab)	SU	7.63			7.66			7.48		7.55				7.72	7.6	7.51	7.51	7.62	7.6	7.61	7.45	7.50	7.5	7.4	7.04	7.12	7.20	7.09	7.3	7.2	7.17	7.15	7.32	7.24
Total Dissolved Solids (Lab)	mg/L	685			470			525		495				635	415	525	540	515	545	545	575	550	575	695	655	690	695	730	665	685	660	655	685	655
Calcium	mg/L	72.2			54.9			75.9		72.7				81.0	60.9	64.8	78.0	70.1	70.2	72.7	70.4	78.7	81.3	87.1	83.3	99.4	87.2	92.2	90.1	90	97.9	81.2	76.8	80.1
Magnesium	mg/L	63.9			43.1			63.8		60.8				68.7	48.5	52.6	61.8	57.4	58.2	58.4	58.2	65.2	69.2	77.6	74.0	86.3	78.2	83.7	81.3	83.7	92.2	79.2	75.6	77.9
Sodium	mg/L	22.2			16.5			19.8		20.7				21.8	16.1	17.0	20.1	19.4	19.2	19.6	19.1	21.3	22.1	23.4	21.4	25.5	23.3	24.5	23.8	24.5	26.9	23.4	23.1	23.3
Potassium	mg/L	2.04			2.1			2.16		2.05				1.94	2.22	1.64	2.19	1.76	1.68	2.00	1.82	2.08	1.97	1.94	2.06	2.40	2.04	2.00	2.06	2.22	<5.00	1.94	<5.00	2.12
Alkalinity, Total	mg/L	342			280			380		380				375	285	395	375	333	350	380	328	340	395	460	365	348	324	324	345	341	385	375	380	540
Alkalinity, Bicarbonate	mg/L	338			280			380		380				375	285	395	375	333	350	380	328	340	395	460	365	348	324	324	345	333	385	375	380	540
Alkalinity, Carbonate	mg/L	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Alkalinity, Hydroxide	mg/L	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	35.8			6.8			27.4		26.2				23.3	7.11	19.0	23.4	24.7	27.2	34.5	34.1	39.3	40.1	42.9	45.2	47.2	48.9	50.3	44.8	44.6	46	45.9	37	44.3
Fluoride	mg/L	0.230			0.298			0.272		0.256				0.228	0.313	0.263	0.246	0.244	0.224	0.259	0.281	0.263	0.244	0.246	0.221	<0.500	<0.500	<0.500	0.254	0.248	0.216	0.236	<0.500	0.210
Sulfate as SO4	mg/L	129			70			114		117				153	75.2	98.4	94.7	104	102	112	111	137	138	196	189	182	199	230	204	219	190	199	186	176
Total Organic Carbon (TOC)	mg/L	3.34			14			2.64		3.4				3.52	3.56	2.61	2.25	2.10	2.02	2.06	1.93	2.08	1.87	2.69	2.28	1.99	1.80	1.84	1.87	1.74	2.18	1.74	1.77	1.73
Nitrate/Nitrite as N	mg/L	0.042			<0.02			<0.02		0.089				<0.020	<0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
Ammonia as N ^	mg/L	NA	NA	NA	NA			NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	0.156			<0.05			<0.05		<0.050				<0.050	<0.05	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.050	<0.250	<0.050	<0.250	<0.05
Arsenic	mg/L	0.0008			0.0015			0.0010		0.0013				0.0009	0.0017	0.0006	0.0011	0.0010	0.0009	0.0012	0.0012	0.0010	0.0012	0.0011	0.0012	0.0012	0.0011	0.0009	<0.001	0.0013	<0.0025	0.0009	0.0012	<0.0025
Cadmium	mg/L	<0.0001			<0.0001			<0.0001		<0.0001				<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005	<0.0025
Copper	mg/L	0.0004			0.0005			0.0003		0.0051				0.0007	0.0002	0.0004	0.0001	0.0056	0.0002	0.0006	0.0004	0.0003	0.001	0.0016	0.0003	0.0002	<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	0.0006	0.0005	<0.0025
Iron	mg/L	0.081			0.085			0.118		<0.050				0.213	<0.050	<0.050	0.074	0.060	0.073	0.089	0.163	0.082	0.062	0.116	0.105	0.119	0.094	0.107	0.109	0.159	<0.250	<0.050	<0.250	0.076
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	<0.0010	<0.0005	<0.0025	<0.0005	<0.0005	<0.0025	
Manganese	mg/L	0.497			0.54			0.359		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									

GCC Energy Hydrologic Monitoring Data

Wiltse Well																																	
Year	2016										2017						2018				2019				2020				2021				
Quarter	Q1	Q2			Q3			Q4			Q1			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	3	4	5	6	7	8	9	10	11	12	1	2	3	6	9	11	2	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	
Sample Date	3/31	4/27	5/25	6/23	7/19	8/24	9/20	10/24	11/29	12/13	1/18	2/27	3/21	6/13	9/28	11/28	2/22	5/16	8/9	11/8	2/28	5/23	8/19	11/11	2/17	5/13	8/12	12/15	2/24	5/21	8/11	11/3	
Lab Analysis (Y/N)	Y	N	N	Y	N	N	Y	N	Y	N	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y		
Field Parameters:																																	
Purge Flow Rate	gpm	150.0	38.5	23.4	18.6	19.9	17.3	15.8	17.0	10.6	18.1	39.5	39.6	39.6	NM	18.3	23.5	11.9	12.0	18.5	12.3	28.0	38.0	18.0	17.0	35.0	24.4	16.0	18.0	15.0	12.5	8.5	24.0
Total Purged	gal	5850	4228	4229	3686	2844	2979	2637	2724	2992	2916	3595	3580	3560	2980	2712	2423	2700	2890	2783	2747	3017	3200	3010	3058	3825	3495	3200	3030	2920	3000	1800	2800
Depth to Water	ft bgs	0.35	0.00	0.85	2.15	2.99	2.60	3.32	6.85	1.90	1.95	0.30	0.00	0.00	2.05	3.40	3.40	3.35	3.93	4.13	3.78	2.40	0.05	2.47	2.68	0.43	1.60	3.18	5.65	3.64	3.70	4.55	4.10
Temperature	deg C	6.7	8.8	10.4	10.7	11.5	12.1	11.5	11.0	9.1	8.8	7.6	7.2	7.5	10.3	11.3	9.7	8.0	10.2	11.7	10.4	8.0	9.3	10.7	9.9	6.7	9.8	11.7	8.7	8.9	9.9	11.3	10.8
pH	SU	7.22	7.32	7.34	7.26	7.26	7.24	7.22	7.22	7.32	7.29	7.2	7.17	7.12	7.41	7.27	7.3	7.26	7.13	7.04	7.07	7.17	7.08	7.09	7.09	7.01	7.12	7.22	7.26	7.25	7.23	7.33	7.23
Specific Conductance	µS/cm	2043	1633	1805	1768	1478	1602	1941	1937	2014	2036	2262	2276	2085	1869	2074	2190	2232	2144	2072	2167	2170	2151	1964	1970	2171	2017	1450	1984	1739	1789	2012	2038
Oxygen Reduction Potential	mV	105.6	17.9	20.1	38.5	26.9	20.0	28.6	21.6	13.7	20.9	3.2	18.3	6.0	13.3	19.5	19.2	14.3	29.9	-52.7	-18.8	22.7	-10.6	-23.7	51.9	49.33	71.9	72.2	73.7	6.9	31.2	41.5	50.5
Lab Analytical Results:																																	
Hardness as CaCO3	mg/L	990			1050			1030		963				1040	1060	1140	1150	1090	1160	1130	1180	1150	1080	1080	1060	982	1060	1070	1130	1090	1070	1080	1080
pH (Lab)	SU	7.22			7.34			7.29		7.36				7.22	7.46	7.30	7.33	7.70	8.35	7.22	7.42	7.38	7.35	7.11	7.09	7.12	7.09	7.29	6.86	7.27	6.98	7.25	7.52
Total Dissolved Solids (Lab)	mg/L	1580			1480			1520		1520				1480	1510	1680	1740	1740	1740	1750	1720	1710	1670	1520	1480	1600	1560	1580	1540	1550	1500	1580	1640
Calcium	mg/L	197			208			206		186				205	211	219	226	211	216	221	230	226	214	214	208	191	206	206	215	208	199	206	209
Magnesium	mg/L	121			128			126		121				128	129	143	142	136	150	139	147	143	132	132	132	123	132	136	144	138	140	136	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	67.5	65.1	61.1	61.6	63.6
Potassium	mg/L	4.64			4.56			4.90		4.42				4.61	4.79	4.62	<5.00	4.73	4.98	5.01	5.00	5.01	4.77	4.92	4.85	4.33	<5.00	4.48	4.54	<5.00	4.35	<5.00	4.41
Alkalinity, Total	mg/L	460			500			470		450				410	445	510	475	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520
Alkalinity, Bicarbonate	mg/L	440			500			470		450				410	445	510	475	445	435	463	505	515	469	474	460	460	431	475	470	480	480	480	520
Alkalinity, Carbonate	mg/L	20.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Alkalinity, Hydroxide	mg/L	<10.0			<10.0			<10.0		<10.0				<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	
Chloride	mg/L	81.0			76.3			62.3		70.1				72.5	72.5	68.7	68.9	66.7	60	57.2	57.5	67.2	67.8	49.9	48.2	57.7	51.8	58.1	57.9	54.8	52.3	49	52.4
Fluoride	mg/L	0.285			<0.5			<0.5		0.3				<0.500	0.332	<0.500	<0.500	<0.500	<0.500	<0.500	0.298	0.324	0.306	<0.500	<0.500	<0.500	<0.500	0.304	0.292	0.276	0.28	<0.500	0.280
Sulfate as SO4	mg/L	671			595			656		676				731	702	779	772	832	714	733	741	801	709	627	627	711	633	704	728	683	661	679	697
Total Organic Carbon (TOC)	mg/L	3.54			4.1			3.15		3.02				3.40	3.54	3.34	3.26	3.37	3.5	3.51	3.63	3.82	4.87	4.27	3.30	4.22	3.80	3.69	3.43	3.29	3.33	3.48	3.37
Nitrate/Nitrite as N	mg/L	0.456			0.891			1.08		0.965				0.492	1.07	1.80	1.94	2.26	2.48	2.26	1.99	1.95	0.651	0.896	1.31	1.05	0.865	1.25	1.48	1.82	1.49	2.06	1.87
Ammonia as N ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.100	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA			NA			NA		NA				NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.05			<0.05			<0.05		<0.050				<0.050	<0.1	<0.050	<0.250	<0.100	<0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.050	<0.250	<0.100	<0.050	<0.100	
Arsenic	mg/L	<0.0025			<0.0025			0.0005		0.0008				0.0009	0.0006	0.0005	0.0029	0.0009	0.0006	<0.0025	<0.001	<0.0010	0.0006	<0.0010	<0.0010	<0.0010	<0.0025	<0.0010	0.0005	<0.0025	<0.0025	<0.0025	<0.0010
Cadmium	mg/L	<0.0005			<0.0005			<0.0005		<0.0001				<0.0001	<0.0001	<0.0001	<0.0005	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0005	<0.0002	<0.0001	<0.0005	<0.0025	<0.0025	<0.001
Copper	mg/L	0.0018			0.0024			0.0020		0.0038				0.0023	0.0019	0.0025	0.0097	0.0020	0.0019	0.0018	0.0030	0.002	0.0021	0.0021	0.0012	0.0020	<0.0025	0.0013	0.0006	0.0028	<0.0025	<0.0025	0.0033
Iron	mg/L	0.100			<0.05			0.060		0.136				0.286	0.161	<0.050	<0.250	0.132	0.151	0.125	0.121	0.151	0.379	0.287	0.209	0.285	<0.250	<0.100	0.216	<0.250	0.304	<0.250	0.154
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	<0.0010	<0.0005	<0.0025	<0.0025	<0.0025	<0.0010
Manganese	mg/L	0.673			0.																												

GCC Energy Hydrologic Monitoring Data

MW-HGA-4																															
Year	2016	2017												2018				2019				2020				2021					
Quarter	Q4	Q1			Q2			Q3			Q4			Q1		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11	
Sample Date	12/12	1/26	2/28	3/22	4/27	5/31	6/13	7/27	8/16	9/21	10/27	11/28	12/12	1/3	2/22	5/15	8/9	11/8	2/28	5/23	8/16	11/13	2/13	5/13	8/26	12/14	2/22	5/19	8/12	11/12	
Lab Analysis (Y/N)	Y	N	N	Y	N	N	Y	N	N	Y	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																															
Purge Flow Rate	gpm	0.5	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	NM	9.40	NM	0.1	1.5	2.00	1.00	1.12	1.00	1.00	0.25	1.00	0.25	0.25	0.13	0.25	0.13	0.25	0.25
Total Purged	gal	21	21	21	21	21	21	19.5	20	20	21	21	24	19	21	21	19	21	24	22	21	21	22	21	20	21	21	21	20	22	
Depth to Water	ft bgs	0.73	0.57	0.60	0.83	0.94	2.06	2.53	3.25	2.65	3.31	3.31	1.76	4.31	1.37	0.55	2.60	3.98	1.90	0.49	0.42	1.95	1.15	0.38	2.36	3.80	1.75	0.90	2.91	3.95	2.33
Temperature	deg C	7.3	4.8	6.4	8.1	7.2	9.9	8.4	8.6	8.8	9.0	9.2	9.0	9.3	8.8	7.8	8.1	8.7	8.8	7.6	7.7	8.5	8.8	7.9	7.4	9.2	8.6	7.8	8.2	8.9	9.2
pH	SU	7.29	7.36	7.40	7.41	7.33	7.36	7.40	7.36	7.35	7.33	7.31	7.27	7.27	7.33	7.30	7.18	7.27	7.05	7.15	7.18	7.16	7.09	7.12	7.23	7.28	7.31	7.29	7.34	7.37	7.31
Specific Conductance	µS/cm	1284	1257	1201	1155	1153	1113	1055	1099	1050	1124	1072	1171	1160	1141	1154	1098	1057	1167	1183	1102	1083	1127	1122	1093	1022	1158	975	1093	1108	1160
Oxygen Reduction Potential	mV	-72.1	-86.6	-105.1	-104.4	-74.5	-91.3	-134.7	-137.6	-131.0	-139.5	-77.3	-157.9	-70.1	-96.6	-157.3	-130.9	-230.8	-190.9	-128.3	-140.7	-130.9	-104.9	-107.8	-86.7	-61.1	-64.7	-67.9	-116.8	-104.9	-105.8
Lab Analytical Results:																															
Hardness as CaCO3	mg/L	724			611			616			522		595			561	555	524	625	613	563	544	624	563	528	571	612	630	582	515	627
pH (Lab)	SU	7.30			7.17			7.31			7.25		7.21			7.58	8.15	7.33	7.12	7.2	8.17	6.95	6.88	6.78	6.89	7.07	6.95	7.38	6.89	7.05	7.03
Total Dissolved Solids (Lab)	mg/L	855			710			715			750		775			740	730	695	770	795	695	695	715	705	685	700	665	685	680	735	790
Calcium	mg/L	147			118			121			102		118			110	108	102	124	122	110	106	123	112	101	111	122	126	114	98.7	125
Magnesium	mg/L	86.7			76.7			76.6			64.9		72.8			69.3	69	65.4	76.5	74.7	70.3	67.9	76.8	68.9	67.0	71.7	74.9	76.8	72	65.2	76.6
Sodium	mg/L	19.5			27.4			28.6			24.9		27.2			26.5	30.4	29.9	27.6	27	28.6	28.3	31.9	27.9	30.3	30.5	26.8	28.4	27.4	26.4	23.1
Potassium	mg/L	2.02			2.13			2.11			1.75		2.21			2.17	2.22	2.33	2.13	2.16	2.00	2.10	2.38	2.05	2.06	2.08	2.11	2.24	2.03	<5.00	<5.00
Alkalinity, Total	mg/L	545			465			415			465		475			460	425	410	460	455	445	455	432	435	416	485	457	475	465	470	580
Alkalinity, Bicarbonate	mg/L	545			465			415			465		475			460	425	410	460	455	445	455	432	435	416	485	457	475	465	470	580
Alkalinity, Carbonate	mg/L	ND			<10.0			<10.0			<10.0		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	ND			<10.0			<10.0			<10.0		<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	10.9			8.75			7.95			8.96		8.74			8.43	7.57	6.47	9.40	10.5	8.06	8.44	9.46	8.39	7.64	8.78	10.1	9.65	9.41	11.1	13.9
Fluoride	mg/L	0.577			0.485			0.506			0.517		0.495			0.496	0.459	0.482	0.487	0.484	0.456	0.443	0.520	0.447	0.449	0.431	0.473	0.424	0.434	<0.500	0.420
Sulfate as SO4	mg/L	240			229			192			205		204			222	190	169	201	221	186	212	190	193	181	179	187	191	184	194	199
Total Organic Carbon (TOC)	mg/L	NA			4.54			4.35			4.69		4.79			4.56	4.57	4.30	4.72	4.82	4.45	4.58	4.35	4.8	4.30	4.56	4.67	4.31	4.36	4.55	4.84
Nitrate/Nitrite as N	mg/L	<0.020			<0.020			<0.020			<0.020		<0.100			<0.020	<0.020	<0.020	<0.020	0.173	<0.020	<0.020	<0.020	<0.020	<0.100	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA			NA			NA			NA		NA			NA	NA	NA	NA	NA	NA	0.528	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA			NA			NA			NA		NA			NA	NA	NA	NA	NA	NA	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	0.423			<0.050			<0.050			<0.050		<0.050			<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.050	<0.250	<0.250
Arsenic	mg/L	0.0030			0.0029			0.0028			<0.0005		0.0035			0.0037	0.0034	0.0036	0.0032	0.0031	0.0029	0.0028	0.0033	0.0022	0.0025	0.0026	0.0038	0.0036	0.0033	0.0034	0.0027
Cadmium	mg/L	<0.0001			<0.0001			<0.0001			<0.0001		<0.0001			<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0001	<0.0005	<0.0005	<0.0005
Copper	mg/L	0.0006			0.0008			0.0002			0.0004		0.0002			0.0006	0.0008	0.0004	0.0008	<0.0010	0.0003	0.0004	0.0002	0.0005	<0.0010	<0.0010	<0.0005	0.0006	0.0007	0.0009	<0.0025
Iron	mg/L	3.71			7.29			7.32			0.378		7.84			7.60	7.92	8.55	8.44	8.35	7.98	8.38	9.76	8.59	8.22	8.95	9.31	9.6	9.29	8.52	8.44
Lead	mg/L	<0.0005			<0.0005			<0.0005			<0.0005		<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Manganese	mg/L	4.07			2.78			2.37			2.03		2.11			1.99	1.81	1.58	2.13	2.56	2.12	1.84	1.78	1.77	1.49	1.66	2.36	2.54	2.51	1.79	2.86
Mercury	mg/L	ND			<0.0002			<0.0002			<0.0002		<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	0.0013			0.0024			0.0027			0.0028		0.0027			0.0030	0.0031	0.0038	0.0029	0.0026	0.0027	0.0029	0.0031	0.0025	0.0030	0.0032	0.0029	0.0027	0.003	0.0033	0.0024
Selenium	mg/L	<0.001			0.0030			<0.00																							

GCC Energy Hydrologic Monitoring Data

MW-1-A																														
Year	2017								2018								2019				2020				2021					
Quarter	Q2	Q3				Q4				Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month	6	7	8	9	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11	
Sample Date	6/7	7/18	8/23	9/7	9/26	10/26	11/16	12/5	1/2	2/9	3/22	4/11	5/10	--	7/23	8/7	11/1	2/20	5/30	8/14	11/5	2/12	5/28	9/1	11/16	2/15	5/20	8/23	11/17	
Lab Analysis (Y/N)	Y	N	N	N	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																														
Purge Flow Rate	gpm	NM	NM*	NM*	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	***	0.12	0.10	0.09	0.12	0.12	0.06	0.25	0.25	0.25	0.13	0.13	0.13	0.13	0.25	0.25	
Total Purged	gal	12.8	NM*	NM*	NM	NM	2.0	2.0	1.0	1.5	2	1.5	1	1.3		1.5	1.5	1.6	1.0	1.5	1.1	1.5	1.0	1.0	1.0	1.3	1.0	2.0	1.0	1.3
Depth to Water	ft bgs	215.42	NM*	215.92	215.54	216.33	216.31	216.47	216.58	216.21	216.47	216.47	216.54	216.54		216.63	216.63	216.65	216.55	216.43	216.33	216.13	216.05	215.85	215.56	215.80	215.60	215.53	215.71	215.65
Temperature	deg C	17.7	NM*	NM*	10.7	9.7	9.1	9.1	8.7	9.5	9.0	8.7	9.6	9.2		9.9	10.0	8.9	7.5	10.3	9.6	9.7	8.1	9.1	9.6	9.4	8.4	9.6	10.1	9.2
pH	SU	7.78	NM*	NM*	7.35	7.38	7.29	7.28	7.25	7.19	7.37	7.28	6.8	6.97		6.99	7.05	7.01	7.13	6.96	7.05	7.00	7.13	7.18	7.22	7.24	7.19	7.30	7.35	7.17
Specific Conductance	µS/cm	1362	NM*	NM*	1555	1563	1616	1650	1693	1700	1723	1735	1647	1761		1734	1815	1781	1776	1681	1757	1737	1797	1855	1664	1670	1550	1647	1691	1792
Oxygen Reduction Potential	mV	-34.6	NM*	NM*	-54.7	-46.5	-50.0	-48.3	-49.6	-44.6	-52.8	-37.5	142.4	0.4		-26.4	-33.2	101.4	-11.8	25.4	-18.7	3.6	12.7	4.2	-20.1	111.4	23.8	-13.4	-6.5	38.2
Lab Analytical Results:																														
Hardness as CaCO3	mg/L	124				133		130			159			156			160	174	159	153	148	150	159	165	161	168	168	150	158	157
pH (Lab)	SU	7.74				7.35		7.33			7.22			7.45			7.17	7.27	7.13	7.03	7.14	6.92	7.19	6.91	7.23	7.17	7.22	7.13	7.1	7.05
Total Dissolved Solids (Lab)	mg/L	975				1080		1120			1100			1150			1040	1130	1160	1150	1150	1140	1190	1150	1150	1170	1250	1150	1190	1150
Calcium	mg/L	24.7				25.8		24.9			30.5			29.7			30.9	34.0	31.2	29.8	27.9	29.0	30.9	31.6	30.6	32.8	32.1	28.3	29.9	30.0
Magnesium	mg/L	15.1				16.7		16.6			20.1			19.9			20.1	21.5	19.7	19.1	18.9	18.8	19.9	20.8	20.6	20.9	21.4	19.2	20.3	20.0
Sodium	mg/L	324				329		325			348			327			333	358	357	319	348	333	337	349	348	353	357	314	333	340
Potassium	mg/L	1.98				2.02		<5.00			<5.00			2.12			2.23	2.47	2.34	2.18	2.29	2.12	2.13	<5.00	2.29	<3.00	<5.00	2.18	<5.00	2.34
Alkalinity, Total	mg/L	375				450		380			415			353			385	395	375	355	368	420	360	340	325	366	400	400	370	440
Alkalinity, Bicarbonate	mg/L	375				450		380			415			353			385	395	375	355	368	420	360	340	325	366	400	400	370	440
Alkalinity, Carbonate	mg/L	<10.0				<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	<10.0				<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	2.75				2.16		<5.00			2.19			<5.00			2.12	2.20	2.74	2.33	2.72	2.66	2.74	2.71	2.74	2.88	2.73	2.34	2.78	<5.00
Fluoride	mg/L	0.268				0.245		<0.500			0.240			<0.5			0.260	0.240	0.266	0.242	0.252	0.246	0.234	0.228	0.24	0.264	0.212	0.223	0.24	<0.5
Sulfate as SO4	mg/L	427				432		511			518			522			515	511	508	494	537	495	506	532	510	508	553	531	507	458
Total Organic Carbon (TOC)	mg/L	5.03				1.36		1.58			1.51			1.54			1.60	1.75	1.61	1.67	1.59	1.50	1.55	1.55	1.49	1.57	1.58	1.49	1.57	1.51
Nitrate/Nitrite as N	mg/L	<0.200				<0.400		<0.100			<0.020			<0.020			<0.020	0.028	<0.020	<0.020	<0.020	0.020	<0.020	0.046	<0.020	<0.020	<0.020	<0.020	0.036	<0.020
Ammonia as N ^	mg/L	NA				NA		NA			NA			NA			NA	NA	NA	NA	NA	0.387	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA				NA		NA			NA			NA			NA	NA	NA	NA	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050				<0.050		<0.250			<0.250			<0.050			<0.050	<0.100	<0.100	<0.050	<0.050	<0.050	<0.100	<0.250	<0.050	<0.050	<0.250	<0.050	<0.250	<0.100
Arsenic	mg/L	<0.0005				<0.0005		<0.0025			<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0005	<0.0015	<0.0015	<0.0025	<0.001
Cadmium	mg/L	<0.0001				<0.0001		<0.0005			<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0005	<0.0001	<0.0003	<0.0015	<0.0025	<0.001
Copper	mg/L	0.0043				0.0057		0.0045			0.0066			0.0041			0.0048	0.0048	0.0075	0.0064	0.0040	0.0147	0.0034	0.0012	0.004	0.0024	0.0026	0.0059	0.0068	0.0086
Iron	mg/L	0.128				0.367		<0.250			0.590			0.614			0.644	0.647	0.581	0.589	0.613	0.510	0.614	0.559	0.637	0.579	0.572	0.61	0.592	0.647
Lead	mg/L	<0.0005				<0.0005		<0.0025			<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0015	<0.0015	<0.0015	<0.0025	<0.0010
Manganese	mg/L	0.0260				0.0218		0.0259			0.0279			0.026			0.0242	0.0282	0.0281	0.0235	0.0270	0.0248	0.0303	0.0329	0.032	0.0313	0.0367	0.0316	0.0328	0.0287
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	0.0007				0.0010		<0.0025			<0.0025			0.0009			0.0008	0.0007	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0015	<0.0015	<0.0015	<0.0025	<0.0010
Selenium	mg/L	<0.0010				<0.0010		<0.0050			<0.0050			<0.0010			<0.0010	<0.0010	<0.0020	<0.0010	<0.0010	<0.0010	<0.0020	<0.0020	<0.0050	<0.0030	<0.0030	<0.0030	<0.0050	<0.0020
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	11.5	11.3	10.7	10.7	11.6
Silicon	mg/L	5.74				5.56		3.87			5.24			5.25			5.31	5.62	5.2	5.23	5.43	5.13	5.19	4.85	5.17	5.37	5.27	5.00	5.01	5.42
Uranium	mg/L	0.0004				0.0002		<0.0005			<0.0005			0.0003			0.0002	0.0003	0.0002	0.0001	0.0001	0.0001	<0.0010	<0.0010	<0.0025	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010
Zinc	mg/L	0.0270				0.0088		<0.0100			<0.0100			0.0051			<0.0100	<0.002	<0.0040	0.0022	<0.0040	0.0020	<0.0040	<0.0040	<0.0100	<0.0060	<0.0060	<0.0100	<0.004	

Notes & Definitions:

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

- ^ one-time analysis

yes or no

gpm gallons per minute

g C degrees Celsius

SU standard pH units

cm microsier

mV millivolts

g/L milligram per liter

ci/L picocuries per liter

NM not measured (field)

NA not analyzed (lab)

1. "*<*" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO₃.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-1-MI																														
Year		2017						2018								2019				2020				2021						
Quarter		Q2	Q3		Q4		Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
Month		6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11	
Sample Date		6/7	7/18	8/23	9/26	10/26	11/16	12/5	1/2	2/9	3/22	4/11	5/10	--	7/23	8/7	11/1	2/20	5/30	8/14	11/5	2/12	5/28	9/1	11/16	2/15	5/20	8/23	11/17	
Lab Analysis (Y/N)		Y	N	N	N	N	N	N	N	N	N	N	N	N	N	Y	N	N	N	N	N	N	N	N	N	N	N	N	N	
Field Parameters:																														
Purge Flow Rate	gpm	NM	NM*	NM	NM	dry	dry	dry	dry	dry	dry	dry	***	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	
Total Purged	gal	19.5	NM*	<0.5	NM																									
Depth to Water	ft bgs	259.99	NM*	258.29	258.34																									
Temperature	deg C	15.8	NM*	11.8	21.7																									
pH	SU	8	NM*	7.94	7.86																									
Specific Conductance	µS/cm	2032	NM*	2137	2119																									
Oxygen Reduction Potential	mV	160.5	NM*	65.7	61.4																									
Lab Analytical Results:																														
Hardness as CaCO3	mg/L	231																												
pH (Lab)	SU	8.14																												
Total Dissolved Solids (Lab)	mg/L	1520																												
Calcium	mg/L	46.7																												
Magnesium	mg/L	27.9																												
Sodium	mg/L	470																												
Potassium	mg/L	2.55																												
Alkalinity, Total	mg/L	600																												
Alkalinity, Bicarbonate	mg/L	600																												
Alkalinity, Carbonate	mg/L	<10.0																												
Alkalinity, Hydroxide	mg/L	<10.0																												
Chloride	mg/L	7.69																												
Fluoride	mg/L	1.14																												
Sulfate as SO4	mg/L	739																												
Total Organic Carbon (TOC)	mg/L	5.14																												
Nitrate/Nitrite as N	mg/L	0.103																												
Aluminum	mg/L	<0.050																												
Arsenic	mg/L	0.0029																												
Cadmium	mg/L	<0.0001																												
Copper	mg/L	0.0067																												
Iron	mg/L	<0.050																												
Lead	mg/L	0.0010																												
Manganese	mg/L	0.0445																												
Mercury	mg/L	<0.0002																												
Molybdenum	mg/L	0.0796																												
Selenium	mg/L	0.0028																												
Silica (SiO2)	mg/L	11.6																												
Silicon	mg/L	5.44																												
Uranium	mg/L	0.0505																												
Zinc	mg/L	1.52																												

Notes & Definitions:

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

- Y/N
- yes or no
- gpm
- gallons per minute
- deg C
- degrees Celsius
- SU
- standard pH units
- µS/cm
- microsiemens per centimeter
- mV
- millivolts
- mg/L
- milligram per liter
- pCi/L
- picocuries per liter
- NM
- not measured (field)
- NA
- not analyzed (lab)

1. "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-1-C																														
Year		2017							2018								2019				2020				2021					
Quarter		Q2	Q3				Q4			Q1			Q2		Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month		6	7	8	9	9	10	11	12	1	2	3	4	5	6	7	8	11	2	5	8	11	2	5	9	11	2	5	8	11
Sample Date		6/7	7/18	8/23	9/7	9/26	10/26	11/16	12/5	1/2	2/9	3/22	4/11	5/10	--	7/23	8/7	11/18	2/20	5/30	8/14	11/5	2/12	5/28	9/1	11/16	2/15	5/20	8/23	11/17
Lab Analysis (Y/N)		Y	N	N	N	Y	N	Y	N	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																														
Purge Flow Rate	gpm	NM	NM*	NM*	NM	NM	NM	NM	NM	MM	0.1	NM	0.1	0.1	***	0.05	0.1	0.10	0.06	0.02	0.03	0.01	0.01	0.10	0.05	0.05	0.05	0.05	0.01	0.13
Total Purged	gal	5	NM*	NM*	NM	NM	1.00	1.00	1.00	1	1	1	1	1.25		1	1	1.10	1.00	1.10	1.00	1.00	1.00	0.75	0.80	1.00	1.00	2.00	1.00	1.25
Depth to Water	ft bgs	216.5	NM*	216.91	216.95	216.59	216.52	216.48	216.52	216.38	216.38	216.37	216.35	216.41		216.41	216.05	216.04	216.41	216.20	216.02	216.04	216.12	216.10	216.41	216.66	216.66	216.66	216.66	216.66
Temperature	deg C	16.0	NM*	NM*	NM	12.9	11.7	10.6	7.0	9.7	9.6	6.7	9.2	10.5		20.0	14.1	9.7	5.4	9.8	10.4	11.1	6.4	9.5	11.2	9.7	7.0	10.7	12.1	10.1
pH	SU	7.52	NM*	NM*	NM	7.17	7.16	7.15	7.17	7.11	7.19	7.32	7.03	7.05		6.91	6.97	6.93	7.09	6.80	6.65	6.70	6.79	6.85	6.93	6.99	7.40	7.18	7.16	7.15
Specific Conductance	µS/cm	2446	NM*	NM*	NM	2725	2738	2739	2778	2778	2738	2751	2700	2749		2693	2675	2751	2621	3139	3172	3080	3005	3002	2653	2709	2410	2249	2290	2554
Oxygen Reduction Potential	mV	74.3	NM*	NM*	NM	77.4	31.7	23.9	13.0	6.2	-4.3	-29.6	-15.3	-42.3		-41.8	-32.5	-110.0	-23.4	27.6	10.5	51.0	50.7	-57.7	21.8	49.6	57.5	-16.8	0.0	-7.0
Lab Analytical Results:																														
Hardness as CaCO3	mg/L	498				1290		1180			1190			1130			1120	1180	1010	1820	1840	1700	1600	1590	1400	1420	1320	953	975	920
pH (Lab)	SU	8.35				7.36		7.34			7.22			7.2			7.20	7.02	7.24	6.93	6.67	6.63	6.80	6.62	6.83	7.12	7.08	6.86	7.04	6.89
Total Dissolved Solids (Lab)	mg/L	2020				2440		2360			2360			2340			2170	2200	1960	2880	2890	2750	2610	2460	2420	2450	2330	1910	1850	1840
Calcium	mg/L	96.0				234		216			219			203			203	219	188	340	342	318	301	294	248	265	241	175	178	168
Magnesium	mg/L	62.8				172		155			156			150			148	154	131	237	240	219	207	207	189	183	173	126	129	122
Sodium	mg/L	506				242		253			260			239			239	255	265	146	119	119	143	155	168	194	206	196	214	234
Potassium	mg/L	11.4				3.81		<5.00			<5.00			3.07			3.04	2.65	3.13	<5.00	<5.00	<5.00	3.05	<5.00	2.82	<5.00	<5.00	2.68	<5.00	<3.00
Alkalinity, Total	mg/L	530				700		540			570			580			560	410	525	530	518	505	515	490	445	520	580	480	485	640
Alkalinity, Bicarbonate	mg/L	530				700		540			570			580			560	410	525	530	518	505	515	490	445	520	580	480	485	640
Alkalinity, Carbonate	mg/L	<10.0				<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	<10.0				<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	24.2				6.97		8.03			7.78			7.75			5.97	6.22	6.36	10.2	9.31	8.78	8.54	8.20	8.15	7.14	7.13	5.3	5.04	7.12
Fluoride	mg/L	1.59				0.864		0.955			1.03			0.96			0.888	0.924	0.975	0.67	0.525	0.565	0.615	0.695	0.705	0.750	0.804	0.654	0.716	0.755
Sulfate as SO4	mg/L	1090				1350		1230			1160			1210			1090	1080	1070	1630	1730	1520	1400	1370	1280	1180	1150	940	872	886
Total Organic Carbon (TOC)	mg/L	4.56				2.84		2.12			2.21			2.2			2.35	2.37	2.32	2.62	2.52	2.30	2.30	2.32	2.2	2.13	2.26	1.92	1.93	1.91
Nitrate/Nitrite as N	mg/L	<2.00				<0.400		<0.100			<0.020			<0.020			0.036	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA				NA		NA			NA			NA			NA	NA	NA	NA	NA	0.140	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA				NA		NA			NA			NA			NA	NA	NA	NA	NA	<0.100	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050				<0.050		<0.250			<0.250			<0.05			<0.05	<0.100	<0.100	<0.250	<0.250	<0.250	<0.150	<0.250	<0.050	<0.050	<0.250	<0.100	<0.250	<0.150
Arsenic	mg/L	0.0029				0.0016		<0.0025			<0.0025			0.0051			0.0052	0.0035	0.0038	0.0048	0.0034	<0.0025	<0.0025	0.0019	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0010
Cadmium	mg/L	<0.0001				<0.0001		<0.0005			<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0002	<0.0005	<0.0005	<0.0003	<0.0005	<0.0001	<0.0005	<0.0025	<0.0025	<0.0010
Copper	mg/L	0.0088				0.0085		0.0036			0.0052			0.003			0.0049	0.0033	0.0054	0.0057	0.0014	0.0096	<0.0025	<0.0015	<0.0025	<0.0005	<0.0025	0.0042	0.0043	0.0064
Iron	mg/L	<0.050				<0.050		<0.250			<0.250			0.643			1.01	1.12	0.988	2.3	0.819	0.543	0.570	0.606	0.619	0.855	0.769	0.552	0.573	0.724
Lead	mg/L	<0.0005				<0.0005		<0.0025			<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0010	<0.0025	<0.0025	<0.0015	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0010
Manganese	mg/L	0.0744				0.0853		0.0959			0.0989			0.153			0.140	0.106	0.0807	0.075	0.0562	0.0512	0.0537	0.0473	0.0445	0.0496	0.0482	0.0419	0.0383	0.0346
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	0.0164				0.0049		<0.0025			<0.0025			0.0006			<0.0025	<0.0005	<0.0010	<0.0005	<0.0010	<0.0025	<0.0025	<0.0015	<0.0025	<0.0025	<0.0025	<0.0025	<0.0025	<0.001
Selenium	mg/L	0.0136				0.0012		<0.0050			<0.0050			<0.001			<0.0050	0.0011	<0.0020	0.0016	0.0023	<0.0050	<0.0050	<0.0030	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0020
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	14.8	14.4	15.0	14.5	14.8
Silicon	mg/L	4.94				7.77		6.16			6.94			7.09			6.87	6.78	6.55	7.75	8.07	7.65	7.35	6.47	6.6	6.93	6.75	7.00	6.79	6.94
Uranium	mg/L	0.0500				0.0044		0.0028			0.0024			0.0025			0.0022	0.0021	0.0016	0.002	0.0025	0.0023	<0.0025	0.0020	<0.0025	<0.0015	<0.0025	<0.0025	<0.0025	0.0010
Zinc	mg/L	0.0293				0.0294		<0.0100			<0.0100			0.0062			<0.0100	0.0055	<0.0040	0.0085	0.0077	<0.0100	<0.0100	<0.0060	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0040

Notes & Definitions:

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

- ^ one-time analysis

Y/N yes or no

gpm gallons per minute

eg C degrees Celsius

SU standard pH units

/cm microsiemens per centimeter

mV millivolts

mg/L milligram per liter

Ci/L **picocuries per liter**

NM not measured (field)

NA not analyzed (lab)

1. "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO₃.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-2-A																										
Year	2017							2018							2019				2020				2021			
Quarter	Q1	Q2	Q3		Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month	3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11
Sample Date	3/30	6/7	7/18	8/23	10/30	11/16	12/5	1/2	2/9	3/22	4/11	5/10	8/7	11/1	2/20	5/29	8/14	11/6	2/11	5/27	9/1	11/24	2/15	5/20	8/24	11/17
Lab Analysis (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																										
Purge Flow Rate	gpm	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
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-2-MI																										
Year	2017							2018							2019				2020				2021			
Quarter	Q1	Q2	Q3		Q4		Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11
Sample Date	3/30	6/7	7/18	8/23	10/30	11/16	12/5	1/2	2/9	3/22	4/11	5/10	8/7	11/1	2/20	5/29	8/14	11/6	2/11	5/27	9/1	11/24	2/15	5/20	8/24	11/17
Lab Analysis (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																										
Purge Flow Rate	gpm	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
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-C																										
Year	2017							2018							2019				2020				2021			
Quarter	Q1	Q2	Q3		Q4		Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	3	6	7	8	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	9	11	2	5	8	11
Sample Date	3/30	6/7	7/18	8/23	10/30	11/16	12/5	1/2	2/9	3/22	4/11	5/10	8/7	11/1	2/20	5/29	8/14	11/6	2/11	5/27	9/1	11/24	2/15	5/20	8/24	11/17
Lab Analysis (Y/N)	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																										
Purge Flow Rate	gpm	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
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
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/cm	microsiemens per centimeter
mV	millivolts
mg/L	milligram per liter
pCi/L	picocuries per liter
NM	not measured (field)
NA	not analyzed (lab)

1. " < " values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO₃.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-3-A																												
Year		2017							2018							2019				2020				2021				
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11
Sample Date		3/27	6/30	7/18	8/24	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	8/14	11/12	2/4	5/26	8/31	12/1	2/10	5/18	8/10	11/9
Lab Analysis (Y/N)		Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	N
Field Parameters:																												
Purge Flow Rate	gpm	0.50	NM	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	0.10	0.10	0.12	0.15	0.06	0.25	0.12	0.13	0.13	0.13	0.05	0.13	0.15	0.13
Total Purged	gal	30.0	2.0	NM	NM	NM	1.0	1.0	1.0	1.3	1.5	1.5	1.0	1.3	1.0	1.1	1.5	1.3	1.3	1.5	1.1	1.2	1.5	1.3	1.3	1.5	1.5	1.5
Depth to Water	ft bgs	297.35	298.24	297.45	298.24	298.11	298.12	298.01	298.05	298.37	298.04	297.86	297.76	298.17	298.55	298.27	297.85	296.79	297.27	297.33	296.47	296.87	297.21	297.02	296.97	296.72	297.47	297.46
Temperature	deg C	11.7	13.2	19.5	12.6	12.3	12.5	11.7	12.0	11.8	11.7	12.2	11.9	13.5	13.5	11.9	11.8	12.1	NM	13.1	11.5	13.2	13.1	11.9	12.1	12.4	13.6	12.2
pH	SU	8.82	8.75	8.56	8.67	8.72	8.64	8.61	8.57	8.54	8.52	8.61	8.21	8.38	8.30	8.31	8.28	8.31	8.13	8.51	8.11	8.26	8.23	8.39	8.53	8.46	8.42	8.47
Specific Conductance	µS/cm	2535	2446	2115	2524	2470	2430	2483	2494	2528	2506	2458	2415	2253	2336	2391	2355	2309	NM	2204	2211	2249	2112	2192	1930	1525	2091	2127
Oxygen Reduction Potential	mV	-269.0	-101.5	-55.3	-87.4	-142.3	-124.5	-125.6	-146.8	-120.3	-125.2	-181.6	-135.8	-138.2	-155.8	-164.6	-145.9	-132.3	-138.6	-120.1	-65.7	-156.8	-98.8	-89.3	-101.3	-157.1	-149.0	-156.8
Lab Analytical Results:																												
Hardness as CaCO3	mg/L	7.53	12.6			12.6		10.4			11.5			11.2	12.6	14.1	11.9	10.7	10.4	11.1	10.8	10.3	11.1	9.41	10.5	8.14	8.89	8.68
pH (Lab)	SU	8.63	8.69			8.53		8.29			8.45			8.36	8.37	8.24	8.28	8.29	8.27	8.39	8.09	7.68	8.16	8.13	8.13	8.22	8.21	8.19
Total Dissolved Solids (Lab)	mg/L	1630	1670			1630		1690			1680			1670	1600	1540	1500	1530	1520	1510	1500	1460	1380	1460	1410	1350	1420	1360
Calcium	mg/L	2.00	3.67			3.63		3.27			3.33			3.2	3.71	4.15	3.55	3.16	3.08	3.34	3.14	3.07	3.02	2.83	3.07	2.48	2.59	2.53
Magnesium	mg/L	0.616	0.823			0.859		0.550			0.776			0.774	0.811	0.913	0.739	0.692	0.655	0.680	0.723	0.645	0.866	0.568	0.698	0.475	0.586	0.577
Sodium	mg/L	566	585			589		551			562			542	562	605	543	525	553	528	520	507	510	505	536	471	462	448
Potassium	mg/L	1.72	2.02			2.04		<5.00			<2.00			1.8	<2.00	2.17	<2.00	1.92	<2.00	<5.00	<3.00	<5.00	<5.00	<5.00	<5.00	<3.00	<5.00	<2.00
Alkalinity, Total	mg/L	530	470			500		490			430			480	480	475	540	450	459	420	460	430	440	470	520	530	465	485
Alkalinity, Bicarbonate	mg/L	380	470			440		460			360			480	420	385	330	430	423	420	460	400	440	450	520	530	465	435
Alkalinity, Carbonate	mg/L	150	<10.0			60.0		30.0			70.0			<10.0	60.0	90.0	210	20	36.0	<10.0	<10.0	30.0	<10.0	20	<10.0	<10.0	<10.0	50.0
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	16.1	17.4			18.5		16.9			16.4			16.1	15.1	16.0	15.2	15	15.0	14.7	13.9	13.9	13.5	14	13.5	14	14.1	14.6
Fluoride	mg/L	0.464	0.488			0.535		<0.500			<0.500			<0.5	NA	0.383	0.406	0.404	0.396	<0.500	0.370	0.374	0.366	0.372	0.336	0.352	0.366	0.314
Sulfate as SO4	mg/L	729	802			840		730			812			756	706	682	716	699	724	633	637	656	624	644	600	601	599	515
Total Organic Carbon (TOC)	mg/L	3.52	10.0			7.26		6.07			5.32			4.7	4.62	4.52	4.15	4.10	3.84	3.81	3.42	3.48	3.39	3.15	3.16	3.18	3.01	3.02
Nitrate/Nitrite as N	mg/L	<0.100	<0.100			<0.020		<0.020			<0.020			<0.020	<0.020	<0.020	0.266	<0.020	<0.020	<0.020	0.024	0.026	0.039	0.032	<0.020	0.024	<0.020	<0.020
Ammonia as N ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.354	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.0730	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	<0.050			<0.050		<0.250			<0.100			<0.050	<0.050	<0.100	<0.100	<0.050	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100
Arsenic	mg/L	0.0025	<0.0025			<0.0025		<0.0025			<0.0025			0.0006	<0.0025	<0.0010	<0.0010	<0.0025	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	0.0026	0.0006	0.001	0.0018
Cadmium	mg/L	<0.0001	<0.0005			<0.0005		<0.0005			<0.0005			<0.0001	<0.0001	<0.0002	<0.0002	<0.0005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010
Copper	mg/L	0.0061	0.0081			0.0080		0.0079			0.0236			0.0063	0.0117	0.0086	0.0137	0.0078	0.0067	0.0039	0.0037	0.0021	0.0051	0.0055	0.0037	0.0157	0.0156	0.0113
Iron	mg/L	<0.050	<0.050			<0.050		<0.250			<0.100			<0.05	<0.05	<0.100	<0.100	<0.050	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100
Lead	mg/L	<0.0005	<0.0025			<0.0025		<0.0025			<0.0025			<0.0005	<0.0005	<0.0010	<0.0010	<0.0025	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.001	<0.0010	<0.0010
Manganese	mg/L	0.0042	0.0251			0.0194		0.0269			0.0232			0.018	0.0222	0.0187	0.0172	0.0185	0.0166	0.0140	0.0162	0.0136	0.0120	0.0125	0.0128	0.0121	0.0096	0.0101
Mercury	mg/L	<0.0002	<0.0002			<0.0002		<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	0.0005	0.0274			0.0091		0.0078			0.0065			0.0046	0.0043	0.0033	0.003	0.003	0.0018	0.0027	0.0022	0.0015	<0.0025	<0.0025	<0.0025	0.0015	0.0013	<0.001
Selenium	mg/L	0.0577	<0.0050			<0.0050		<0.0050			<0.0050			0.0109	<0.0050	0.0028	0.0039	<0.005	0.0020	<0.0020	<0.0020	0.0033	0.0086	<0.0050	0.129	0.0276	0.0167	0.0855
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	11.2	11.3	10.1	10.7	10.9
Silicon	mg/L	4.70	5.10			5.41		3.58			5.18			5.17	5.62	5.97	5.46	5.16	5.95	5.53	5.43	4.92	5.14	5.22	5.28	4.73	4.98	5.11
Uranium	mg/L	0.0002	0.0040			0.0051		0.0036			0.0030			0.0026	0.0026	0.0027	0.0018	0.0014	0.0012	0.0011	0.0010	<0.0025	<0.0025	<0.0025	<0.0025	<0.0010	<0.0010	<0.0010

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-3-MI																												
Year		2017							2018							2019				2020				2021				
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11
Sample Date		3/27	6/30	7/18	8/16	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	8/21	11/12	2/4	5/26	8/31	12/1	2/10	5/18	8/10	11/9
Lab Analysis (Y/N)		Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																												
Purge Flow Rate	gpm	0.50	NM	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	0.10	0.10	0.12	0.12	0.06	0.25	0.50	0.25	0.13	0.13	0.10	0.13	0.13	0.25
Total Purged	gal	19.0	2.0	NM	NM	NM	1.0	1.0	1.0	1.3	1.5	1.5	1.0	1.3	1.0	1.1	1.5	1.3	2.0	1.0	1.5	1.3	1.8	1.3	1.3	1.5	1.5	1.3
Depth to Water	ft bgs	304.49	241.15	240.46	240.53	240.46	240.44	240.44	240.58	240.73	240.55	240.65	240.84	241.04	241.97	242.13	242.15	242.32	246.55	243.07	242.85	243.05	243.6	243.9	243.93	244.25	244.28	244.15
Temperature	deg C	10.0	12.6	22.0	12.9	11.0	12.1	11.7	11.7	11.9	11.3	11.9	11.8	12.6	13.0	12.4	11.6	11.3	13.2	12.3	11.6	12.6	12.8	11.7	11.5	12.8	13.0	11.9
pH	SU	9.34	8.94	8.46	8.90	8.74	8.90	8.86	8.86	8.84	8.83	8.84	8.51	8.48	8.49	8.46	8.51	8.55	8.71	8.75	8.71	8.92	9.01	9.09	9.03	9.06	9.13	9.11
Specific Conductance	µS/cm	1907	1699	1402	1598	1737	1729	1745	1786	1790	1810	1771	1772	1727	1709	1746	1753	1739	1691	1739	1758	1737	1560	1555	1519	1232	1647	1765
Oxygen Reduction Potential	mV	-87.0	-54.5	-26.4	-108.2	-107.3	-113.8	-124.2	-163.1	-136.0	-131.4	-160.7	-99.9	-103.9	-127.8	-176.5	-113.0	-84.5	43.9	-130.8	-104.3	-174.5	-111.0	-132.4	-94.6	-120.4	-142.9	-163.3
Lab Analytical Results:																												
Hardness as CaCO3	mg/L	4.85	8.73			9.02		7.75			9.92			8.65	8.63	8.88	7.63	6.84	7.98	6.64	6.50	7.25	6.39	5.94	6.63	5.06	5.39	5.21
pH (Lab)	SU	8.95	8.75			8.72		8.72			8.66			8.56	8.58	8.34	8.5	8.45	8.58	8.62	8.61	8.59	8.87	8.77	8.72	8.84	8.81	8.88
Total Dissolved Solids (Lab)	mg/L	1550	1120			1140		1080			1170			1210	1110	1120	1120	1170	1010	1130	1130	1130	1060	1160	1120	1110	1180	1130
Calcium	mg/L	1.32	2.32			2.34		2.06			2.22			1.91	1.95	2.03	1.87	1.7	2.04	1.73	1.63	1.76	1.62	1.42	1.66	1.28	1.34	1.25
Magnesium	mg/L	0.374	0.714			0.775		0.632			1.07			0.945	0.911	0.926	0.715	0.629	0.703	0.561	0.591	0.694	0.570	0.579	0.606	0.454	0.5	0.508
Sodium	mg/L	420	430			440		411			459			417	446	476	434	419	454	437	437	427	431	431	468	410	403	390
Potassium	mg/L	2.15	2.21			1.93		<5.00			<2.00			1.63	<2.00	<2.00	1.39	1.65	<2.00	<5.00	<2.00	<5.00	<3.00	<4.00	<5.00	<2.00	<2.00	<2.00
Alkalinity, Total	mg/L	740	675			700		660			700			680	730	720	685	755	720	690	705	680	625	770	690	690	705	705
Alkalinity, Bicarbonate	mg/L	510	555			600		570			600			500	630	610	485	605	590	610	645	550	465	690	450	550	555	565
Alkalinity, Carbonate	mg/L	230	120			100		90.0			100			180	100	110	200	150	130	80.0	60.0	130	160	80	240	140	150	140
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	8.66	10.1			10.7		10.6			10.7			10.7	8.54	8.83	9.21	9.25	10.2	9.13	9.21	9.61	9.45	10	9.84	10.5	10.4	10.4
Fluoride	mg/L	0.952	1.34			1.26		1.26			1.30			1.2	1.16	1.19	1.21	1.22	1.19	1.19	1.13	1.13	1.09	1.12	1.03	1.09	1.07	0.980
Sulfate as SO4	mg/L	165	241			247		254			245			250	226	230	232	229	236	224	227	231	222	110	223	227	228	230
Total Organic Carbon (TOC)	mg/L	8.34	14.8			10.9		10.3			9.24			8.67	7.83	7.28	6.73	6.56	6.17	5.78	5.58	6.07	5.79	5.46	5.34	5.33	5.4	5.26
Nitrate/Nitrite as N	mg/L	<0.020	<0.020			<0.020		<0.020			<0.020			<0.02	<0.02	<0.02	<0.020	<0.020	<0.020	<0.020	0.034	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.317	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.348	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	0.102			<0.050		<0.250			<0.100			<0.050	<0.050	<0.10	<0.050	<0.050	0.167	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100
Arsenic	mg/L	0.0134	0.0167			0.0131		0.0135			0.0160			0.0152	0.0127	0.0104	0.0149	0.0107	0.0142	0.0099	0.0093	0.0086	0.0061	0.007	0.0083	0.0091	0.0091	0.0078
Cadmium	mg/L	<0.0001	<0.0005			<0.0005		<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0005	<0.0001	<0.0002	<0.0002	<0.0005	<0.0005	<0.0004	<0.0005	<0.0005	<0.0010	<0.0010
Copper	mg/L	0.0055	0.0058			0.0065		0.0059			0.0122			0.0048	0.0071	0.0073	0.0068	0.0063	0.0049	0.0037	0.0024	<0.0025	0.0046	0.0045	0.0031	0.0131	0.0143	0.0097
Iron	mg/L	<0.050	<0.100			<0.050		<0.250			<0.100			<0.05	<0.05	<0.1	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100
Lead	mg/L	0.0024	<0.0025			<0.0025		<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0025	<0.0005	<0.0010	<0.0010	<0.0025	<0.0025	<0.0020	<0.0025	<0.0005	<0.0010	<0.0010
Manganese	mg/L	0.0022	0.0058			0.0033		0.0045			0.0049			0.006	0.0054	0.0072	0.0078	0.0082	0.0079	0.0099	0.0095	0.0102	0.0072	0.007	0.0069	0.0057	0.0058	0.0054
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	0.0061	0.0211			0.0148		0.0152			0.0170			0.016	0.0149	0.0158	0.0157	0.0167	0.0277	0.0372	0.0204	0.0195	0.0149	0.0163	0.0162	0.016	0.0149	0.0140
Selenium	mg/L	0.0013	<0.0050			<0.0050		<0.0050			0.0010			0.0019	<0.0050	<0.002	0.0034	<0.005	<0.0010	<0.0020	<0.0020	<0.0050	<0.0050	<0.004	0.0462	0.0033	<0.0020	0.0091
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	9.11	9.64	8.11	8.77	8.82
Silicon	mg/L	3.73	3.82			4.23		2.50			4.36			4.13	4.44	4.76	4.18	4.14	4.55	4.42	4.11	3.85	4.13	4.26	4.51	3.79	4.1	4.12
Uranium	mg/L	0.0049	0.0084			0.0140		0.0124			0.0125			0.0126	0.0111	0.0110	0.011	0.0085	0.0080	0.0070	0.0063	0.0059	0.0043	0.0049	0.0049	0.0043	0.0041	0.0033
Zinc	mg/L	0.0405	<0.0100			<0.0100		<0.0100			<0.0020			0.0023	0.0023	<0.0040	0.0028	<0.0100	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.

GCC Energy Hydrologic Monitoring Data

MW-3-C																												
Year		2017							2018							2019				2020				2021				
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	9	11	3	5	8	12	2	5	8	11
Sample Date		3/27	6/30	7/27	8/24	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/7	8/8	11/6	2/27	5/21	9/17	11/12	3/13	5/26	8/31	12/1	2/10	5/18	8/10	11/10
Lab Analysis (Y/N)		Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																												
Purge Flow Rate	gpm	0.50	NM	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.13	0.13	0.10	0.03	0.08	0.13	0.13	0.13	0.13	0.13
Total Purged	gal	20.0	2.0	NM	NM	NM	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.3	1.3	1.1	1.3	1.5	10.0	1.5	11.0	1.1	1.3	1.5	1.3	1.5	1.3	1.5
Depth to Water	ft bgs	304.21	296.3	296.93	296.87	297.43	297.46	297.43	297.35	297.01	296.66	296.57	296.62	296.78	297.12	296.80	296.39	295.56	295.70	295.50	299.35	294.99	294.60	295.26	295.97	295.25	295.70	295.68
Temperature	deg C	10.5	12.9	13.1	12.5	11.8	12.7	11.5	11.7	11.7	11.4	11.6	12.2	13.0	13.3	11.5	11.0	11.4	13.5	12.5	11.3	13.4	15.0	14.0	9.9	12.3	15.6	9.6
pH	SU	8.61	8.57	8.51	8.46	8.44	8.48	8.41	8.48	8.43	8.43	8.45	8.25	8.28	8.26	8.17	8.28	8.29	8.31	8.20	7.98	8.44	8.45	8.73	8.71	8.50	8.71	8.85
Specific Conductance	µS/cm	3549	3588	3815	4112	4351	4412	4659	4596	4923	4864	5063	5019	4916	4953	5127	5155	5184	5144	5144	4921	3143	5039	4251	4426	3755	4571	5244
Oxygen Reduction Potential	mV	-129.0	-87.2	-137.5	-128.8	-149.9	-198.3	-200.7	-222.2	-187.9	-183.5	-155.4	-154.7	-161.4	-180.5	-217.6	-185.4	-188.5	-151.8	-184.4	-155.0	-240.5	-174.4	-150.0	-202.7	-149.6	-255.3	-227.4
Lab Analytical Results:																												
Hardness as CaCO3	mg/L	14.4	11.8			15.1		14.9			16.1			40.3	17.9	21.7	17.3	16.8	18.6	18.6	18.3	16.0	18.1	16.9	18.5	14.8	16.9	16.7
pH (Lab)	SU	8.5	8.48			8.35		8.28			8.35			8.34	8.31	8.24	8.2	8.23	8.31	8.12	7.98	8.41	8.36	8.36	8.43	8.38	8.47	8.87
Total Dissolved Solids (Lab)	mg/L	2130	2360			3070		3310			3540			3610	3520	3360	3300	3440	3500	3390	3220	3180	3170	3280	3200	3230	3300	3200
Calcium	mg/L	3.60	2.87			3.50		3.58			3.81			7.28	4.01	4.70	4.05	3.74	4.30	4.23	4.26	3.81	3.97	3.72	4.25	3.59	3.84	3.76
Magnesium	mg/L	1.31	1.12			1.55		1.44			1.59			5.38	1.92	2.41	1.75	1.8	1.91	1.94	1.86	1.58	1.98	1.84	1.92	1.42	1.77	1.78
Sodium	mg/L	796	890			1100		1130			1200			1350	1220	1460	1270	1100	1360	1300	1280	1240	1250	1250	1360	1220	1220	1170
Potassium	mg/L	3.47	3.24			4.01		<5.00			<10.0			<5.00	<5.00	<5.00	<5.00	5.24	<5.00	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<6.00	<5.00	<5.00
Alkalinity, Total	mg/L	1490	1570			1690		1880			1910			1760	1730	2050	2000	2110	2190	2130	2160	2050	1820	2090	2170	2130	2140	2230
Alkalinity, Bicarbonate	mg/L	1360	1480			1650		1830			1810			1600	1670	1900	1830	2000	2020	2070	2000	1800	1690	1970	1710	1910	1950	1950
Alkalinity, Carbonate	mg/L	130	90.0			40.0		50.0			100			160	60.0	150	170	110	170	60.0	160	250	130	120	460	220	190	280
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	NA	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	182	330			477		506			549			544	524	561	577	575	620	542	549	555	552	578	574	577	582	462
Fluoride	mg/L	4.89	4.94			4.52		4.34			4.15			3.52	3.84	4.04	4.04	3.91	3.78	3.66	3.61	3.51	3.47	3.53	3.37	3.34	3.36	3.16
Sulfate as SO4	mg/L	73.4	73.5			46.4		24.5			<10.0			<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
Total Organic Carbon (TOC)	mg/L	10.6	58.5			219		251			337			343	306	141	122	129	132	107	81.9	23.4	17.1	15.7	15.7	16.3	15.7	16.4
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	<0.02	<0.020	<0.020	<0.020	<0.020	<0.040
Ammonia as N ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.500	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.212	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	<0.100			<0.050		<0.250			<0.500			1.47	<0.500	<0.250	<0.250	<0.500	<0.250	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.300	<0.250	<0.250
Arsenic	mg/L	0.0115	0.0088			0.0098		0.0091			0.0194			0.0168	0.0148	0.0155	0.0218	0.0171	0.0192	0.0188	0.0087	0.0133	0.0106	0.0125	0.0113	0.0163	0.0195	0.0170
Cadmium	mg/L	<0.0001	<0.0010			<0.0010		<0.0005			<0.0005			<0.0005	<0.0005	<0.0005	<0.0005	<0.001	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.001	<0.0010	<0.0025	<0.0025	<0.0025
Copper	mg/L	0.0109	0.0147			0.0174		0.0160			0.0409			0.0183	0.0257	0.0227	0.0223	0.0168	0.0102	0.0109	0.0069	0.0064	0.0136	0.0156	0.0102	0.0499	0.0434	0.0323
Iron	mg/L	<0.050	<0.050			<0.050		<0.250			<0.500			0.252	<0.500	<0.250	<0.250	0.344	0.328	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.300	0.464	0.310
Lead	mg/L	0.0085	<0.0050			<0.0050		<0.0025			<0.0025			<0.0025	<0.0025	<0.0025	<0.0025	<0.005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025
Manganese	mg/L	0.0091	0.0188			0.0178		0.0202			0.0307			0.0275	0.0243	0.0252	0.0483	0.063	0.0378	0.0266	0.0245	0.0175	0.0102	0.0079	0.0052	0.0046	0.0034	0.0032
Mercury	mg/L	<0.0002	<0.0002			<0.0002		<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	0.0143	0.0291			0.0241		0.0241			0.0221			0.0189	0.0155	0.0140	0.0134	0.0121	0.0081	0.0075	0.0082	0.0085	0.0076	0.0075	0.008	0.0069	0.0061	0.0061
Selenium	mg/L	0.0233	0.0121			0.0149		0.0240			0.0383			0.0268	0.0232	0.0261	0.0464	0.0203	0.0203	0.0173	0.0125	0.0129	0.0135	0.0191	0.027	0.0411	0.0372	0.0319
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	<10.7	<10.7	7.48	8.4	8.33
Silicon	mg/L	3.66	4.14			4.28		2.81			<5.00			4.53	4.06	5.01	3.85	3.9	4.24	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	3.5	3.93	3.89
Uranium	mg/L	0.0091	0.0102			0.0137		0.0100			0.0091			0.0087	0.0089	0.0113	0.0077	0.0046	0.0053	0.0034	0.0045	0.0033	<0.0050	<0.0050	<0.0050	0.0025	0.0025	<0.0025
Zinc	mg/L																											

Notes & Definitions:

- ^

one-time analysis

Y/N

yes or no

gpm

gallons per minute

deg C

degrees Celsius

SU

standard pH units

µS/cm

microsiemens per centimeter

mV

millivolts

mg/L

milligram per liter

pCi/L

picocuries per liter

NM

not measured (field)

NA

not analyzed (lab)
1.

"<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2.

Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3.
3.

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

GCC Energy Hydrologic Monitoring Data

MW-4-A																												
Year	2017								2018								2019				2020				2021			
Quarter	Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11	
Sample Date	3/29	6/30	7/19	8/23	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/14	8/8	11/5	2/27	5/22	8/15	11/12	2/6	5/26	8/27	11/25	2/10	5/18	8/10	11/10	
Lab Analysis (Y/N)	Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	
Field Parameters:																												
Purge Flow Rate	gpm	NM	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.06	0.13	0.03	0.03	0.13	0.13	0.05	0.13	0.25	0.20	
Total Purged	gal	19.0	2.0	1.5	0.5	1.0	1.0	1.0	1.0	1.3	1.5	1.5	1.0	1.5	1.5	1.5	1.3	1.1	1.0	1.5	1.2	1.3	1.3	1.3	1.3	1.5	1.3	
Depth to Water	ft bgs	338.6	334.96	335.59	334.79	334.81	334.86	332.29	334.09	334.31	334.73	334.81	335.07	335.58	336.06	336.73	335.6	335.07	335.21	335.16	336.35	337.16	336.88	336.13	335.46	335.72	335.93	336.16
Temperature	deg C	15.6	16.8	25.5	17.6	11.9	11.6	10.8	10.1	10.9	9.8	11.4	10.9	17.8	12.9	11.6	11.1	10.4	13.6	11.6	10.3	12.5	14.0	12.3	10.3	11.2	12.1	11.6
pH	SU	8.61	8.29	8.55	7.98	8.41	8.32	8.38	8.32	8.33	8.37	8.41	8.19	8.20	8.10	8.12	8.15	8.08	8.02	8.11	8.07	8.19	8.27	8.30	8.25	8.30	8.38	8.38
Specific Conductance	µS/cm	2163	2053	1876	2096	2180	2165	2186	2261	2259	2267	2207	2214	2183	2192	2246	2205	2237	2201	2211	2271	2273	2165	2249	2052	1618	2205	2268
Oxygen Reduction Potential	mV	28.6	54.0	60.2	61.7	-8.6	-27.0	-12.3	-51.8	-35.2	-75.9	-117.3	-77.9	-81.8	-137.5	-157.6	-92.3	-89.3	-54.3	-19.8	15.3	-71.3	-11.5	-10.6	29.0	-63.4	-48.7	-77.3
Lab Analytical Results:																												
Hardness as CaCO3	mg/L	9.16	9.85			7.77		7.11			7.73			7.84	7.69	8.81	7.76	7.31	8.62	8.00	8.19	7.46	7.87	7.77	8.87	7.02	5.81	7.54
pH (Lab)	SU	8.2	8.40			8.36		8.40			8.28			8.31	8.21	8.24	8.05	8.08	8.15	8.02	8.11	7.90	8.19	8.16	8.04	8.15	8.09	8.21
Total Dissolved Solids (Lab)	mg/L	1470	1470			1450		1500			1490			1470	1430	1350	1450	1410	1540	1490	1500	1480	1460	1560	1370	1430	1510	1470
Calcium	mg/L	2.23	2.43			1.76		1.87			1.81			1.75	1.71	1.92	1.77	1.68	1.94	1.82	1.88	1.67	1.79	1.73	2.04	1.65	1.41	1.76
Magnesium	mg/L	0.871	0.916			0.823		0.591			0.778			0.846	0.832	0.973	0.809	0.756	0.914	0.837	0.850	0.798	0.826	0.836	0.917	0.704	0.555	0.765
Sodium	mg/L	515	537			513		511			507			528	531	568	535	515	548	529	551	498	533	531	565	507	411	488
Potassium	mg/L	1.57	1.75			1.63		<5.00			<2.00			1.5	<2.00	<2.00	<2.00	<2.00	4.75	<5.00	<3.00	<5.00	<5.00	<5.00	<5.00	<3.00	<5.00	<2.00
Alkalinity, Total	mg/L	635	560			630		590			530			560	575	575	545	565	575	544	560	585	605	538	620	590	580	670
Alkalinity, Bicarbonate	mg/L	635	560			590		560			490			560	555	575	505	544	535	528	560	545	565	530	620	530	580	670
Alkalinity, Carbonate	mg/L	<10.0	<10.0			40.0		30.0			40.0			<10.0	20.0	<10.0	40	32	40.0	16.0	<10.0	40.0	40	<10.0	<10.0	60	<10.0	<10.0
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	9.56	9.66			10.3		10.3			10.0			9.94	9.55	8.60	8.93	8.99	8.91	8.76	8.83	8.89	10.1	9.15	8.79	9.15	9.17	9.04
Fluoride	mg/L	<0.400	<0.400			<0.500		<0.500			<0.500			<0.500	<0.500	0.143	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.500	<0.200	<0.200	<0.200	<0.200	<0.200
Sulfate as SO4	mg/L	594	588			783		594			579			561	522	450	567	584	615	559	557	580	542	607	561	577	593	551
Total Organic Carbon (TOC)	mg/L	6.63	11.7			3.52		3.27			3.46			3.59	3.60	3.59	3.47	3.40	3.33	3.25	3.10	3.49	3.48	3.27	3.42	3.42	3.23	3.28
Nitrate/Nitrite as N	mg/L	0.035	<0.020			<0.020		<0.020			<0.020			<0.02	<0.02	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.312	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	<0.0500	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	<0.050			<0.050		<0.250			<0.100			<0.05	<0.05	<0.100	<0.100	<0.100	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100
Arsenic	mg/L	0.0016	<0.0025			<0.0025		<0.0025			0.0019			0.0005	<0.0025	<0.0010	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	0.0005	<0.0010	<0.0010
Cadmium	mg/L	<0.0001	<0.0005			<0.0005		<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0002	<0.0002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010
Copper	mg/L	0.0053	0.0093			0.0076		0.0073			0.0124			0.0077	0.0105	0.0084	0.0081	0.0061	0.0120	0.0037	0.0034	0.0020	0.0056	0.0053	0.0036	0.0135	0.0161	0.0126
Iron	mg/L	<0.050	<0.050			<0.050		<0.250			<0.100			<0.050	<0.050	<0.100	<0.100	<0.100	<0.100	<0.250	<0.150	<0.250	<0.250	<0.250	<0.250	<0.150	<0.250	<0.100
Lead	mg/L	0.0014	<0.0025			<0.0025		<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010
Manganese	mg/L	0.0044	0.0063			0.0044		0.0040			0.0035			0.0033	<0.0075	0.0034	0.0032	0.0031	0.0026	0.0016	0.0033	0.0031	0.0029	0.0035	0.0029	0.0029	0.003	0.0030
Mercury	mg/L	<0.0002	<0.0002			<0.0002		<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	0.0009	0.0275			<0.0025		<0.0025			0.0005			<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0005	<0.0010	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010
Selenium	mg/L	0.0016	<0.0050			<0.0050		<0.0050			0.0014			0.0025	<0.0050	<0.0020	0.0036	<0.0010	<0.0010	<0.0020	<0.0020	<0.0020	<0.0050	<0.0050	<0.0050	<0.0010	<0.0020	<0.0040
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	9.96	10.4	8.98	8.57	10.0
Silicon	mg/L	4.75	4.97			4.67		3.20			4.43			4.7	4.77	5.22	4.51	4.59	5.14	4.89	4.79	4.00	4.42	4.65	4.87	4.2	4.01	4.67
Uranium	mg/L	0.0016	<0.0005			<0.0005		0.0005			0.0003			<0.0001	<0.0005	<0.0002	<0.0002	<0.0001	<0.0002	<0.0002	<0.0010	<0.0010	<0.0025	<0.0025	<0.0025	<0.0005	<0.0010	<0.0010
Zinc	mg/L	0.269	0.0319			<0.0100		<0.0100			0.0022			0.0024	<0.0100	<0.0040	<0.0040	0.0033	<0.0020	<0.0040	<0.0040	<0.0040	<0.0100	<0.0100	<0.0100	0.0021	<0.0040	<0.0040

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 | picrocuries per liter |
| NM | not measured (field) |
| NA | not analyzed (lab) |

1. "*<*" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards.
2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO₃.
3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.

GCC Energy Hydrologic Monitoring Data

MW-4-MI																												
Year		2017							2018							2019				2020				2021				
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	11	2	5	8	11
Sample Date		3/30	6/16	7/27	8/23	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/14	8/8	11/5	2/27	5/22	8/15	11/12	2/6	5/26	8/27	11/25	2/10	5/18	8/10	11/10
Lab Analysis (Y/N)		Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																												
Purge Flow Rate	gpm	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.10	NM	0.10	0.10	0.10	0.10	0.06	0.06	0.13	0.25	0.13	0.13	0.13	0.13	0.13	0.13	0.25	0.25
Total Purged	gal	0.5	6.5	NM	NM	1.0	1.0	1.0	1.0	1.3	1.5	1.5	1.0	1.3	1.8	1.6	2.0	1.3	1.1	1.0	1.3	1.2	1.3	1.3	1.5	1.3	1.5	1.5
Depth to Water	ft bgs	378.2	330.15	330.94	330.85	330.81	330.8	330.74	330.67	330.52	330.42	330.53	330.5	329.62	331.1	336.57	331.1	331.06	331.92	332.1	332.5	332.87	332.45	333.29	333.22	329.27	333.57	333.65
Temperature	deg C	15.0	14.6	12.9	12.5	11.4	10.7	11.3	11.4	11.2	11.0	10.5	10.9	10.1	11.8	11.3	11.1	10.8	13.3	11.6	11.8	12.2	12.9	11.8	10.8	11.6	12.1	11.7
pH	SU	9.08	8.91	8.78	8.79	8.76	8.76	8.73	8.67	8.62	8.48	8.53	8.01	8.50	8.14	8.25	8.38	8.23	8.14	8.26	8.18	8.42	8.45	8.57	8.57	8.60	8.59	8.59
Specific Conductance	µS/cm	1581	1668	1731	1708	1784	1794	1804	1833	1848	1856	1841	1816	1739	1756	1808	1716	1800	1830	1776	1795	1794	1730	1777	1605	1258	1711	1761
Oxygen Reduction Potential	mV	155.2	64.7	9.8	35.2	-29.6	-37.3	-111.5	-89.2	-112.5	-151.3	-145.7	-117.7	-130.0	-178.2	-202.3	-140.4	-154.7	-127.3	-76.8	-50.6	-131.2	-92.0	-87.7	-53.9	-105.9	-97.8	-118.1
Lab Analytical Results:																												
Hardness as CaCO3	mg/L	5.43	8.71			7.07		4.20			6.01			5.88	6.06	6.39	5.35	4.93	5.65	3.31	4.70	<3.31	5.19	2.84	4.91	3.79	4.59	4.53
pH (Lab)	SU	8.83	8.59			8.63		8.51			8.47			8.48	8.31	8.47	8.35	8.3	8.44	8.08	8.33	8.02	8.28	8.38	8.21	8.38	8.28	8.59
Total Dissolved Solids (Lab)	mg/L	1160	1170			1180		1180			1220			1140	1120	1100	1130	1130	1140	1120	1110	1110	1070	1170	1130	1100	1130	1090
Calcium	mg/L	1.53	2.32			1.88		1.68			1.64			1.55	1.56	1.60	1.44	1.3	1.51	1.32	1.21	1.22	1.32	1.14	1.97	1.05	1.23	1.09
Magnesium	mg/L	0.392	0.707			0.579		<0.500			0.465			0.49	0.524	0.580	0.428	0.408	0.458	<0.500	0.406	<0.500	0.459	<0.400	<0.500	0.285	0.37	0.441
Sodium	mg/L	408	458			449		452			447			471	470	500	462	458	496	477	441	460	459	458	476	431	427	418
Potassium	mg/L	1.46	<2.00			1.73		<5.00			<2.00			1.39	<2.00	<2.00	1.43	1.77	2.03	<5.00	<2.00	<5.00	<3.00	<4.00	<5.00	<2.00	<2.00	<2.00
Alkalinity, Total	mg/L	965	915			1100		985			965			955	968	995	510	890	970	978	985	1030	1020	1010	990	1020	985	1140
Alkalinity, Bicarbonate	mg/L	775	825			880		885			875			865	896	885	420	650	880	886	895	935	940	965	910	900	865	1020
Alkalinity, Carbonate	mg/L	190	90.0			220		100			90.0			90	72.0	110	90	240	90.0	92.0	90.0	90.0	80	40	80	120	120	120
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	2.18	7.50			8.78		9.11			8.74			7.99	5.68	5.38	5.98	5.98	5.83	5.47	5.37	5.11	5.02	4.97	4.89	4.85	4.91	4.98
Fluoride	mg/L	4.72	5.02			5.09		5.10			5.02			4.82	4.84	4.94	5.49	5.44	5.38	5.31	5.11	5.16	5	5.27	4.92	5.03	5.2	4.78
Sulfate as SO4	mg/L	17.4	64.7			76.6		77.5			68.6			54.4	48.3	47.6	38.7	34.4	31.9	28.2	24.6	21.9	20	18.7	17.1	16.1	16.4	13.7
Total Organic Carbon (TOC)	mg/L	2.64	6.49			8.58		9.53			9.54			9.25	8.94	8.48	8.37	8.25	7.81	6.42	6.63	6.55	5.93	5.77	5.78	5.36	5.29	5.09
Nitrate/Nitrite as N	mg/L	<0.020	<0.020			<0.020		<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.240	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	0.280	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	<0.100			<0.050		<0.250			<0.100			<0.050	<0.100	<0.100	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100
Arsenic	mg/L	0.0099	0.0220			0.0131		0.0122			0.0139			0.0153	0.014	0.0119	0.0164	0.0111	0.0116	0.0107	0.0127	0.0139	0.0084	0.0092	0.0088	0.011	0.0099	0.0093
Cadmium	mg/L	<0.0001	<0.0001			<0.0005		<0.0005			<0.0001			<0.0001	<0.0001	<0.0002	<0.0001	<0.0001	<0.0001	<0.0002	<0.0002	<0.0001	<0.0005	<0.0004	<0.0005	<0.0005	<0.0010	<0.0010
Copper	mg/L	0.0059	0.0058			0.0071		0.0070			0.0079			0.0063	0.0071	0.0078	0.0087	0.0153	0.0051	0.0027	0.0028	0.0020	0.0052	0.0045	0.004	0.0103	0.0134	0.0107
Iron	mg/L	<0.050	<0.100			<0.050		<0.250			<0.100			<0.050	<0.100	<0.100	<0.050	<0.050	<0.100	<0.250	<0.100	<0.250	<0.150	<0.200	<0.250	<0.100	<0.100	<0.100
Lead	mg/L	0.0010	<0.0005			<0.0025		<0.0025			<0.0005			<0.0005	<0.0005	<0.0010	<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0025	<0.0020	<0.0025	<0.0005	<0.0010	<0.0010
Manganese	mg/L	0.0020	0.0066			0.0081		0.0124			0.0080			0.007	0.0068	0.0084	0.0091	0.0084	0.0084	0.0073	0.0085	0.0086	0.0086	0.0092	0.0094	0.0073	0.0075	0.0077
Mercury	mg/L	<0.0002	<0.0002			<0.0002		<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	0.0020	0.0160			0.0127		0.0134			0.0151			0.0119	0.0115	0.0129	0.0121	0.0119	0.0108	0.0101	0.0096	0.0091	0.0081	0.0089	0.0082	0.0076	0.0068	0.0065
Selenium	mg/L	<0.0010	0.0012			<0.0050		<0.0050			<0.0010			0.0022	0.0113	<0.0020	0.002	<0.0010	<0.0010	<0.0020	<0.0020	<0.0010	<0.005	<0.0040	0.0143	<0.0010	<0.0020	<0.0040
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	8.88	9.26	7.82	8.69	8.54
Silicon	mg/L	3.40	3.75			4.11		2.50			3.88			4.16	4.34	4.81	4.14	4.24	4.76	4.45	3.84	3.65	3.92	4.15	4.33	3.66	4.06	3.99
Uranium	mg/L	0.0043	0.0126			0.0184		0.0169			0.0183			0.0173	0.0151	0.0191	0.0269	0.0176	0.0168	0.0145	0.0163	0.0195	0.0121	0.0139	0.0137	0.0115	0.0112	0.0097
Zinc	mg/L	0.113	0.0697			<0.0100		<0.0100			<0.0020																	

Notes & Definitions:

^ one-time analysis

Y/N yes or no

gpm gallons per minute

deg C degrees Celsius

SU standard pH units

µS/cm microsiemens per centimeter

mV millivolts

mg/L milligram per liter

pCi/L picocuries per liter

NM not measured (field)

NA not analyzed (lab)

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

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

3. Industry

GCC Energy Hydrologic Monitoring Data

MW-4-C																												
Year		2017							2018							2019				2020				2021				
Quarter		Q1	Q2	Q3			Q4			Q1			Q2		Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month		3	6	7	8	9	10	11	12	1	2	3	4	5	8	11	2	5	8	11	2	5	8	12	2	5	8	11
Sample Date		3/30	6/16	7/27	8/23	9/28	10/27	11/17	12/7	1/3	2/21	3/23	4/12	5/14	8/8	11/5	2/27	5/22	8/15	11/12	2/4	5/26	8/27	12/1	2/10	5/18	8/10	11/10
Lab Analysis (Y/N)		Y	Y	N	N	Y	N	Y	N	N	Y	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																												
Purge Flow Rate	gpm	NM	NM	NM	NM	NM	NM	NM	NM	NM	0.1	NM	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Total Purged	gal	7.0	1.5	NM	NM	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.0	1.5	1.0	1.3	1.5	1.3	1.1	1.0	1.5	1.2	1.5	1.3	1.5	1.5	1.5	1.5
Depth to Water	ft bgs	328.33	314.05	309.87	306.86	303.96	303.80	302.47	304.80	282.35	281.30	303.30	304.05	NM	302.55	302.17	302.45	303.93	304.93	305.73	306.44	304.90	307.80	308.05	308.65	308.58	309.32	309.90
Temperature	deg C	13.3	17.4	12.7	12.0	13.9	11.8	11.2	11.0	11.7	10.8	12.5	11.4	12.4	12.9	11.5	11.3	11.2	12.5	11.7	11.2	12.7	13.0	11.4	10.0	11.4	12.3	11.7
pH	SU	8.33	7.62	7.68	7.70	7.69	7.75	7.72	7.79	7.80	7.88	7.94	7.75	7.79	7.76	7.79	7.87	7.86	7.81	7.85	7.87	7.97	8.00	8.05	8.02	8.05	8.12	8.11
Specific Conductance	µS/cm	3792	5944	5997	5885	5813	5721	5782	5604	5834	5903	5628	5792	5592	5583	5775	5710	5712	5930	5636	5729	5636	5429	5665	5106	4047	5454	5687
Oxygen Reduction Potential	mV	57.3	20.3	-101.5	-111.2	-103.7	-117.4	-109.0	-120.1	-123.8	-154.3	-131.3	-134.9	-129.3	-157.6	-209.0	-160.1	-180.1	-156.8	-148.7	-135.9	-147.7	-132.1	-128.7	-106.2	-100.6	-142.3	-173.0
Lab Analytical Results:																												
Hardness as CaCO3	mg/L	46.3	55.9			38.9		30.0			26.5			26.2	25.9	28.6	23.6	22.5	25.2	24.4	24.0	22.7	23	21.8	25.6	19.6	21.9	20.9
pH (Lab)	SU	7.61	7.77			7.79		7.98			7.84			7.97	7.96	8.27	7.9	7.92	7.95	7.85	7.95	7.76	7.92	7.94	7.96	7.97	7.96	8.08
Total Dissolved Solids (Lab)	mg/L	3230	4050			3750		3780			3730			3660	3650	3590	3580	3590	3610	3610	3580	3570	3510	3610	3720	3540	3600	3630
Calcium	mg/L	13.6	13.7			9.15		7.45			6.32			6.15	5.90	6.60	5.5	5.21	5.83	5.61	5.57	5.31	5.3	5.15	5.98	4.64	5.07	4.77
Magnesium	mg/L	2.99	5.26			3.90		2.76			2.61			2.62	2.72	2.94	2.39	2.3	2.57	2.53	2.44	2.30	2.36	2.18	2.58	1.95	2.25	2.19
Sodium	mg/L	908	1510			1490		1400			1410			1400	1410	1590	1410	1370	1440	1430	1440	1390	1400	1400	1520	1310	1340	1270
Potassium	mg/L	4.38	5.71			6.07		<10.0			<10.0			<5.00	<5.00	5.36	<5.00	<5.00	5.42	<10.0	<5.00	<10.0	<10.0	<10.0	<10.0	<6.00	<5.00	<5.00
Alkalinity, Total	mg/L	1250	2360			2780		2680			2600			2410	2480	2450	2470	2550	2500	2470	2480	2460	2500	2950	2470	2500	2410	2630
Alkalinity, Bicarbonate	mg/L	1250	2360			2780		2640			2600			2330	2480	2450	2470	2350	2390	2410	2420	2340	2390	2880	2430	2360	2290	2410
Alkalinity, Carbonate	mg/L	<10.0	<10.0			<10.0		40.0			<10.0			80	<10.0	<10.0	<10.0	200	110	60.0	60.0	120	110	70	40	140	120	220
Alkalinity, Hydroxide	mg/L	<10.0	<10.0			<10.0		<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
Chloride	mg/L	181	550			587		608			592			573	533	590	575	554	580	525	528	555	543	565	557	553	572	561
Fluoride	mg/L	1.29	2.04			2.17		2.43			2.53			2.52	2.48	2.54	2.64	2.62	2.59	2.51	2.41	2.36	2.34	2.37	2.21	2.16	2.28	2.04
Sulfate as SO4	mg/L	534	487			70.2		26.0			34.5			27	18.7	11.2	5.07	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
Total Organic Carbon (TOC)	mg/L	30	6.42			5.08		3.64			3.23			3.23	2.80	3.46	3.24	2.62	2.63	4.18	2.23	2.50	2.31	3.72	4.57	4.92	4.81	4.70
Nitrate/Nitrite as N	mg/L	<2.00	<0.500			<0.400		<0.100			<0.020			<0.020	<0.020	<0.020	0.061	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	NA	0.424	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA	NA			NA		NA			NA			NA	NA	NA	NA	NA	NA	NA	0.182	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050	<0.050			<0.050		<0.500			<0.500			<0.250	<0.250	<0.250	<0.250	<0.250	<0.250	<0.500	<0.250	<0.500	<0.500	<0.500	<0.500	<0.300	<0.250	<0.250
Arsenic	mg/L	0.0059	0.0119			0.0128		0.0152			0.0246			0.0195	0.0202	0.0164	0.0211	0.0171	0.0178	0.0179	0.0203	0.0195	0.015	0.0182	0.0177	0.0212	0.0248	0.0213
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	<0.0005	<0.001	<0.001	<0.0010	<0.0025	<0.0025
Copper	mg/L	0.0125	0.0243			0.0221		0.0208			0.0482			0.0389	0.0280	0.0230	0.0249	0.0382	0.0198	0.0107	0.0111	0.0069	0.0151	0.0148	0.0111	0.0464	0.0499	0.0370
Iron	mg/L	<0.050	<0.050			<0.050		<0.500			<0.500			0.373	0.397	0.474	0.279	0.391	0.522	0.619	0.591	0.551	<0.500	0.553	0.837	0.355	0.793	0.551
Lead	mg/L	<0.0005	<0.0050			<0.0050		<0.0050			<0.0025			<0.0025	<0.0025	<0.0025	<0.0025	<0.0005	<0.0025	<0.0025	<0.0025	<0.0025	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025
Manganese	mg/L	0.0269	0.0772			0.0554		0.0571			0.0647			0.0529	0.0381	0.0283	0.0268	0.0174	0.0162	0.0096	0.0209	0.0103	0.008	0.0076	0.0059	0.0063	0.005	0.0047
Mercury	mg/L	<0.0002	<0.0002			<0.0002		<0.0002			<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0050	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
Molybdenum	mg/L	0.0526	0.115			0.0138		0.0106			0.0086			0.0072	0.0071	0.0057	0.0074	0.007	0.0056	0.0047	0.0045	0.0044	<0.005	<0.005	<0.0050	0.0037	0.0031	0.0031
Selenium	mg/L	0.0248	0.0231			0.0214		0.0269			0.0378			0.0317	0.0260	0.0211	0.0339	0.0195	0.0195	0.0156	0.0140	0.0129	0.0112	0.0182	<0.0100	0.0186	0.028	0.0269
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	<10.7	10.8	8.35	9.54	9.37
Silicon	mg/L	4.61	5.88			6.02		<5.00			<5.00			5.16	5.24	6.00	4.7	4.89	5.29	5.14	4.62	<5.00	<5.00	<5.00	5.06	3.91	4.46	4.38
Uranium	mg/L	0.0297	0.121			0.0984		0.0545			0.0311			0.0311	0.0277	0.0246	0.0215	0.0154	0.0086	0.0073	0.0063	0.0039	<0.0050	<0.0050	<0.0050	<0.0025	<0.0025	<0.0025
Zinc	mg/L	0.0156	0.0265			<0.0200		<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 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-6-A																				
	Year	2018	2019										2020				2021			
	Quarter	Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Month	12	1	2	3	4	5	6	7	8	9	11	2	5	8	11	2	5	8	11
	Sample Date	12/28	1/31	2/21	3/21	4/23	5/20	6/19	7/23	8/15	9/24	11/7	2/5	5/14	8/11	11/25	2/9	5/17	8/9	11/9
	Lab Analysis (Y/N)	Y	N	Y	N	N	Y	N	N	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	Y
Field Parameters:																				
Purge Flow Rate	gpm	NM	NM	0.10	2.00	0.03	0.03	0.03	0.06	0.03	0.02	0.01	0.05	0.13	0.05	0.05	0.05	0.02	0.13	0.02
Total Purged	gal	36.3	0.5	0.5	2.0	2.0	1.3	1.0	1.3	1.1	1.3	1.5	1.1	1.0	1.3	1.0	1.0	1.0	1.0	1.0
Depth to Water	ft bgs	304.33	306.41	307.40	309.60	311.05	312.50	314.20	315.75	316.43	NM	318.70	315.46	319.63	319.64	319.65	319.66	319.66	319.64	319.66
Temperature	deg C	7.4	10.7	8.1	7.5	9.6	7.3	12.5	12.3	11.9	10.4	10.4	7.8	9.8	19.5	8.0	9.7	12.6	19.4	10.7
pH	SU	7.32	6.64	6.66	6.74	6.65	6.73	6.76	6.75	6.76	6.80	6.79	6.89	6.95	6.97	7.10	7.03	7.10	7.11	7.11
Specific Conductance	µS/cm	6573	6053	6072	6107	6012	6057	5725	5598	5562	5451	5108	5043	4779	4339	4656	4051	3198	4238	4465
Oxygen Reduction Potential	mV	-22.8	19.4	24.6	12.6	11.8	34.8	86.6	25.8	6.5	29.2	20.5	36.7	51.7	62.3	55.2	73.5	83.5	5.2	26.5
Lab Analytical Results:																				
Hardness as CaCO3	mg/L	4360		4190			3920			3540		3070	3200	2780	2690	2710	2660	2550	2740	2510
pH (Lab)	SU	7.10		6.85			6.77			6.85		6.87	6.9	6.93	6.66	7.04	7.20	6.93	7.1	6.98
Total Dissolved Solids (Lab)	mg/L	6520		6520			120*			6080		5210	4980	4670	4490	4570	4480	4390	4440	4310
Calcium	mg/L	615		559			553			492		431	467	400	398	406	398	378	415	370
Magnesium	mg/L	687		678			617			560		484	495	431	411	413	404	390	413	385
Sodium	mg/L	294		283			296			304		276	296	274	261	273	272	266	263	254
Potassium	mg/L	15.0		14.4			12.4			12.8		11.1	<20.0	10.6	10.3	10.5	11.1	10.7	11	10.4
Alkalinity, Total	mg/L	160		160			143			183		220	215	233	236	246	245	290	255	295
Alkalinity, Bicarbonate	mg/L	160		160			143			183		220	215	233	236	246	245	290	255	295
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
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
Chloride	mg/L	97.4		28.6			27.3			29.9		29.6	28.4	29.0	26.0	26.6	24.9	25.8	26	26.6
Fluoride	mg/L	2.83		<0.500			<0.500			<0.500		<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500
Sulfate as SO4	mg/L	205		4300			4280			4260		3460	3080	3020	3160	2890	2620	2740	2780	2790
Total Organic Carbon (TOC)	mg/L	3.45		3.08			2.91			3.57		3.10	3.16	3.39	3.31	3.26	1.71	3.82	3.33	3.25
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020		<0.020	0.049	0.154	0.117	0.093	0.039	0.156	0.118	0.096
Ammonia as N ^	mg/L	NA		NA			NA			NA		2.72	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA		<0.0500	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.500		<0.250			<0.250			<0.250		<0.250	<1.00	<0.500	<0.250	<0.500	<0.250	<0.250	<0.250	<0.250
Arsenic	mg/L	<0.0025		<0.0025			0.0009			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025
Cadmium	mg/L	<0.0005		<0.0005			0.0001			<0.0005		<0.0005	<0.0005	<0.0010	<0.0005	<0.0010	<0.0005	<0.0025	<0.0025	<0.0025
Copper	mg/L	0.0116		0.0081			0.0035			0.0039		0.0017	0.0028	<0.0050	<0.0025	<0.0050	<0.0025	0.0068	0.0082	0.0063
Iron	mg/L	1.37		3.75			3.93			3.22		2.72	1.95	1.38	1.10	1.24	1.17	0.890	1.48	1.15
Lead	mg/L	<0.0025		<0.0025			<0.0005			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025
Manganese	mg/L	0.788		0.802			0.724			0.690		0.585	0.551	0.526	0.520	0.454	0.437	0.397	0.407	0.391
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
Molybdenum	mg/L	<0.0025		<0.0025			<0.0005			<0.0025		<0.0025	<0.0025	<0.0050	<0.0025	<0.005	<0.0025	<0.0025	<0.0025	<0.0025
Selenium	mg/L	<0.0050		<0.0050			0.0028			<0.0050		<0.0050	<0.005	<0.0100	<0.0050	<0.0100	<0.0050	<0.0050	<0.0050	<0.0100
Silica (SiO2)	mg/L	12.3		11.9			14.3			13.4		12.5	<21.4	11.0	11.4	12.3	11.9	13.2	14.3	13.6
Silicon	mg/L	5.77		5.57			6.69			6.28		5.83	<10.00	5.17	5.35	5.76	5.58	6.17	6.67	6.36
Uranium	mg/L	<0.0005		<0.0005			<0.0001			<0.0005		<0.0005	<0.0025	<0.0050	<0.0025	<0.0050	<0.0025	<0.0025	<0.0025	<0.0025
Zinc	mg/L	0.0689		<0.0100			0.0082			0.0108		0.0117	0.0107	<0.0200	0.0159	<0.0200	<0.0100	<0.0100	<0.0100	<0.0100

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-MI																				
Year	2018	2019											2020				2021			
Quarter	Q4	Q1			Q2			Q3			Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	12	1	2	3	4	5	5	6	7	8	9	11	2	5	8	11	2	5	8	11
Sample Date	12/29	1/31	2/25	3/21	4/19	5/20	5/30	6/19	7/23	8/15	9/24	11/7	2/5	5/14	8/11	11/24	2/9	5/17	8/9	11/9
Lab Analysis (Y/N)	Y	N	Y	N	N	N [#]	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Field Parameters:																				
Purge Flow Rate	gpm	NM	NM	NM	0.5	0.1	0.015	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry	dry
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

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:

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 CaCO ₃ .
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-6-LM																				
Year	2018	2019											2020				2021			
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11
Sample Date	12/30	1/31	2/25	3/21	4/23	5/20	6/19	7/23	8/15	9/24	10/28	11/7	2/5	5/14	8/11	11/25	2/9	5/17	8/9	11/9
Lab Analysis (Y/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	0.06	2.00	0.03	0.03	0.10	0.06	0.03	0.02	0.01	0.03	0.01	0.13	0.01	0.13	0.13	0.13	0.13
Total Purged	gal	0.5	0.5	1.5	2.0	2.0	2.3	1.3	1.3	1.8	2.0	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Depth to Water	ft bgs	535.72	538.73	539.34	540.64	539.98	537.58	540.00	540.35	540.24	540.17	539.80	540.18	539.70	539.45	539.98	540.30	539.78	540.20	541.25
Temperature	deg C	7.9	14.3	7.8	8.1	9.1	9.3	11.7	14.0	13.4	11.6	10.1	12.4	10.5	11.3	14.8	11.4	10.2	11.6	14.4
pH	SU	7.64	7.38	7.51	7.54	7.49	7.54	7.67	7.80	7.65	7.43	7.45	7.37	7.39	7.54	7.44	7.47	7.44	7.54	7.52
Specific Conductance	µS/cm	6011	3784	3503	1461	1164	1296	1400	1272	1532	2104	2267	2113	2283	2287	2442	2495	2136	1629	2531
Oxygen Reduction Potential	mV	185.3	10.7	40.9	-32.8	-35.8	-111.0	-194.5	-163.6	-67.2	6.4	-48.0	19.9	-128.9	-222.9	32.1	21.8	3.5	-188.8	-2.6
Lab Analytical Results:																				
Hardness as CaCO3	mg/L	2260		1270			431			621			843	1060	965	1130	1160	1120	1010	1280
pH (Lab)	SU	7.60		7.52			7.47			7.59			7.32	7.43	7.18	6.95	7.45	7.49	7.45	7.37
Total Dissolved Solids (Lab)	mg/L	5100		2840			875			1150			1630	1840	1840	2040	2020	1990	1830	2290
Calcium	mg/L	367		216			75.9			103			136	173	150	179	184	176	154	201
Magnesium	mg/L	325		177			58.7			88.3			122	153	143	165	171	166	152	189
Sodium	mg/L	459		248			129			153			172	203	188	194	194	188	169	177
Potassium	mg/L	173		64.5			14.0			13.7			11.3	11	7.82	7.20	6.04	5.96	5.22	5.69
Alkalinity, Total	mg/L	205		315			371			381			355	320	353	335	329	336	346	330
Alkalinity, Bicarbonate	mg/L	205		315			371			381			355	320	353	335	329	336	346	330
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
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
Chloride	mg/L	256		43.7			5.73			8.70			11.4	11	11.7	12.2	12.4	11	10.5	12.6
Fluoride	mg/L	0.530		<0.500			0.324			<0.500			<0.500	0.352	<0.500	0.346	0.356	0.318	0.340	0.418
Sulfate as SO4	mg/L	3050		1790			338			492			830	951	904	1260	1170	1020	978	1300
Total Organic Carbon (TOC)	mg/L	3.46		2.61			1.57			1.78			1.85	1.76	1.84	1.87	1.93	3.17	1.81	1.91
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			1.99	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.250		<0.250			<0.050			<0.050			<0.100	<0.250	<0.250	<0.150	<0.250	<0.250	<0.150	<0.100
Arsenic	mg/L	0.0039		0.0049			0.0036			0.0038			0.0035	0.0044	0.0034	0.0038	0.0036	0.0038	0.0038	0.0039
Cadmium	mg/L	<0.0005		<0.0005			<0.0001			<0.0001			<0.0002	<0.0002	<0.0005	<0.0003	<0.0005	<0.0005	<0.0015	<0.0010
Copper	mg/L	0.0135		0.0064			0.0017			0.0018			0.0069	0.0014	<0.0025	<0.0015	<0.0025	<0.0025	0.0042	0.0046
Iron	mg/L	<0.250		<0.250			<0.050			<0.050			<0.100	<0.250	<0.250	<0.150	<0.250	<0.250	<0.150	<0.100
Lead	mg/L	<0.0025		<0.0025			<0.0005			<0.0005			<0.0010	<0.001	<0.0025	<0.0015	<0.0025	<0.0025	<0.0015	<0.0010
Manganese	mg/L	0.383		0.223			0.0692			0.148			0.166	0.184	0.171	0.267	0.292	0.253	0.203	0.257
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
Molybdenum	mg/L	0.0490		0.0169			0.0037			0.0025			0.0022	0.002	<0.0025	0.0023	<0.0025	<0.0025	<0.0015	0.0016
Selenium	mg/L	0.0080		<0.0050			<0.0010			<0.0010			<0.0020	<0.002	<0.0050	<0.0030	<0.0050	0.0151	<0.0030	<0.0020
Silica (SiO2)	mg/L	10.5		13.5			17.0			17.4			15.9	17.1	15.1	14.7	16.0	15.6	16.4	16.8
Silicon	mg/L	4.91		6.29			7.96			8.12			7.43	7.97	7.07	6.88	7.47	7.3	7.68	7.85
Uranium	mg/L	0.0230		0.0075			0.0039			0.0054			0.0047	0.0055	0.0043	0.0046	0.0042	0.0039	0.0030	0.0037
Zinc	mg/L	0.0323		<0.0100			<0.0020			<0.0040			<0.0040	<0.004	<0.0100	0.0069	<0.0100	<0.0100	<0.0060	<0.0040

Notes & Definitions:

^ one-time analysis

Y/N yes or no

gpm gallons per minute

deg C degrees Celsius

SU standard pH units

µS/cm microsiemens per centimeter

mV millivolts

mg/L milligram per liter

pCi/L picocuries per liter

NM not measured (field)

NA not analyzed (lab)

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

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

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

GCC Energy Hydrologic Monitoring Data

MW-7-EAA																				
Year	2018	2019											2020				2021			
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11
Sample Date	12/23	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30
Lab Analysis (Y/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	1.10	1.10	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.25	0.13	0.25	0.25	0.13	0.25	0.25
Total Purged	gal	15.0	18.0	15.0	3.0	15.0	16.0	15.3	15.3	17.0	15.0	15.0	36.5	15.0	16.0	17.0	15.0	17.0	17.0	18.0
Depth to Water	ft bgs	36.13	36.27	36.45	36.52	36.70	36.25	36.22	36.48	36.49	36.88	36.85	36.72	35.40	36.35	37.10	36.20	35.33	36.91	35.92
Temperature	deg C	10.0	10.0	10.0	9.9	10.1	10.4	10.4	10.6	10.5	10.3	10.4	10.6	10.4	12.1	10.3	10.3	10.1	10.5	10.9
pH	SU	6.99	7.01	7.04	6.93	7.00	7.06	7.07	6.28	6.95	7.06	7.03	7.06	6.91	7.17	7.09	7.12	7.14	7.19	7.24
Specific Conductance	µS/cm	2001	1910	1910	1926	1912	1767	1836	1885	1890	1913	1936	1922	1993	1890	1772	1628	1672	1805	1814
Oxygen Reduction Potential	mV	-68.0	-36.7	-41.4	-38.1	-48.8	14.1	-13.8	-33.9	-37.8	-29.5	-25.6	-21.3	0.9	-49.2	17.6	-8.6	2.2	-55.8	-41.9
Lab Analytical Results:																				
Hardness as CaCO3	mg/L	936		1030			982			997			1020	963	1020	1080	939	1090	958	986
pH (Lab)	SU	7.2		7.37			7.17			7.09			6.99	6.92	6.89	7.23	7.06	6.99	6.92	7.03
Total Dissolved Solids (Lab)	mg/L	1460		1480			1490			1480			1530	1520	1430	1480	1450	1590	1460	1510
Calcium	mg/L	170		179			171			173			162	165	175	183	157	186	167	167
Magnesium	mg/L	124		142			135			137			144	134	142	150	133	152	131	138
Sodium	mg/L	75.3		81.3			75.0			75.2			74.9	73.7	76.0	80.9	73.4	81.4	75	74.6
Potassium	mg/L	3.87		3.9			<5.00			3.74			3.74	3.82	<5.00	<5.00	<5.00	4.25	<5.00	<5.00
Alkalinity, Total	mg/L	380		367			405			392			350	357	355	268	430	420	395	340
Alkalinity, Bicarbonate	mg/L	380		367			405			392			425	357	355	268	430	420	395	340
Alkalinity, Carbonate	mg/L	<10.0		<10.0			<10.0			<10.0			<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
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
Chloride	mg/L	11.9		10.7			10.8			10.9			11.6	10.3	10.7	10.2	10.1	10.4	10.1	10.5
Fluoride	mg/L	<0.500		0.332			0.322			0.322			<0.500	0.354	0.330	0.322	0.322	0.300	0.304	0.312
Sulfate as SO4	mg/L	732		736			733			844			746	774	803	767	742	757	746	796
Total Organic Carbon (TOC)	mg/L	3.72		3.57			3.73			3.70			3.45	3.42	3.63	4.01	3.39	3.00	3.42	3.63
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.178	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.100			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.250	<0.250
Arsenic	mg/L	0.0014		0.0015			0.0013			0.0016			0.0013	0.0013	0.0011	<0.0015	<0.0025	0.0016	<0.0025	<0.0025
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0002	<0.0002	<0.0002	<0.0003	<0.0005	<0.0001	<0.0025	<0.0025
Copper	mg/L	0.0003		0.0018			0.0011			0.0008			0.0006	<0.0010	<0.0010	<0.0015	<0.0025	0.0007	<0.0025	<0.0025
Iron	mg/L	1.82		1.95			1.81			2.12			2.00	1.84	1.71	2.16	2.15	2.08	1.92	1.75
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.001	<0.0010	<0.0015	<0.0025	<0.0005	<0.0025	<0.0025
Manganese	mg/L	3.72		4.49			4.01			4.22			4.76	4.86	3.63	4.49	4.42	5.22	4.21	4.39
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
Molybdenum	mg/L	0.0008		0.0011			0.0007			0.0009			<0.0010	0.001	<0.0010	<0.0015	<0.0025	0.0006	<0.0025	<0.0025
Selenium	mg/L	<0.0020		<0.0020			<0.0010			0.0011			<0.0020	<0.002	<0.0020	<0.0030	<0.0050	<0.0010	<0.0050	<0.0050
Silica (SiO2)	mg/L	16.6		16.1			16.1			16.9			16.8	16.4	15.8	16.9	14.9	17.7	17.1	16.7
Silicon	mg/L	7.75		7.52			7.55			7.90			7.83	7.67	7.37	7.91	6.96	8.28	7.97	7.81
Uranium	mg/L	0.0021		0.0018			0.0017			0.0018			0.0020	0.0019	0.0016	0.0018	<0.0025	0.0018	<0.0025	<0.0025
Zinc	mg/L	<0.0050		<0.0040			0.0021			0.0020			<0.0040	<0.004	<0.0040	<0.0060	<0.0100	0.0022	<0.0100	<0.0100

Notes & Definitions:	
^	one-time analysis
Y/N	yes or no
gpm	gallons per minute
deg C	degrees Celsius
SU	standard pH units
µS/cm	microsiemens per centimeter
mV	millivolts
mg/L	milligram per liter
pCi/L	picocuries per liter
NM	not measured (field)
NA	not analyzed (lab)
1. "<" values denote that the quantification of that analyte is below the reporting level for the analytical laboratory, acceptable by environmental water quality laboratory industry standards. 2. Total alkalinity is measured by titration with hydrochloric acid to a set pH point, reporting this value as an equivalent amount of calcium carbonate. This value is then partitioned into bicarbonate, carbonate and hydroxide depending on the initial pH of the sample solution, each components reported as equivalent CaCO3. 3. Industry standard Quality Assurance/Quality Control (QA/QC) protocol are followed for this hydrologic monitoring program by both GCC Energy and the contracted environmental water quality analytical laboratories. QA/QC results are not shown in this table.	

GCC Energy Hydrologic Monitoring Data

MW-8-EAA																					
Year	2018	2019											2020				2021				
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	
Sample Date	12/23	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	
Lab Analysis (Y/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	0.85	1.10	0.50	3.00	0.50	0.75	1.00	1.00	0.75	0.50	1.00	0.25	1.00	0.25	0.13	0.13	0.13	0.13	0.25	0.25
Total Purged	gal	18.0	14.0	15.0	3.0	15.0	17.0	15.3	15.3	18.0	15.3	15.5	15.0	15.2	15.0	16.0	15.0	15.0	16.0	15.0	14.0
Depth to Water	ft bgs	40.00	39.95	40.10	43.45	40.44	40.05	39.94	40.10	40.08	40.25	40.31	40.22	40.40	40.45	34.50	40.83	41.22	41.00	40.98	48.04
Temperature	deg C	10.3	10.2	10.0	9.9	10.3	10.5	10.6	10.5	10.6	10.3	10.2	11.2	10.5	11.0	11.1	11.0	10.9	11.0	11.2	10.7
pH	SU	7.12	7.09	7.13	7.17	7.09	7.02	7.17	7.09	7.05	7.03	6.99	6.99	6.99	7.14	7.19	7.19	7.20	7.27	7.31	7.30
Specific Conductance	µS/cm	1781	1696	1720	1725	1729	1628	1676	1699	172	1739	1774	1739	1758	1760	1675	1716	1570	1642	1671	1746
Oxygen Reduction Potential	mV	-65.0	-52.8	-51.8	-53.0	-59.7	11.0	-29.5	-46.6	-44.8	-33.5	-38.8	-39.2	-18.2	-72.4	1.4	-14.7	-20.2	-63.3	-57.4	-37.2
Lab Analytical Results:																					
Hardness as CaCO3	mg/L	870		861			864			883			867	861	907	937	810	914	838	859	859
pH (Lab)	SU	7.28		7.36			7.13			7.05			7.01	7.11	6.96	7.18	7.1	7.03	6.97	7.06	6.81
Total Dissolved Solids (Lab)	mg/L	1220		1290			1240			1280			1380	1290	1260	1280	1310	1400	1320	1320	1340
Calcium	mg/L	152		151			148			154			143	149	153	160	134	156	146	146	149
Magnesium	mg/L	119		118			120			121			124	119	127	130	115	127	115	120	118
Sodium	mg/L	81.7		82.6			77.2			78.6			77.1	77.2	77.7	82.9	74.3	80.9	76.1	75.8	74.9
Potassium	mg/L	3.80		3.27			3.55			3.18			3.52	3.8	<5.00	<5.00	<5.00	3.63	3.49	<5.00	3.36
Alkalinity, Total	mg/L	400		435			450			431			445	404	385	288	480	450	445	385	490
Alkalinity, Bicarbonate	mg/L	400		435			450			431			445	404	385	288	480	450	445	385	490
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
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
Chloride	mg/L	9.83		10.5			10.3			11.1			11.0	10.2	10.3	10.1	11.3	10.4	10.2	10.3	10.5
Fluoride	mg/L	0.380		0.370			0.338			0.342			<0.500	0.33	0.346	0.336	0.334	0.292	0.306	0.35	0.272
Sulfate as SO4	mg/L	533		559			606			643			577	602	625	605	582	609	595	615	599
Total Organic Carbon (TOC)	mg/L	3.77		3.59			3.77			3.68			3.52	3.49	3.56	3.82	3.54	3.04	3.65	3.71	3.48
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			NA	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			NA	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.100		<0.100			<0.050			<0.100			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100
Arsenic	mg/L	0.0020		0.0018			0.0018			0.0021			0.0018	0.0017	0.0017	0.0018	<0.0025	0.0018	0.0018	<0.0025	0.0017
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0003	<0.0005	<0.0003	<0.0015	<0.0025	<0.0010
Copper	mg/L	0.0004		0.0024			0.0023			0.0008			0.0010	0.001	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	0.0017
Iron	mg/L	2.12		2.13			2.42			2.46			2.30	2.28	2.29	2.31	0.762	2.33	2.25	2.2	2.22
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.001	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.001
Manganese	mg/L	3.17		3.52			3.06			3.37			3.39	3.7	3.36	3.54	3.81	3.55	3.5	3.6	3.66
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
Molybdenum	mg/L	0.0009		0.0011			0.0008			0.0011			0.0008	<0.0010	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010
Selenium	mg/L	<0.0020		<0.0020			0.0010			0.0013			<0.0010	<0.0020	<0.0020	<0.0030	<0.0050	0.0046	<0.003	<0.0050	0.0035
Silica (SiO2)	mg/L	16.3		15.3			15.7			16.1			15.9	15.7	15.0	16.1	14.2	16.0	16.5	15.5	16.4
Silicon	mg/L	7.63		7.15			7.32			7.52			7.42	7.32	7.02	7.53	6.63	7.48	7.72	7.24	7.68
Uranium	mg/L	0.0021		0.0017			0.0016			0.0018			0.0019	0.0019	0.0017	0.0017	<0.0025	0.0016	0.0016	<0.0025	0.0015
Zinc	mg/L	<0.0050		<0.0040			<0.0020			<0.0020			<0.0020	<0.0040	<0.0040	<0.0060	<0.0100	<0.0060	<0.0060	<0.0100	<0.0040

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. "<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.	

GCC Energy Hydrologic Monitoring Data

MW-8-MI																					
Year	2018	2019											2020				2021				
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11	
Sample Date	12/23	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30	
Lab Analysis (Y/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	1.10	1.00	0.50	3.00	0.50	0.50	0.25	0.50	0.75	0.50	1.00	0.25	0.25	0.13	0.10	0.25	0.25	0.13	0.25	0.25
Total Purged	gal	27.5	18.0	1.0	3.0	1.5	2.5	2.5	2.3	3.0	2.0	2.5	1.0	1.0	1.0	2.0	1.0	2.0	3.0	1.0	1.0
Depth to Water	ft bgs	45.75	43.48	43.50	44.30	44.47	44.10	44.24	44.45	44.59	44.90	45.12	45.10	45.20	45.42	45.84	46.24	46.38	46.54	47.27	46.84
Temperature	deg C	10.8	10.8	10.6	11.2	10.4	11.1	11.4	11.0	11.4	10.9	10.3	11.4	10.2	11.3	13.1	11.3	10.0	11.6	11.9	11.1
pH	SU	7.57	7.50	7.48	7.47	7.34	7.31	7.48	7.42	7.38	7.30	7.23	7.15	7.08	7.44	7.44	7.43	7.47	7.59	7.55	7.56
Specific Conductance	µS/cm	1786	1667	1651	1658	1643	1595	1639	1645	1658	1637	1689	1642	1651	1659	1598	1628	1468	1616	1554	1629
Oxygen Reduction Potential	mV	-84.4	-177.1	-122.1	-113.3	-87.2	-54.4	-97.1	-116.4	-119.4	-88.4	-82.0	-59.3	-136.6	-184.9	-107.0	-112.2	-72.0	-131.9	-123.1	-115.9
Lab Analytical Results:																					
Hardness as CaCO3	mg/L	167		249			273			253			267	254	309	355	339	376	288	377	317
pH (Lab)	SU	7.73		7.54			7.24			7.46			7.44	7.53	7.25	7.34	7.27	7.33	7.36	7.31	7.06
Total Dissolved Solids (Lab)	mg/L	1050		1030			1100			1110			1050	1060	1040	1010	1040	1060	1040	1000	1100
Calcium	mg/L	34.0		48.5			52.4			49.7			51.3	48.7	58.5	65.9	62.6	69.7	54	70.3	59.8
Magnesium	mg/L	19.9		31.0			34.5			31.4			33.8	32.1	39.6	46.2	44.4	49.1	37.2	48.9	40.8
Sodium	mg/L	344		312			289			289			275	269	272	260	232	237	256	229	238
Potassium	mg/L	4.47		5.25			<5.00			4.55			5.07	4.71	5.00	5.56	5.22	5.88	5.05	5.69	5.14
Alkalinity, Total	mg/L	500		565			560			573			585	543	545	448	590	590	575	570	605
Alkalinity, Bicarbonate	mg/L	500		565			560			573			585	543	545	448	590	590	575	570	605
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
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
Chloride	mg/L	12.7		10.0			9.33			9.06			9.66	8.19	8.23	8.12	7.91	7.96	8.07	7.85	7.91
Fluoride	mg/L	<0.500		<0.200			<0.200			<0.200			<0.500	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200
Sulfate as SO4	mg/L	347		353			343			366			317	314	316	335	319	326	314	324	312
Total Organic Carbon (TOC)	mg/L	2.73		2.83			2.81			2.74			2.65	2.6	2.94	2.87	2.76	2.6	2.74	2.97	2.66
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			1.31	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.100			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100
Arsenic	mg/L	0.0008		<0.0010			0.0006			0.0005			0.0005	<0.0010	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0002	<0.0003	<0.0005	<0.0003	<0.0015	<0.0025	<0.0010
Copper	mg/L	0.0031		0.0066			0.0036			0.0035			0.0037	0.0027	<0.0010	<0.0015	<0.0025	0.0015	0.0046	0.0047	0.0054
Iron	mg/L	0.137		0.162			<0.250			0.129			0.130	0.108	<0.250	<0.250	<0.250	<0.150	0.113	<0.250	0.168
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.0010	<0.0025	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010
Manganese	mg/L	0.0495		0.0383			0.0327			0.0351			0.0377	0.0391	0.0393	0.0551	0.0546	0.0579	0.0412	0.0544	0.0443
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
Molybdenum	mg/L	0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.001	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010
Selenium	mg/L	<0.0020		<0.0020			0.0010			0.0010			<0.0010	<0.0020	0.0020	<0.0030	<0.0050	0.0425	0.0037	0.0072	0.0264
Silica (SiO2)	mg/L	12.1		12.4			12.8			12.5			12.6	12.2	11.9	12.9	12.1	13.5	13.2	13.6	13.7
Silicon	mg/L	5.65		5.78			5.99			5.83			5.88	5.71	5.55	6.05	5.67	6.32	6.17	6.35	6.39
Uranium	mg/L	0.0002		0.0002			0.0002			0.0001			0.0001	<0.0010	<0.0025	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010
Zinc	mg/L	<0.0050		<0.0040			<0.0020			<0.0020			<0.0020	<0.0040	<0.0040	<0.0060	<0.0100	<0.0060	<0.0060	<0.0100	<0.0040

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)

GCC Energy Hydrologic Monitoring Data

MW-8-LM																					
Year		2018	2019										2020				2021				
Quarter		Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month		12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11
Sample Date		12/28	1/29	2/19	3/21	4/16	5/29	6/18	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30
Lab Analysis (Y/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	1.00	0.25	1.00	0.50	0.10	0.25	0.25	0.50	0.25	0.12	0.25	0.25	0.25	0.13	0.13	0.13	0.13	0.25	0.25
Total Purged	gal	30	4.0	1.5	1.0	2.0	1.3	6.8	2.0	2.0	1.0	1.0	1.5	1.0	1.0	2.0	1.0	2.0	1.5	1.0	1.0
Depth to Water	ft bgs	136.39	130.52	134.30	144.03	140.03	137.48	142.23	144.15	138.06	137.50	137.60	137.34	139.15	129.70	127.90	125.75	126.72	126.13	125.25	123.55
Temperature	deg C	4.1	13.9	13.2	8.7	13.6	13.9	12.8	13.7	13.4	13.0	11.7	13.3	11.4	13.4	13.6	8.8	12.1	12.8	13.5	12.5
pH	SU	8.37	8.70	8.71	8.41	8.70	8.50	8.66	8.64	8.58	8.44	8.44	8.47	7.98	8.76	8.83	8.81	8.82	8.90	8.90	8.91
Specific Conductance	µS/cm	2306	1274	1265	1310	1262	1234	1264	1226	1269	1252	1299	1255	1294	1282	1055	1117	1132	1121	1196	1262
Oxygen Reduction Potential	mV	37.5	-114.3	112.8	77.0	-36.2	33.2	-63.9	-93.5	-103.0	-115.9	-94.4	-47.4	-106.6	-204.5	-106.9	-93.6	-87.8	-164.1	-106.1	-99.3
Lab Analytical Results:																					
Hardness as CaCO3	mg/L	45.0		7.29			16.9			6.67			6.38	6.79	7.76	7.53	6.35	6.93	7.23	4.65	7.11
pH (Lab)	SU	8.57		8.63			8.02			8.56			8.52	8.55	8.41	8.45	8.48	8.54	8.57	8.48	8.31
Total Dissolved Solids (Lab)	mg/L	1420		770			780			785			780	840	730	740	700	795	720	740	760
Calcium	mg/L	10.8		1.93			3.84			1.78			1.68	1.77	2.09	2.05	1.71	1.87	1.92	1.86	1.88
Magnesium	mg/L	4.39		0.600			1.77			0.541			0.528	0.574	0.620	0.587	0.502	0.550	0.592	<0.500	0.587
Sodium	mg/L	382		341			317			306			305	309	315	337	304	319	315	308	291
Potassium	mg/L	45.7		3.49			<5.00			2.27			2.18	2.06	<5.00	<5.00	<5.00	<3.00	2.24	<5.00	2.12
Alkalinity, Total	mg/L	615		720			745			731			745	685	630	675	780	730	755	750	770
Alkalinity, Bicarbonate	mg/L	535		610			645			645			685	595	530	585	680	630	645	650	620
Alkalinity, Carbonate	mg/L	80.0		110			100			86.0			60.0	90	100	90	100	100	110	100	150
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
Chloride	mg/L	175		5.11			6.80			2.63			2.48	3.04	3.01	2.98	2.47	2.5	2.48	2.55	2.47
Fluoride	mg/L	2.06		3.91			3.95			3.97			3.88	3.61	3.63	3.53	3.66	3.58	3.48	3.67	3.40
Sulfate as SO4	mg/L	190		3.79			9.58			1.02			<1.00	<2.00	<2.00	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00
Total Organic Carbon (TOC)	mg/L	2.80		1.80			3.33			1.94			1.69	1.69	1.92	1.82	1.66	1.2	1.71	1.79	1.60
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.282	NA	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100
Arsenic	mg/L	0.0106		<0.0010			0.0006			0.0007			0.0006	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0001	<0.0002	<0.0003	<0.0005	<0.0003	<0.0015	<0.0025	<0.0010
Copper	mg/L	0.0337		0.0077			0.0047			0.0041			0.0051	0.0033	0.0012	0.0017	<0.0025	0.0025	0.0057	0.0068	0.0065
Iron	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.100	<0.250	<0.250	<0.250	<0.150	<0.050	<0.250	<0.100
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0010	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010
Manganese	mg/L	0.0258		0.0038			0.0150			0.0020			0.0026	0.0025	0.0029	0.0026	0.0028	0.0024	0.0021	0.0025	0.0023
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
Molybdenum	mg/L	0.0142		<0.0010			0.0009			<0.0005			<0.0005	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010
Selenium	mg/L	0.0020		<0.0020			<0.0010			<0.0010			<0.0010	<0.0010	<0.0020	<0.0030	<0.0050	0.0031	<0.0030	<0.0050	<0.0020
Silica (SiO2)	mg/L	9.09		8.45			8.68			8.28			7.77	7.62	7.40	7.84	7.4	8.17	8.21	7.82	8.28
Silicon	mg/L	4.25		3.95			4.06			3.87			3.63	3.56	3.46	3.67	3.46	3.82	3.84	3.66	3.87
Uranium	mg/L	0.0044		<0.0002			0.0001			0.0001			<0.0002	<0.0005	<0.0010	<0.0015	<0.0025	<0.0015	<0.0015	<0.0025	<0.0010
Zinc	mg/L	0.0080		<0.0040			0.0023			<0.0020			<0.0020	<0.002	<0.0040	<0.0060	<0.0100	<0.0060	<0.0060	<0.0100	<0.0040

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. " <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.

GCC Energy Hydrologic Monitoring Data

MW-8-PL																				
Year	2018	2019											2020				2021			
Quarter	Q4	Q1			Q2			Q3			Q4		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Month	12	1	2	3	4	5	6	7	8	9	10	11	2	5	8	11	2	5	8	11
Sample Date	12/27	1/29	2/19	3/20	4/16	5/29	6/20	7/24	8/13	9/27	10/24	11/6	2/11	5/27	8/25	11/11	2/16	5/24	8/24	11/30
Lab Analysis (Y/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	0.25	1.00	0.50	3.00	0.50	0.25	0.50	1.00	0.50	0.75	0.25	0.25	0.25	0.25	0.25	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	2.0	2.0	2.0	2.0
Depth to Water	ft bgs	125.97	126.29	126.40	127.10	126.98	126.70	126.82	127.25	127.38	127.42	127.48	127.59	127.32	127.34	128.00	127.31	127.50	127.83	127.89
Temperature	deg C	10.3	14.2	13.4	12.9	13.2	14.2	14.8	14.7	14.9	13.2	14.9	13.8	14.8	14.9	14.1	12.9	14.6	14.8	13.4
pH	SU	7.50	7.30	7.49	7.30	7.29	7.31	7.57	7.56	7.52	7.45	7.47	7.52	7.55	7.47	7.52	7.52	7.53	7.58	7.55
Specific Conductance	µS/cm	1690	1531	1571	1558	1554	1411	1326	1165	1083	947	940	900	862	844	792	827	760	813	816
Oxygen Reduction Potential	mV	30.2	-116.5	97.9	-108.7	-110.6	34.2	-57.6	-74.0	-79.5	-51.3	-52.5	-30.8	-59.9	-101.9	-38.0	-37.3	-11.5	-76.6	-64.4
Lab Analytical Results:																				
Hardness as CaCO3	mg/L	617		644			596			411			294	278	298	292	268	281	283	280
pH (Lab)	SU	7.28		7.40			7.26			7.22			7.39	7.47	7.19	7.16	7.41	7.36	7.41	7.29
Total Dissolved Solids (Lab)	mg/L	1150		1090			995			705			620	500	490	525	465	525	505	475
Calcium	mg/L	112		120			105			73.1			52.1	49.3	53.8	53.3	49.1	52.2	53.3	53
Magnesium	mg/L	82.1		83.8			81.4			55.4			39.7	37.6	39.7	38.5	35.4	36.6	36.5	35.9
Sodium	mg/L	106		124			102			91.7			83.3	78.5	80.4	81.6	77.2	78.6	79.7	77.8
Potassium	mg/L	5.14		5.62			<5.00			2.80			2.35	2.32	2.11	<2.00	<2.00	1.78	1.73	<2.00
Alkalinity, Total	mg/L	370		415			435			393			390	339	340	315	410	370	385	360
Alkalinity, Bicarbonate	mg/L	370		415			435			393			390	339	340	315	410	370	385	360
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
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
Chloride	mg/L	18.8		18.5			9.03			5.61			5.66	3.51	3.38	3.33	3.32	3.39	3.30	3.33
Fluoride	mg/L	0.505		0.474			0.290			0.291			<0.500	0.258	0.240	0.233	0.224	0.219	0.200	0.222
Sulfate as SO4	mg/L	478		471			390			232			127	109	103	99.2	99	101	96.3	102
Total Organic Carbon (TOC)	mg/L	4.17		4.02			2.92			2.21			1.75	1.63	1.63	1.61	1.44	0.928	1.42	1.54
Nitrate/Nitrite as N	mg/L	<0.020		<0.020			<0.020			<0.020			<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020
Ammonia as N ^	mg/L	NA		NA			NA			NA			0.199	NA	NA	NA	NA	NA	NA	NA
Ortho-Phosphate as P ^	mg/L	NA		NA			NA			NA			<0.0500	NA	NA	NA	NA	NA	NA	NA
Aluminum	mg/L	<0.050		<0.100			<0.250			<0.050			<0.050	<0.050	<0.100	<0.100	<0.100	<0.050	<0.050	<0.100
Arsenic	mg/L	0.0074		0.0124			0.0190			0.0156			0.0104	0.0073	0.0075	0.0064	0.0058	0.0074	0.0055	0.0017
Cadmium	mg/L	<0.0001		<0.0002			<0.0001			<0.0001			<0.0001	<0.0002	<0.0001	<0.0002	<0.0002	<0.0001	<0.0010	<0.0010
Copper	mg/L	0.0016		0.0025			0.0017			0.0011			0.0004	0.001	<0.0025	<0.001	0.0014	0.0005	0.0013	<0.0010
Iron	mg/L	<0.050		0.352			<0.250			0.129			0.075	0.054	<0.100	<0.100	<0.100	<0.050	<0.050	<0.100
Lead	mg/L	<0.0005		<0.0010			<0.0005			<0.0005			<0.0005	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010
Manganese	mg/L	1.31		1.22			0.697			0.505			0.313	0.303	0.307	0.259	0.219	0.196	0.175	0.0772
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
Molybdenum	mg/L	0.0090		0.0068			0.0020			0.0021			0.0017	0.0008	<0.0005	<0.0010	<0.0010	<0.0005	<0.0010	<0.0010
Selenium	mg/L	0.0012		<0.0020			<0.0010			<0.0010			<0.0010	<0.001	<0.0010	<0.0020	<0.0020	0.0038	<0.002	<0.0020
Silica (SiO2)	mg/L	14.1		16.3			17.7			18.5			18.0	18.9	18.7	19.9	18.5	20.1	21.5	20
Silicon	mg/L	6.58		7.64			8.28			8.67			8.42	8.82	8.75	9.28	8.66	9.40	10.00	9.37
Uranium	mg/L	0.0052		0.0040			0.0010			0.0009			0.0004	<0.0005	<0.0005	<0.0010	<0.0010	<0.0005	<0.001	<0.0010
Zinc	mg/L	0.0344		<0.0040			<0.0020			<0.0080			<0.0020	<0.0020	<0.0100	<0.0040	<0.0040	<0.0020	<0.004	<0.0040

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.	



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24 November 2021

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

Enclosed are the results of analyses for samples received by the laboratory on 11/03/21 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.
TNI Certificate Number: T104704514-21-12.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-21-14



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Tom Bird

Reported:
11/24/21 09:28

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Wiltse Well	2111054-01	Water	11/03/21 12:08	11/03/21 15:00	
MW-99-WW	2111054-02	Water	11/03/21 12:40	11/03/21 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: [none]
Project Manager: Tom BirdReported:
11/24/21 09:28

Wiltse Well

2111054-01 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	520	10.0	4.53	mg/L	5	11/15/21 14:05	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	11/15/21 14:05	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	11/15/21 14:05	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	520	10.0	4.53	mg/L	5	11/15/21 14:05	2320 B		VJW
Chloride*	52.4	2.00	0.0845	mg/L	2	11/08/21 20:59	EPA300.0		AES
Fluoride*	0.280	0.200	0.0194	mg/L	2	11/08/21 20:59	EPA300.0		AES
Nitrate/Nitrite as N*	1.87	0.020	0.006	mg/L as N	1	11/09/21 15:55	EPA353.2		DTR
pH*	7.52			pH Units	1	11/04/21 08:45	EPA150.1		VJW
pH Temperature, degrees C	17.2			pH Units	1	11/04/21 08:45	EPA150.1		VJW
Total Dissolved Solids*	1640	10.0		mg/L	1	11/09/21 12:30	EPA160.1		VJW
Sulfate*	697	20.0	3.05	mg/L	20	11/08/21 21:20	EPA300.0		AES
Total Organic Carbon*	3.37	0.500	0.0616	mg/L	1	11/10/21 21:28	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	11/10/21 13:25	EPA200.7		AES
Calcium*	209	0.200	0.116	mg/L	2	11/10/21 13:24	EPA200.7		AES
Hardness as CaCO ₃	1080	1.32	0.827	mg/L	2	11/10/21 13:24	2340 B		AES
Iron*	0.154	0.100	0.036	mg/L	2	11/10/21 13:25	EPA200.7		AES
Magnesium*	136	0.200	0.131	mg/L	2	11/10/21 13:24	EPA200.7		AES
Potassium*	4.41	2.00	0.161	mg/L	2	11/10/21 13:24	EPA200.7		AES
Silica (SiO ₂)	16.0	2.14	0.159	mg/L	2	11/10/21 13:25	Calculation		AES
Silicon	7.50	1.00	0.075	mg/L	2	11/10/21 13:25	EPA200.7		AES
Sodium*	63.6	2.00	0.159	mg/L	2	11/10/21 13:24	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0001	mg/L	2	11/12/21 09:57	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	11/12/21 09:57	EPA200.8		AES
Copper*	0.0033	0.0010	0.0002	mg/L	2	11/12/21 09:57	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00003	mg/L	2	11/12/21 09:57	EPA200.8		AES
Manganese*	1.34	0.0010	0.0003	mg/L	2	11/12/21 09:57	EPA200.8		AES
Molybdenum*	0.0017	0.0010	0.00006	mg/L	2	11/12/21 09:57	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0003	mg/L	2	11/12/21 09:57	EPA200.8		AES
Uranium	0.0025	0.0010	0.00009	mg/L	2	11/12/21 09:57	EPA200.8		AES
Zinc*	0.0276	0.0040	0.0002	mg/L	2	11/12/21 09:57	EPA200.8		AES

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Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Tom Bird

Reported:
11/24/21 09:28

Wiltse Well

2111054-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- **SVL Analytical, Inc.**

Metals (Filtered)

Mercury	<0.000200	0.000200	0.000093	mg/L	1	11/19/21 09:36	EPA 245.1		ATM
Cation/Anion Balance	-3.79								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Tom Bird

Reported:
11/24/21 09:28

MW-99-WW

2111054-02 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	525	10.0	4.53	mg/L	5	11/15/21 14:05	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	11/15/21 14:05	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	11/15/21 14:05	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	525	10.0	4.53	mg/L	5	11/15/21 14:05	2320 B		VJW
Chloride*	51.9	2.00	0.0845	mg/L	2	11/08/21 21:40	EPA300.0		AES
Fluoride*	0.292	0.200	0.0194	mg/L	2	11/08/21 21:40	EPA300.0		AES
Nitrate/Nitrite as N*	1.83	0.020	0.006	mg/L as N	1	11/09/21 15:56	EPA353.2		DTR
pH*	7.26			pH Units	1	11/04/21 08:45	EPA150.1		VJW
pH Temperature, degrees C	16.8			pH Units	1	11/04/21 08:45	EPA150.1		VJW
Total Dissolved Solids*	1620	10.0		mg/L	1	11/09/21 12:30	EPA160.1		VJW
Sulfate*	703	20.0	3.05	mg/L	20	11/09/21 09:51	EPA300.0		AES
Total Organic Carbon*	3.37	0.500	0.0616	mg/L	1	11/10/21 21:45	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	11/10/21 13:29	EPA200.7		AES
Calcium*	213	0.200	0.116	mg/L	2	11/10/21 13:29	EPA200.7		AES
Hardness as CaCO ₃	1100	1.32	0.827	mg/L	2	11/10/21 13:29	2340 B		AES
Iron*	0.160	0.100	0.036	mg/L	2	11/10/21 13:29	EPA200.7		AES
Magnesium*	138	0.200	0.131	mg/L	2	11/10/21 13:29	EPA200.7		AES
Potassium*	4.47	2.00	0.161	mg/L	2	11/10/21 13:29	EPA200.7		AES
Silica (SiO ₂)	16.3	2.14	0.159	mg/L	2	11/10/21 13:29	Calculation		AES
Silicon	7.60	1.00	0.075	mg/L	2	11/10/21 13:29	EPA200.7		AES
Sodium*	64.0	2.00	0.159	mg/L	2	11/10/21 13:29	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0001	mg/L	2	11/12/21 09:59	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	11/12/21 09:59	EPA200.8		AES
Copper*	0.0033	0.0010	0.0002	mg/L	2	11/12/21 09:59	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00003	mg/L	2	11/12/21 09:59	EPA200.8		AES
Manganese*	1.36	0.0010	0.0003	mg/L	2	11/12/21 09:59	EPA200.8		AES
Molybdenum*	0.0017	0.0010	0.00006	mg/L	2	11/12/21 09:59	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0003	mg/L	2	11/12/21 09:59	EPA200.8		AES
Uranium	0.0026	0.0010	0.00009	mg/L	2	11/12/21 09:59	EPA200.8		AES
Zinc*	0.0279	0.0040	0.0002	mg/L	2	11/12/21 09:59	EPA200.8		AES

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Tom Bird

Reported:
11/24/21 09:28

MW-99-WW

2111054-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Subcontracted -- **SVL Analytical, Inc.**

Metals (Filtered)

Mercury	<0.000200	0.000200	0.000093	mg/L	1	11/19/21 09:38	EPA 245.1		ATM
Cation/Anion Balance	-3.41								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Tom BirdReported:
11/24/21 09:28

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212694 - Lachat

Blank (B212694-BLK1)

Prepared: 11/04/21 Analyzed: 11/09/21

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

LCS (B212694-BS1)

Prepared: 11/04/21 Analyzed: 11/09/21

Nitrate/Nitrite as N 1.01 0.020 mg/L as N 1.00 101 90-110

LCS Dup (B212694-BSD1)

Prepared: 11/04/21 Analyzed: 11/09/21

Nitrate/Nitrite as N 1.01 0.020 mg/L as N 1.00 101 90-110 0.109 20

Batch B212700 - General Prep - Wet Chem

Duplicate (B212700-DUP2)

Source: 2111065-12 Prepared & Analyzed: 11/04/21

pH 7.94 pH Units 7.92 0.252 20
pH Temperature, degrees C 19.6 pH Units 19.4 1.03 200

Reference (B212700-SRM1)

Prepared & Analyzed: 11/04/21

pH 7.04 pH Units 7.00 101 98.57-101.42

Batch B212708 - General Prep - Wet Chem

Blank (B212708-BLK1)

Prepared: 11/05/21 Analyzed: 11/09/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (B212708-DUP1)

Source: 2111030-04 Prepared: 11/05/21 Analyzed: 11/09/21

Total Dissolved Solids 12200 20.0 mg/L 12200 0.00 20

Reference (B212708-SRM1)

Prepared: 11/05/21 Analyzed: 11/09/21

Total Dissolved Solids 390 10.0 mg/L 400 97.5 85-115

Batch B212730 - IC- Ion Chromatograph

Blank (B212730-BLK1)

Prepared & Analyzed: 11/08/21

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

LCS (B212730-BS1)

Prepared & Analyzed: 11/08/21

Chloride 23.8 1.00 mg/L 25.0 95.2 90-110
Fluoride 2.30 0.100 mg/L 2.50 92.0 90-110
Sulfate 23.3 1.00 mg/L 25.0 93.3 90-110

LCS Dup (B212730-BSD1)

Prepared & Analyzed: 11/08/21

Chloride 23.8 1.00 mg/L 25.0 95.3 90-110 0.126 20
Fluoride 2.32 0.100 mg/L 2.50 92.7 90-110 0.780 20
Sulfate 23.4 1.00 mg/L 25.0 93.8 90-110 0.492 20

Batch B212759 - General Prep - Wet Chem

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Tom Bird

Reported:
11/24/21 09:28

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212759 - General Prep - Wet Chem (Continued)

Blank (B212759-BLK1)

Prepared & Analyzed: 11/10/21

Total Organic Carbon	ND	0.500	mg/L
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LCS (B212759-BS1)

Prepared & Analyzed: 11/10/21

Total Organic Carbon	9.76	0.500	mg/L	10.0	97.6	85-115
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LCS Dup (B212759-BSD1)

Prepared & Analyzed: 11/10/21

Total Organic Carbon	9.79	0.500	mg/L	10.0	97.9	85-115	0.317	20
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Batch B212766 - General Prep - Wet Chem

Blank (B212766-BLK1)

Prepared: 11/11/21 Analyzed: 11/15/21

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 (B212766-BS1)

Prepared: 11/11/21 Analyzed: 11/15/21

Alkalinity, Bicarbonate as CaCO ₃	105	10.0	mg/L	100	105	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	105	10.0	mg/L	100	105	85-115

LCS Dup (B212766-BSD1)

Prepared: 11/11/21 Analyzed: 11/15/21

Alkalinity, Bicarbonate as CaCO ₃	103	10.0	mg/L	100	103	85-115	1.92	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	103	10.0	mg/L	100	103	85-115	1.92	20

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Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Tom Bird

Reported:
11/24/21 09:28

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212725 - Diss. 200.7/200.8

Blank (B212725-BLK1)

Prepared: 11/08/21 Analyzed: 11/10/21

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

LCS (B212725-BS1)

Prepared: 11/08/21 Analyzed: 11/10/21

Aluminum	4.81	0.050	mg/L	5.00	96.3	85-115
Calcium	4.75	0.100	mg/L	5.00	95.0	85-115
Iron	4.79	0.050	mg/L	5.00	95.8	85-115
Magnesium	24.2	0.100	mg/L	25.0	96.7	85-115
Potassium	9.66	1.00	mg/L	10.0	96.6	85-115
Silicon	5.00	0.500	mg/L	5.00	100	85-115
Sodium	3.83	1.00	mg/L	4.05	94.5	85-115

LCS Dup (B212725-BSD1)

Prepared: 11/08/21 Analyzed: 11/10/21

Aluminum	4.87	0.050	mg/L	5.00	97.4	85-115	1.20	20
Calcium	4.77	0.100	mg/L	5.00	95.4	85-115	0.359	20
Iron	4.79	0.050	mg/L	5.00	95.9	85-115	0.0325	20
Magnesium	24.3	0.100	mg/L	25.0	97.1	85-115	0.441	20
Potassium	9.56	1.00	mg/L	10.0	95.6	85-115	1.05	20
Silicon	5.08	0.500	mg/L	5.00	102	85-115	1.46	20
Sodium	3.86	1.00	mg/L	4.05	95.3	85-115	0.860	20

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Tom Bird

Reported:
11/24/21 09:28

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212727 - Diss. 200.7/200.8

Blank (B212727-BLK1)

Prepared: 11/08/21 Analyzed: 11/12/21

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

LCS (B212727-BS1)

Prepared: 11/08/21 Analyzed: 11/12/21

Arsenic	0.0506	0.0005	mg/L	0.0500	101	85-115
Cadmium	0.0508	0.0005	mg/L	0.0500	102	85-115
Copper	0.0491	0.0005	mg/L	0.0500	98.2	85-115
Lead	0.0497	0.0005	mg/L	0.0500	99.3	85-115
Manganese	0.0513	0.0005	mg/L	0.0500	103	85-115
Molybdenum	0.0499	0.0005	mg/L	0.0500	99.7	85-115
Selenium	0.251	0.0010	mg/L	0.250	100	85-115
Uranium	0.0511	0.0005	mg/L	0.0500	102	85-115
Zinc	0.0504	0.0020	mg/L	0.0500	101	85-115

LCS Dup (B212727-BSD1)

Prepared: 11/08/21 Analyzed: 11/12/21

Arsenic	0.0505	0.0005	mg/L	0.0500	101	85-115	0.216	20
Cadmium	0.0491	0.0005	mg/L	0.0500	98.2	85-115	3.43	20
Copper	0.0474	0.0005	mg/L	0.0500	94.7	85-115	3.64	20
Lead	0.0489	0.0005	mg/L	0.0500	97.7	85-115	1.62	20
Manganese	0.0499	0.0005	mg/L	0.0500	99.9	85-115	2.73	20
Molybdenum	0.0500	0.0005	mg/L	0.0500	99.9	85-115	0.198	20
Selenium	0.252	0.0010	mg/L	0.250	101	85-115	0.307	20
Uranium	0.0511	0.0005	mg/L	0.0500	102	85-115	0.105	20
Zinc	0.0490	0.0020	mg/L	0.0500	97.9	85-115	2.96	20

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Tom Bird

Reported:
11/24/21 09:28

Metals (Filtered) - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch X147227 - SOP 4010 Mercury D										
Blank (X147227-BLK1)				Prepared: 11/18/21 Analyzed: 11/19/21						
Mercury	ND	0.000200	mg/L							
LCS (X147227-BS1)				Prepared: 11/18/21 Analyzed: 11/19/21						
Mercury	0.00495	0.000200	mg/L	0.00500		99.0	85-115		20	
Matrix Spike (X147227-MS1)				Source: X1K0185-03 Prepared: 11/18/21 Analyzed: 11/19/21						
Mercury	0.00112	0.000200	mg/L	0.00100	ND	112	70-130		20	
Matrix Spike Dup (X147227-MSD1)				Source: X1K0185-03 Prepared: 11/18/21 Analyzed: 11/19/21						
Mercury	0.00107	0.000200	mg/L	0.00100	ND	107	70-130	4.15	20	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC GW Baseline
Project Name / Number: [none]
Project Manager: Tom Bird

Reported:
11/24/21 09:28

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

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Page 13 of 13 2111054 GAL FINAL 11 24 21 0928 11/24/21 09:28:44



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02 December 2021

Tom Bird
GCC Energy, LLC
6473 CR 120
Hesperus, CO 81326
RE: GCC SW Baseline August 2021

Enclosed are the results of analyses for samples received by the laboratory on 11/15/21 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'.

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.
TNI Certificate Number: T104704514-21-12.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-21-14



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
12/02/21 12:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Haygulch Ditch Downgradient	2111208-01	Water	11/15/21 10:56	11/15/21 15:00	
Haygulch Ditch Upgradient	2111208-02	Water	11/15/21 12:17	11/15/21 15:00	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
12/02/21 12:46

Haygulch Ditch Downgradient

2111208-01 (Surface Water)

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

Alkalinity, Bicarbonate as CaCO3*	116	10.0	4.53	mg/L	1	11/22/21 10:40	2320 B	M5	VJW
Alkalinity, Carbonate as CaCO3*	<10.0	10.0		mg/L	1	11/22/21 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO3*	<10.0	10.0		mg/L	1	11/22/21 10:40	2320 B		VJW
Alkalinity, Total as CaCO3*	116	10.0	4.53	mg/L	1	11/22/21 10:40	2320 B		VJW
Chloride*	5.07	1.00	0.0422	mg/L	1	11/23/21 01:05	EPA300.0		JDA
Fluoride*	0.185	0.100	0.00971	mg/L	1	11/23/21 01:05	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 11:25	EPA353.2		DTR
Oil & Grease (HEM)	<5.00	5.00	1.16	mg/L	1	11/29/21 08:45	EPA1664 A		VJW
pH*	7.39			pH Units	1	11/16/21 10:50	EPA150.1		VJW
pH Temperature, degrees C	25.0			pH Units	1	11/16/21 10:50	EPA150.1		VJW
SAR	0.17			No Unit	1	11/23/21 13:31	Calculation		JDA
Total Dissolved Solids*	120	10.0		mg/L	1	11/22/21 16:40	EPA160.1		VJW
Total Suspended Solids*	5.44	2.50		mg/L	1	11/17/21 17:12	2540 D		VJW
Sulfate*	46.3	1.00	0.152	mg/L	1	11/23/21 01:05	EPA300.0		JDA
Total Organic Carbon*	1.12	0.500	0.0616	mg/L	1	11/22/21 19:55	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.013	mg/L	1	11/18/21 16:03	EPA200.7		JDA
Calcium*	39.3	0.100	0.058	mg/L	1	11/18/21 16:03	EPA200.7		JDA
Hardness as CaCO3	143	0.662	0.414	mg/L	1	11/23/21 13:32	2340 B		JDA
Iron*	<0.050	0.050	0.018	mg/L	1	11/18/21 16:03	EPA200.7		JDA
Magnesium*	11.0	0.100	0.065	mg/L	1	11/23/21 13:32	EPA200.7		JDA
Potassium*	1.30	1.00	0.081	mg/L	1	11/18/21 16:03	EPA200.7		JDA
Silica (SiO2)	9.38	1.07	0.0797	mg/L	1	11/18/21 16:03	Calculation		JDA
Silicon	4.38	0.500	0.037	mg/L	1	11/18/21 16:03	EPA200.7		JDA
Sodium*	4.71	1.00	0.079	mg/L	1	11/18/21 16:03	EPA200.7		JDA

Total Recoverable Metals by ICPMS (E200.8)

Mercury	<0.0100	0.0100	0.00430	ug/L	1	12/01/21 12:41	EPA200.8		AES
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Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
12/02/21 12:46

Haygulch Ditch Downgradient

2111208-01 (Surface Water)

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

Arsenic*	<0.0005	0.0005	0.00005	mg/L	1	11/24/21 11:56	EPA200.8		JDA
Cadmium*	<0.0005	0.0005	0.0001	mg/L	1	11/24/21 11:56	EPA200.8		JDA
Copper*	0.0007	0.0005	0.00009	mg/L	1	11/24/21 11:56	EPA200.8		JDA
Lead*	<0.0005	0.0005	0.00001	mg/L	1	11/24/21 11:56	EPA200.8		JDA
Manganese*	0.0124	0.0005	0.0001	mg/L	1	11/24/21 11:56	EPA200.8		JDA
Molybdenum*	0.0009	0.0005	0.00003	mg/L	1	11/24/21 11:56	EPA200.8		JDA
Selenium*	<0.0010	0.0010	0.0002	mg/L	1	11/24/21 11:56	EPA200.8		JDA
Uranium	<0.0005	0.0005	0.00004	mg/L	1	11/24/21 11:56	EPA200.8		JDA
Zinc*	<0.0020	0.0020	0.0001	mg/L	1	11/24/21 11:56	EPA200.8		JDA

Total Mercury by CVAA

Mercury*	0.000020	0.0002	0.00001	mg/L	1	11/19/21 09:15	EPA245.1		DTR
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Cation/Anion Balance -5.08

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www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
12/02/21 12:46

Haygulch Ditch Upgradient

2111208-02 (Surface Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	87.0	10.0	4.53	mg/L	1	11/22/21 09:00	2320 B	M5	VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	1	11/22/21 09:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	1	11/22/21 09:00	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	87.0	10.0	4.53	mg/L	1	11/22/21 09:00	2320 B		VJW
Chloride*	3.44	1.00	0.0422	mg/L	1	11/24/21 12:38	EPA300.0		JDA
Fluoride*	0.179	0.100	0.00971	mg/L	1	11/24/21 12:38	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 11:26	EPA353.2		DTR
Oil & Grease (HEM)	<5.00	5.00	1.16	mg/L	1	11/29/21 08:45	EPA1664 A		VJW
pH*	7.52			pH Units	1	11/16/21 10:50	EPA150.1		VJW
pH Temperature, degrees C	24.4			pH Units	1	11/16/21 10:50	EPA150.1		VJW
SAR	0.14			No Unit	1	11/23/21 13:33	Calculation		JDA
Total Dissolved Solids*	140	10.0		mg/L	1	11/22/21 16:40	EPA160.1		VJW
Total Suspended Solids*	13.2	2.50		mg/L	1	11/17/21 17:12	2540 D		VJW
Sulfate*	40.0	1.00	0.152	mg/L	1	11/24/21 12:38	EPA300.0		JDA
Total Organic Carbon*	0.832	0.500	0.0616	mg/L	1	11/22/21 20:10	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.013	mg/L	1	11/18/21 16:05	EPA200.7		JDA
Calcium*	34.2	0.100	0.058	mg/L	1	11/18/21 16:05	EPA200.7		JDA
Hardness as CaCO ₃	120	0.662	0.414	mg/L	1	11/23/21 13:33	2340 B		JDA
Iron*	<0.050	0.050	0.018	mg/L	1	11/18/21 16:05	EPA200.7		JDA
Magnesium*	8.35	0.100	0.065	mg/L	1	11/23/21 13:33	EPA200.7		JDA
Potassium*	<1.00	1.00	0.081	mg/L	1	11/18/21 16:05	EPA200.7		JDA
Silica (SiO ₂)	8.95	1.07	0.0797	mg/L	1	11/18/21 16:05	Calculation		JDA
Silicon	4.18	0.500	0.037	mg/L	1	11/18/21 16:05	EPA200.7		JDA
Sodium*	3.53	1.00	0.079	mg/L	1	11/18/21 16:05	EPA200.7		JDA

Total Recoverable Metals by ICPMS (E200.8)

Mercury	<0.0100	0.0100	0.00430	ug/L	1	12/01/21 12:44	EPA200.8		AES
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Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom BirdReported:
12/02/21 12:46

Haygulch Ditch Upgradient

2111208-02 (Surface Water)

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

Arsenic*	<0.0005	0.0005	0.00005	mg/L	1	11/24/21 11:57	EPA200.8		JDA
Cadmium*	<0.0005	0.0005	0.0001	mg/L	1	11/24/21 11:57	EPA200.8		JDA
Copper*	0.0006	0.0005	0.00009	mg/L	1	11/24/21 11:57	EPA200.8		JDA
Lead*	<0.0005	0.0005	0.00001	mg/L	1	11/24/21 11:57	EPA200.8		JDA
Manganese*	0.0074	0.0005	0.0001	mg/L	1	11/24/21 11:57	EPA200.8		JDA
Molybdenum*	0.0008	0.0005	0.00003	mg/L	1	11/24/21 11:57	EPA200.8		JDA
Selenium*	<0.0010	0.0010	0.0002	mg/L	1	11/24/21 11:57	EPA200.8		JDA
Uranium	<0.0005	0.0005	0.00004	mg/L	1	11/24/21 11:57	EPA200.8		JDA
Zinc*	<0.0020	0.0020	0.0001	mg/L	1	11/24/21 11:57	EPA200.8		JDA

Total Mercury by CVAA

Mercury*	<0.00001	0.0002	0.00001	mg/L	1	11/19/21 09:15	EPA245.1		DTR
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Cation/Anion Balance -2.09

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom BirdReported:
12/02/21 12:46

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B212449 - General Prep - Wet Chem										
Blank (B212449-BLK1)				Prepared & Analyzed: 10/12/21						
Oil & Grease (HEM)	ND	5.00	mg/L							
LCS (B212449-BS1)				Prepared & Analyzed: 10/12/21						
Oil & Grease (HEM)	37.6	5.00	mg/L	40.0		94.0	85-115			
LCS Dup (B212449-BSD1)				Prepared & Analyzed: 10/12/21						
Oil & Grease (HEM)	36.4	5.00	mg/L	40.0		91.0	85-115	3.24	20	
Batch B212815 - Lachat										
Blank (B212815-BLK1)				Prepared: 11/15/21 Analyzed: 11/16/21						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B212815-BS1)				Prepared: 11/15/21 Analyzed: 11/16/21						
Nitrate/Nitrite as N	1.05	0.020	mg/L as N	1.00		105	90-110			
LCS Dup (B212815-BSD1)				Prepared: 11/15/21 Analyzed: 11/16/21						
Nitrate/Nitrite as N	1.05	0.020	mg/L as N	1.00		105	90-110	0.163	20	
Batch B212837 - General Prep - Wet Chem										
Blank (B212837-BLK1)				Prepared & Analyzed: 11/17/21						
Total Suspended Solids	ND	2.50	mg/L							
Duplicate (B212837-DUP1)				Source: 2111222-01 Prepared & Analyzed: 11/17/21						
Total Suspended Solids	183	2.50	mg/L		96.7			61.9	20	R1
Reference (B212837-SRM1)				Prepared & Analyzed: 11/17/21						
Total Suspended Solids	100	2.50	mg/L	100		100	85-115			
Batch B212841 - General Prep - Wet Chem										
Blank (B212841-BLK1)				Prepared: 11/18/21 Analyzed: 11/22/21						
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 (B212841-BS1)				Prepared: 11/18/21 Analyzed: 11/22/21						
Alkalinity, Bicarbonate as CaCO ₃	105	10.0	mg/L	100		105	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	105	10.0	mg/L	100		105	85-115			

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom BirdReported:
12/02/21 12:46General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212841 - General Prep - Wet Chem (Continued)

LCS Dup (B212841-BSD1)

Prepared: 11/18/21 Analyzed: 11/22/21

Alkalinity, Bicarbonate as CaCO ₃	103	10.0	mg/L	100		103	85-115	1.92	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	103	10.0	mg/L	100		103	85-115	1.92	20	

Batch B212847 - General Prep - Wet Chem

Blank (B212847-BLK1)

Prepared: 11/18/21 Analyzed: 11/22/21

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 (B212847-BS1)

Prepared: 11/18/21 Analyzed: 11/22/21

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

LCS Dup (B212847-BSD1)

Prepared: 11/18/21 Analyzed: 11/22/21

Alkalinity, Bicarbonate as CaCO ₃	104	10.0	mg/L	100		104	85-115	0.00	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	104	10.0	mg/L	100		104	85-115	0.00	20	

Batch B212855 - General Prep - Wet Chem

Duplicate (B212855-DUP1)

Source: 2111206-01

Prepared & Analyzed: 11/16/21

pH	7.02		pH Units		6.94			1.15	20	
pH Temperature, degrees C	25.0		pH Units		24.9			0.401	200	

Reference (B212855-SRM1)

Prepared & Analyzed: 11/16/21

pH	6.99		pH Units	7.00		99.9	98.57-101.42			
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Batch B212860 - General Prep - Wet Chem

Blank (B212860-BLK1)

Prepared: 11/19/21 Analyzed: 11/22/21

Total Dissolved Solids	ND	10.0	mg/L							
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Duplicate (B212860-DUP1)

Source: 2111208-01

Prepared: 11/19/21 Analyzed: 11/22/21

Total Dissolved Solids	175	10.0	mg/L		120			37.2	20	R1
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Reference (B212860-SRM1)

Prepared: 11/19/21 Analyzed: 11/22/21

Total Dissolved Solids	375	10.0	mg/L	400		93.7	85-115			
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Batch B212872 - General Prep - Wet Chem

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom BirdReported:
12/02/21 12:46General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212872 - General Prep - Wet Chem (Continued)

Blank (B212872-BLK1)

Prepared & Analyzed: 11/22/21

Total Organic Carbon ND 0.500 mg/L

LCS (B212872-BS1)

Prepared & Analyzed: 11/22/21

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

LCS Dup (B212872-BSD1)

Prepared & Analyzed: 11/22/21

Total Organic Carbon 10.1 0.500 mg/L 10.0 101 85-115 0.198 20

Batch B212878 - IC- Ion Chromatograph

Blank (B212878-BLK1)

Prepared & Analyzed: 11/22/21

Chloride ND 1.00 mg/L

Fluoride ND 0.100 mg/L

Sulfate ND 1.00 mg/L

LCS (B212878-BS1)

Prepared & Analyzed: 11/22/21

Chloride 24.8 1.00 mg/L 25.0 99.0 90-110

Fluoride 2.41 0.100 mg/L 2.50 96.3 90-110

Sulfate 24.0 1.00 mg/L 25.0 95.9 90-110

LCS Dup (B212878-BSD1)

Prepared & Analyzed: 11/22/21

Chloride 24.8 1.00 mg/L 25.0 99.1 90-110 0.0525 20

Fluoride 2.42 0.100 mg/L 2.50 96.8 90-110 0.580 20

Sulfate 23.8 1.00 mg/L 25.0 95.3 90-110 0.573 20

Batch B212891 - IC- Ion Chromatograph

Blank (B212891-BLK1)

Prepared: 11/23/21 Analyzed: 11/24/21

Chloride ND 1.00 mg/L

Fluoride ND 0.100 mg/L

Sulfate ND 1.00 mg/L

LCS (B212891-BS1)

Prepared: 11/23/21 Analyzed: 11/24/21

Chloride 24.1 1.00 mg/L 25.0 96.4 90-110

Fluoride 2.42 0.100 mg/L 2.50 96.6 90-110

Sulfate 23.5 1.00 mg/L 25.0 93.9 90-110

LCS Dup (B212891-BSD1)

Prepared: 11/23/21 Analyzed: 11/24/21

Chloride 24.9 1.00 mg/L 25.0 99.8 90-110 3.41 20

Fluoride 2.50 0.100 mg/L 2.50 100 90-110 3.58 20

Sulfate 25.3 1.00 mg/L 25.0 101 90-110 7.35 20

Batch B212911 - General Prep - Wet Chem

Blank (B212911-BLK1)

Prepared & Analyzed: 11/29/21

Oil & Grease (HEM) ND 5.00 mg/L

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom BirdReported:
12/02/21 12:46**General Chemistry - Quality Control
(Continued)**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212911 - General Prep - Wet Chem (Continued)**LCS (B212911-BS1)**

Prepared & Analyzed: 11/29/21

Oil & Grease (HEM)	36.3	5.00	mg/L	40.0	90.8	85-115
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LCS Dup (B212911-BSD1)

Prepared & Analyzed: 11/29/21

Oil & Grease (HEM)	36.9	5.00	mg/L	40.0	92.3	85-115	1.64	20
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Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212849 - Diss. 200.7/200.8**Blank (B212849-BLK1)**

Prepared & Analyzed: 11/18/21

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

LCS (B212849-BS1)

Prepared & Analyzed: 11/18/21

Aluminum	4.70	0.050	mg/L	5.00	94.0	85-115
Calcium	4.62	0.100	mg/L	5.00	92.4	85-115
Iron	4.58	0.050	mg/L	5.00	91.5	85-115
Magnesium	23.8	0.100	mg/L	25.0	95.3	85-115
Potassium	9.50	1.00	mg/L	10.0	95.0	85-115
Silicon	4.88	0.500	mg/L	5.00	97.6	85-115
Sodium	3.69	1.00	mg/L	4.05	91.0	85-115

LCS Dup (B212849-BSD1)

Prepared & Analyzed: 11/18/21

Aluminum	4.72	0.050	mg/L	5.00	94.4	85-115	0.373	20
Calcium	4.55	0.100	mg/L	5.00	91.0	85-115	1.54	20
Iron	4.50	0.050	mg/L	5.00	90.0	85-115	1.74	20
Magnesium	23.6	0.100	mg/L	25.0	94.5	85-115	0.846	20
Potassium	9.30	1.00	mg/L	10.0	93.0	85-115	2.06	20
Silicon	4.87	0.500	mg/L	5.00	97.4	85-115	0.267	20
Sodium	3.68	1.00	mg/L	4.05	90.8	85-115	0.283	20

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www.GreenAnalytical.com

GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
12/02/21 12:46

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B212913 - Mercury by 200.8										
Blank (B212913-BLK1)				Prepared: 11/29/21 Analyzed: 12/01/21						
Mercury	ND	0.0100	ug/L							
LCS (B212913-BS1)				Prepared: 11/29/21 Analyzed: 12/01/21						
Mercury	0.0869	0.0100	ug/L	0.100		86.9	85-115			
LCS Dup (B212913-BSD1)				Prepared: 11/29/21 Analyzed: 12/01/21						
Mercury	0.0856	0.0100	ug/L	0.100		85.6	85-115	1.50	20	

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
12/02/21 12:46

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212883 - Diss. 200.7/200.8

Blank (B212883-BLK1)

Prepared & Analyzed: 11/22/21

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

LCS (B212883-BS1)

Prepared & Analyzed: 11/22/21

Arsenic	0.0480	0.0005	mg/L	0.0500	96.1	85-115
Cadmium	0.0477	0.0005	mg/L	0.0500	95.3	85-115
Copper	0.0471	0.0005	mg/L	0.0500	94.3	85-115
Lead	0.0475	0.0005	mg/L	0.0500	94.9	85-115
Manganese	0.0472	0.0005	mg/L	0.0500	94.4	85-115
Molybdenum	0.0481	0.0005	mg/L	0.0500	96.1	85-115
Selenium	0.246	0.0010	mg/L	0.250	98.2	85-115
Uranium	0.0487	0.0005	mg/L	0.0500	97.4	85-115
Zinc	0.0470	0.0020	mg/L	0.0500	94.1	85-115

LCS Dup (B212883-BSD1)

Prepared & Analyzed: 11/22/21

Arsenic	0.0472	0.0005	mg/L	0.0500	94.3	85-115	1.86	20
Cadmium	0.0488	0.0005	mg/L	0.0500	97.6	85-115	2.39	20
Copper	0.0474	0.0005	mg/L	0.0500	94.8	85-115	0.540	20
Lead	0.0489	0.0005	mg/L	0.0500	97.9	85-115	3.05	20
Manganese	0.0484	0.0005	mg/L	0.0500	96.8	85-115	2.43	20
Molybdenum	0.0482	0.0005	mg/L	0.0500	96.4	85-115	0.310	20
Selenium	0.245	0.0010	mg/L	0.250	97.8	85-115	0.426	20
Uranium	0.0497	0.0005	mg/L	0.0500	99.4	85-115	2.10	20
Zinc	0.0484	0.0020	mg/L	0.0500	96.7	85-115	2.80	20

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
12/02/21 12:46

Total Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212827 - EPA 245.1/7470

Blank (B212827-BLK1)

Prepared: 11/16/21 Analyzed: 11/19/21

Mercury	ND	0.0002	mg/L							
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LCS (B212827-BS1)

Prepared: 11/16/21 Analyzed: 11/19/21

Mercury	0.0052	0.0002	mg/L	0.00500	105	85-115				
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LCS Dup (B212827-BSD1)

Prepared: 11/16/21 Analyzed: 11/19/21

Mercury	0.0050	0.0002	mg/L	0.00500	101	85-115	3.92	20		
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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

Project: GCC SW Baseline August 2021
Project Name / Number: GCC SW Baseline
Project Manager: Tom Bird

Reported:
12/02/21 12:46

Notes and Definitions

R1	Duplicate sample RPD exceeded laboratory acceptance criteria. Sample(s) may be difficult to homogenize.
M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis *Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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Fax: (970) 247-4227 75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: **GCC Energy LLC**
Address: **4473 County Road 120**
City: **Hesperus** State: **CO** Zip: **81326**
Phone #: **970 385-4528**
Contact Person: **TOM BIRD TOMB HAYGUTH SERVICES, LLC**
Email Report to: **LANDON BECK**
Project Name (optional): **LOBECCO RESOURCE HYDRO GEOLOGICAL**

Sampler Name (Print): **MARCEY BECK**

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

For Lab Use	Sample Name or Location	Collected		Matrix (check one)						# of containers					GCE S																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
		Date	Time	GROUNDWATER	SURFACEWATER	WASTEWATER	PRODUCEDWATER	SOIL	DRINKING WATER	OTHER :	No preservation (general)	HNO ₃	HCl	H ₂ SO ₄		Other:	Other:																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by GAL, regardless of whether such claim is based upon any of the above stated reasons or otherwise.

Relinquished by: _____ Date: **11/15/21** Received by: **Junda Dimples**
Time: **2:00**
Relinquished by: _____ Date: _____ Received by: _____
Time: _____
Relinquished by: _____ Date: _____ Received by: _____
Time: _____
Relinquished by: _____ Date: _____ Received by: _____
Time: _____

ADDITIONAL REMARKS: **10.8/10.7**

Report to State (Circle) Yes ☒ No ☐

Temperature at receipt: **10.8/10.7** CHECKED BY: **[Signature]** On Ice ☒ No Ice ☐

* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.
† GAL cannot always accept verbal changes. Please fax or email written change requests.
Just Click Printing Form #17-0301



75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
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30 November 2021

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

Enclosed are the results of analyses for samples received by the laboratory on 11/12/21 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'.

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.
TNI Certificate Number: T104704514-21-12.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-21-14



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/30/21 12:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
Well #1 Upgradient	2111202-01	Water	11/12/21 10:10	11/12/21 15:00	
MW-HGA-4	2111202-02	Water	11/12/21 11:30	11/12/21 15:00	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
11/30/21 12:25

Well #1 Upgradient

2111202-01 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	770	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	770	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Chloride*	4.93	2.00	0.0845	mg/L	2	11/24/21 11:57	EPA300.0		JDA
Fluoride*	0.284	0.200	0.0194	mg/L	2	11/24/21 11:57	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 10:58	EPA353.2		DTR
pH*	7.23			pH Units	1	11/12/21 16:05	EPA150.1		VJW
pH Temperature, degrees C	16.8			pH Units	1	11/12/21 16:05	EPA150.1		VJW
Total Dissolved Solids*	745	10.0		mg/L	1	11/17/21 16:30	EPA160.1		VJW
Sulfate*	122	4.00	0.610	mg/L	4	11/24/21 16:23	EPA300.0		JDA
Total Organic Carbon*	3.23	0.500	0.0616	mg/L	1	11/22/21 19:22	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.064	mg/L	5	11/18/21 15:49	EPA200.7		JDA
Calcium*	54.8	0.500	0.289	mg/L	5	11/18/21 15:49	EPA200.7		JDA
Hardness as CaCO ₃	286	3.31	2.07	mg/L	5	11/18/21 15:49	2340 B		JDA
Iron*	1.43	0.250	0.089	mg/L	5	11/18/21 15:49	EPA200.7		JDA
Magnesium*	36.1	0.500	0.327	mg/L	5	11/18/21 15:49	EPA200.7		JDA
Potassium*	<5.00	5.00	0.403	mg/L	5	11/18/21 15:49	EPA200.7		JDA
Silica (SiO ₂)	13.2	5.35	0.398	mg/L	5	11/18/21 15:49	Calculation		JDA
Silicon	6.17	2.50	0.186	mg/L	5	11/18/21 15:49	EPA200.7		JDA
Sodium*	182	5.00	0.396	mg/L	5	11/18/21 15:49	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	<0.0025	0.0025	0.0002	mg/L	5	11/22/21 15:53	EPA200.8		JDA
Cadmium*	<0.0025	0.0025	0.0005	mg/L	5	11/22/21 15:53	EPA200.8		JDA
Copper*	0.0059	0.0025	0.0005	mg/L	5	11/22/21 15:53	EPA200.8		JDA
Lead*	<0.0025	0.0025	0.00007	mg/L	5	11/22/21 15:53	EPA200.8		JDA
Manganese*	0.387	0.0025	0.0006	mg/L	5	11/22/21 15:53	EPA200.8		JDA
Molybdenum*	<0.0025	0.0025	0.0001	mg/L	5	11/22/21 15:53	EPA200.8		JDA
Selenium*	0.0439	0.0050	0.0008	mg/L	5	11/22/21 15:53	EPA200.8		JDA
Uranium	<0.0025	0.0025	0.0002	mg/L	5	11/22/21 15:53	EPA200.8		JDA
Zinc*	<0.0100	0.0100	0.0005	mg/L	5	11/22/21 15:53	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/30/21 12:25

Well #1 Upgradient

2111202-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
Cation/Anion Balance	-13.61								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
11/30/21 12:25

MW-HGA-4

2111202-02 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	580	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	580	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Chloride*	13.9	2.00	0.0845	mg/L	2	11/24/21 12:18	EPA300.0		JDA
Fluoride*	0.420	0.200	0.0194	mg/L	2	11/24/21 12:18	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 10:59	EPA353.2		DTR
pH*	7.03			pH Units	1	11/12/21 16:05	EPA150.1		VJW
pH Temperature, degrees C	18.5			pH Units	1	11/12/21 16:05	EPA150.1		VJW
Total Dissolved Solids*	790	10.0		mg/L	1	11/17/21 16:30	EPA160.1		VJW
Sulfate*	199	10.0	1.52	mg/L	10	11/29/21 18:33	EPA300.0		JDA
Total Organic Carbon*	4.84	0.500	0.0616	mg/L	1	11/22/21 19:39	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.064	mg/L	5	11/18/21 16:01	EPA200.7		JDA
Calcium*	125	0.500	0.289	mg/L	5	11/18/21 16:01	EPA200.7		JDA
Hardness as CaCO ₃	627	2.07	1.26	mg/L	5	11/23/21 13:30	2340 B		JDA
Iron*	8.44	0.250	0.089	mg/L	5	11/18/21 16:01	EPA200.7		JDA
Magnesium*	76.6	0.200	0.131	mg/L	2	11/23/21 13:30	EPA200.7		JDA
Potassium*	<5.00	5.00	0.403	mg/L	5	11/18/21 16:01	EPA200.7		JDA
Silica (SiO ₂)	17.7	5.35	0.398	mg/L	5	11/18/21 16:01	Calculation		JDA
Silicon	8.29	2.50	0.186	mg/L	5	11/18/21 16:01	EPA200.7		JDA
Sodium*	23.1	5.00	0.396	mg/L	5	11/18/21 16:01	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	0.0027	0.0005	0.00005	mg/L	1	11/22/21 15:54	EPA200.8		JDA
Cadmium*	<0.0005	0.0005	0.0001	mg/L	1	11/22/21 15:54	EPA200.8		JDA
Copper*	<0.0025	0.0025	0.0005	mg/L	5	11/24/21 11:54	EPA200.8		JDA
Lead*	<0.0005	0.0005	0.00001	mg/L	1	11/22/21 15:54	EPA200.8		JDA
Manganese*	2.86	0.0025	0.0006	mg/L	5	11/24/21 11:54	EPA200.8		JDA
Molybdenum*	0.0024	0.0005	0.00003	mg/L	1	11/22/21 15:54	EPA200.8		JDA
Selenium*	0.0017	0.0010	0.0002	mg/L	1	11/22/21 15:54	EPA200.8		JDA
Uranium	<0.0005	0.0005	0.00004	mg/L	1	11/22/21 15:54	EPA200.8		JDA
Zinc*	<0.0100	0.0100	0.0005	mg/L	5	11/24/21 11:54	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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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:
11/30/21 12:25

MW-HGA-4

2111202-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
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Cation/Anion Balance -7.51

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
11/30/21 12:25

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212792 - General Prep - Wet Chem

Duplicate (B212792-DUP2)		Source: 211197-03		Prepared & Analyzed: 11/12/21						
pH	8.22		pH Units		8.18			0.488	20	
pH Temperature, degrees C	20.0		pH Units		19.8			1.01	200	

Reference (B212792-SRM1)		Prepared & Analyzed: 11/12/21								
pH	6.97		pH Units	7.00		99.6	98.57-101.42			

Batch B212815 - Lachat

Blank (B212815-BLK1)		Prepared: 11/15/21 Analyzed: 11/16/21								
Nitrate/Nitrite as N	ND	0.020	mg/L as N							

LCS (B212815-BS1)		Prepared: 11/15/21 Analyzed: 11/16/21								
Nitrate/Nitrite as N	1.05	0.020	mg/L as N	1.00		105	90-110			

LCS Dup (B212815-BSD1)		Prepared: 11/15/21 Analyzed: 11/16/21								
Nitrate/Nitrite as N	1.05	0.020	mg/L as N	1.00		105	90-110	0.163	20	

Batch B212834 - General Prep - Wet Chem

Blank (B212834-BLK1)		Prepared & Analyzed: 11/17/21								
Total Dissolved Solids	ND	10.0	mg/L							

Duplicate (B212834-DUP1)		Source: 211173-01		Prepared & Analyzed: 11/17/21						
Total Dissolved Solids	3220	10.0	mg/L		3200			0.779	20	

Reference (B212834-SRM1)		Prepared & Analyzed: 11/17/21								
Total Dissolved Solids	400	10.0	mg/L	400		100	85-115			

Batch B212841 - General Prep - Wet Chem

Blank (B212841-BLK1)		Prepared: 11/18/21 Analyzed: 11/22/21								
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 (B212841-BS1)		Prepared: 11/18/21 Analyzed: 11/22/21								
Alkalinity, Bicarbonate as CaCO ₃	105	10.0	mg/L	100		105	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	105	10.0	mg/L	100		105	85-115			

LCS Dup (B212841-BSD1)		Prepared: 11/18/21 Analyzed: 11/22/21								
Alkalinity, Bicarbonate as CaCO ₃	103	10.0	mg/L	100		103	85-115	1.92	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	103	10.0	mg/L	100		103	85-115	1.92	20	

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/30/21 12:25

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B212872 - General Prep - Wet Chem									
Blank (B212872-BLK1)				Prepared & Analyzed: 11/22/21					
Total Organic Carbon	ND	0.500	mg/L						
LCS (B212872-BS1)				Prepared & Analyzed: 11/22/21					
Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115		
LCS Dup (B212872-BSD1)				Prepared & Analyzed: 11/22/21					
Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115	0.198	20
Batch B212891 - IC- Ion Chromatograph									
Blank (B212891-BLK1)				Prepared: 11/23/21 Analyzed: 11/24/21					
Chloride	ND	1.00	mg/L						
Fluoride	ND	0.100	mg/L						
Sulfate	ND	1.00	mg/L						
LCS (B212891-BS1)				Prepared: 11/23/21 Analyzed: 11/24/21					
Chloride	24.1	1.00	mg/L	25.0		96.4	90-110		
Fluoride	2.42	0.100	mg/L	2.50		96.6	90-110		
Sulfate	23.5	1.00	mg/L	25.0		93.9	90-110		
LCS Dup (B212891-BSD1)				Prepared: 11/23/21 Analyzed: 11/24/21					
Chloride	24.9	1.00	mg/L	25.0		99.8	90-110	3.41	20
Fluoride	2.50	0.100	mg/L	2.50		100	90-110	3.58	20
Sulfate	25.3	1.00	mg/L	25.0		101	90-110	7.35	20

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/30/21 12:25

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212849 - Diss. 200.7/200.8

Blank (B212849-BLK1)

Prepared & Analyzed: 11/18/21

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

LCS (B212849-BS1)

Prepared & Analyzed: 11/18/21

Aluminum	4.70	0.050	mg/L	5.00	94.0	85-115
Calcium	4.62	0.100	mg/L	5.00	92.4	85-115
Iron	4.58	0.050	mg/L	5.00	91.5	85-115
Magnesium	23.8	0.100	mg/L	25.0	95.3	85-115
Potassium	9.50	1.00	mg/L	10.0	95.0	85-115
Silicon	4.88	0.500	mg/L	5.00	97.6	85-115
Sodium	3.69	1.00	mg/L	4.05	91.0	85-115

LCS Dup (B212849-BSD1)

Prepared & Analyzed: 11/18/21

Aluminum	4.72	0.050	mg/L	5.00	94.4	85-115	0.373	20
Calcium	4.55	0.100	mg/L	5.00	91.0	85-115	1.54	20
Iron	4.50	0.050	mg/L	5.00	90.0	85-115	1.74	20
Magnesium	23.6	0.100	mg/L	25.0	94.5	85-115	0.846	20
Potassium	9.30	1.00	mg/L	10.0	93.0	85-115	2.06	20
Silicon	4.87	0.500	mg/L	5.00	97.4	85-115	0.267	20
Sodium	3.68	1.00	mg/L	4.05	90.8	85-115	0.283	20

Green Analytical Laboratories

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/30/21 12:25

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212883 - Diss. 200.7/200.8

Blank (B212883-BLK1)

Prepared & Analyzed: 11/22/21

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

LCS (B212883-BS1)

Prepared & Analyzed: 11/22/21

Arsenic	0.0480	0.0005	mg/L	0.0500	96.1	85-115
Cadmium	0.0477	0.0005	mg/L	0.0500	95.3	85-115
Copper	0.0471	0.0005	mg/L	0.0500	94.3	85-115
Lead	0.0475	0.0005	mg/L	0.0500	94.9	85-115
Manganese	0.0472	0.0005	mg/L	0.0500	94.4	85-115
Molybdenum	0.0481	0.0005	mg/L	0.0500	96.1	85-115
Selenium	0.246	0.0010	mg/L	0.250	98.2	85-115
Uranium	0.0487	0.0005	mg/L	0.0500	97.4	85-115
Zinc	0.0470	0.0020	mg/L	0.0500	94.1	85-115

LCS Dup (B212883-BSD1)

Prepared & Analyzed: 11/22/21

Arsenic	0.0472	0.0005	mg/L	0.0500	94.3	85-115	1.86	20
Cadmium	0.0488	0.0005	mg/L	0.0500	97.6	85-115	2.39	20
Copper	0.0474	0.0005	mg/L	0.0500	94.8	85-115	0.540	20
Lead	0.0489	0.0005	mg/L	0.0500	97.9	85-115	3.05	20
Manganese	0.0484	0.0005	mg/L	0.0500	96.8	85-115	2.43	20
Molybdenum	0.0482	0.0005	mg/L	0.0500	96.4	85-115	0.310	20
Selenium	0.245	0.0010	mg/L	0.250	97.8	85-115	0.426	20
Uranium	0.0497	0.0005	mg/L	0.0500	99.4	85-115	2.10	20
Zinc	0.0484	0.0020	mg/L	0.0500	96.7	85-115	2.80	20

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/30/21 12:25

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B212828 - EPA 245.1/7470									
Blank (B212828-BLK1)				Prepared: 11/16/21 Analyzed: 11/19/21					
Mercury	ND	0.0002	mg/L						
LCS (B212828-BS1)				Prepared: 11/16/21 Analyzed: 11/19/21					
Mercury	0.0051	0.0002	mg/L	0.00500	102	85-115			
LCS Dup (B212828-BSD1)				Prepared: 11/16/21 Analyzed: 11/19/21					
Mercury	0.0052	0.0002	mg/L	0.00500	103	85-115	1.15	20	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/30/21 12:25

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

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75 Suttle St Durango, CO

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
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www.greenanalytical.com

06 December 2021

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

Enclosed are the results of analyses for samples received by the laboratory on 11/17/21 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.
TNI Certificate Number: T104704514-21-12.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-21-14



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:56

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-1-A	2111244-01	Water	11/17/21 09:46	11/17/21 15:00	
MW-1-C	2111244-02	Water	11/17/21 10:30	11/17/21 15:00	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:56

MW-1-A**2111244-01 (Ground Water)**

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

Alkalinity, Bicarbonate as CaCO ₃ *	440	10.0	4.53	mg/L	10	11/29/21 13:00	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	10	11/29/21 13:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/29/21 13:00	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	440	10.0	4.53	mg/L	10	11/29/21 13:00	2320 B		VJW
Chloride*	<5.00	5.00	0.211	mg/L	5	11/24/21 15:42	EPA300.0		JDA
Fluoride*	<0.500	0.500	0.0486	mg/L	5	11/24/21 15:42	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/30/21 13:47	EPA353.2		DTR
pH*	7.05			pH Units	1	11/18/21 16:10	EPA150.1		VJW
pH Temperature, degrees C	20.0			pH Units	1	11/18/21 16:10	EPA150.1		VJW
Total Dissolved Solids*	1150	10.0		mg/L	1	11/22/21 16:40	EPA160.1		VJW
Sulfate*	458	25.0	3.81	mg/L	25	11/29/21 11:31	EPA300.0		JDA
Total Organic Carbon*	1.51	0.500	0.0616	mg/L	1	11/22/21 23:19	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	12/01/21 15:52	EPA200.7		AES
Calcium*	30.0	0.200	0.116	mg/L	2	12/01/21 15:52	EPA200.7		AES
Hardness as CaCO ₃	157	1.32	0.827	mg/L	2	12/01/21 15:52	2340 B		AES
Iron*	0.647	0.100	0.036	mg/L	2	12/01/21 15:52	EPA200.7		AES
Magnesium*	20.0	0.200	0.131	mg/L	2	12/01/21 15:52	EPA200.7		AES
Potassium*	2.34	2.00	0.161	mg/L	2	12/01/21 15:52	EPA200.7		AES
Silica (SiO ₂)	11.6	2.14	0.159	mg/L	2	12/01/21 15:52	Calculation		AES
Silicon	5.42	1.00	0.075	mg/L	2	12/01/21 15:52	EPA200.7		AES
Sodium*	340	2.00	0.159	mg/L	2	12/01/21 15:52	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0001	mg/L	2	11/24/21 12:05	EPA200.8		JDA
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	11/24/21 12:05	EPA200.8		JDA
Copper*	0.0086	0.0010	0.0002	mg/L	2	11/24/21 12:05	EPA200.8		JDA
Lead*	<0.0010	0.0010	0.00003	mg/L	2	11/24/21 12:05	EPA200.8		JDA
Manganese*	0.0287	0.0010	0.0003	mg/L	2	11/24/21 12:05	EPA200.8		JDA
Molybdenum*	<0.0010	0.0010	0.00006	mg/L	2	11/24/21 12:05	EPA200.8		JDA
Selenium*	<0.0020	0.0020	0.0003	mg/L	2	11/24/21 12:05	EPA200.8		JDA
Uranium	<0.0010	0.0010	0.00009	mg/L	2	11/24/21 12:05	EPA200.8		JDA
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	11/24/21 12:05	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:56

MW-1-A

2111244-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	12/01/21 16:30	EPA245.1		DTR
Cation/Anion Balance	-1.23								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/06/21 09:56

MW-1-C

2111244-02 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	640	10.0	4.53	mg/L	10	11/29/21 13:00	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	10	11/29/21 13:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/29/21 13:00	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	640	10.0	4.53	mg/L	10	11/29/21 13:00	2320 B		VJW
Chloride*	7.12	5.00	0.211	mg/L	5	11/24/21 16:02	EPA300.0		JDA
Fluoride*	0.755	0.500	0.0486	mg/L	5	11/24/21 16:02	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/30/21 13:48	EPA353.2		DTR
pH*	6.89			pH Units	1	11/18/21 16:10	EPA150.1		VJW
pH Temperature, degrees C	20.2			pH Units	1	11/18/21 16:10	EPA150.1		VJW
Total Dissolved Solids*	1840	10.0		mg/L	1	11/22/21 16:40	EPA160.1		VJW
Sulfate*	886	50.0	7.62	mg/L	50	11/29/21 11:51	EPA300.0		JDA
Total Organic Carbon*	1.91	0.500	0.0616	mg/L	1	11/22/21 23:39	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.150	0.150	0.038	mg/L	3	12/01/21 15:57	EPA200.7		AES
Calcium*	168	0.300	0.174	mg/L	3	12/01/21 15:57	EPA200.7		AES
Hardness as CaCO ₃	920	1.98	1.24	mg/L	3	12/01/21 15:57	2340 B		AES
Iron*	0.724	0.150	0.053	mg/L	3	12/01/21 15:57	EPA200.7		AES
Magnesium*	122	0.300	0.196	mg/L	3	12/01/21 15:57	EPA200.7		AES
Potassium*	<3.00	3.00	0.242	mg/L	3	12/01/21 15:57	EPA200.7		AES
Silica (SiO ₂)	14.8	3.21	0.239	mg/L	3	12/01/21 15:57	Calculation		AES
Silicon	6.94	1.50	0.112	mg/L	3	12/01/21 15:57	EPA200.7		AES
Sodium*	234	3.00	0.238	mg/L	3	12/01/21 15:57	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0001	mg/L	2	11/24/21 12:07	EPA200.8		JDA
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	11/24/21 12:07	EPA200.8		JDA
Copper*	0.0064	0.0010	0.0002	mg/L	2	11/24/21 12:07	EPA200.8		JDA
Lead*	<0.0010	0.0010	0.00003	mg/L	2	11/24/21 12:07	EPA200.8		JDA
Manganese*	0.0346	0.0010	0.0003	mg/L	2	11/24/21 12:07	EPA200.8		JDA
Molybdenum*	<0.0010	0.0010	0.00006	mg/L	2	11/24/21 12:07	EPA200.8		JDA
Selenium*	<0.0020	0.0020	0.0003	mg/L	2	11/24/21 12:07	EPA200.8		JDA
Uranium	0.0010	0.0010	0.00009	mg/L	2	11/24/21 12:07	EPA200.8		JDA
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	11/24/21 12:07	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:56

MW-1-C

2111244-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	12/01/21 16:30	EPA245.1		DTR
Cation/Anion Balance	-4.65								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/06/21 09:56

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212857 - General Prep - Wet Chem

Duplicate (B212857-DUP2)		Source: 2111245-01		Prepared & Analyzed: 11/18/21						
pH	7.52		pH Units		7.46			0.801	20	
pH Temperature, degrees C	19.8		pH Units		19.9			0.504	200	
Reference (B212857-SRM1)		Prepared & Analyzed: 11/18/21								
pH	6.96		pH Units	7.00		99.4	98.57-101.42			

Batch B212860 - General Prep - Wet Chem

Blank (B212860-BLK1)		Prepared: 11/19/21 Analyzed: 11/22/21								
Total Dissolved Solids	ND	10.0	mg/L							
Duplicate (B212860-DUP1)		Source: 2111208-01		Prepared: 11/19/21 Analyzed: 11/22/21						
Total Dissolved Solids	175	10.0	mg/L		120			37.2	20	R1
Reference (B212860-SRM1)		Prepared: 11/19/21 Analyzed: 11/22/21								
Total Dissolved Solids	375	10.0	mg/L	400		93.7	85-115			

Batch B212872 - General Prep - Wet Chem

Blank (B212872-BLK1)		Prepared & Analyzed: 11/22/21								
Total Organic Carbon	ND	0.500	mg/L							
LCS (B212872-BS1)		Prepared & Analyzed: 11/22/21								
Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115			
LCS Dup (B212872-BSD1)		Prepared & Analyzed: 11/22/21								
Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115	0.198	20	

Batch B212891 - IC- Ion Chromatograph

Blank (B212891-BLK1)		Prepared: 11/23/21 Analyzed: 11/24/21								
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B212891-BS1)		Prepared: 11/23/21 Analyzed: 11/24/21								
Chloride	24.1	1.00	mg/L	25.0		96.4	90-110			
Fluoride	2.42	0.100	mg/L	2.50		96.6	90-110			
Sulfate	23.5	1.00	mg/L	25.0		93.9	90-110			
LCS Dup (B212891-BSD1)		Prepared: 11/23/21 Analyzed: 11/24/21								
Chloride	24.9	1.00	mg/L	25.0		99.8	90-110	3.41	20	
Fluoride	2.50	0.100	mg/L	2.50		100	90-110	3.58	20	
Sulfate	25.3	1.00	mg/L	25.0		101	90-110	7.35	20	

Batch B212900 - General Prep - Wet Chem

Green Analytical Laboratories

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/06/21 09:56General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212900 - General Prep - Wet Chem (Continued)

Blank (B212900-BLK1)

Prepared: 11/24/21 Analyzed: 11/29/21

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 (B212900-BS1)

Prepared: 11/24/21 Analyzed: 11/29/21

Alkalinity, Bicarbonate as CaCO ₃	107	10.0	mg/L	100	107	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	107	10.0	mg/L	100	107	85-115

LCS Dup (B212900-BSD1)

Prepared: 11/24/21 Analyzed: 11/29/21

Alkalinity, Bicarbonate as CaCO ₃	108	10.0	mg/L	100	108	85-115	0.930	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	108	10.0	mg/L	100	108	85-115	0.930	20

Batch B212920 - Lachat

Blank (B212920-BLK1)

Prepared: 11/29/21 Analyzed: 11/30/21

Nitrate/Nitrite as N	ND	0.020	mg/L as N
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LCS (B212920-BS1)

Prepared: 11/29/21 Analyzed: 11/30/21

Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00	104	90-110
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LCS Dup (B212920-BSD1)

Prepared: 11/29/21 Analyzed: 11/30/21

Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00	104	90-110	0.636	20
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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:56

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212889 - Diss. 200.7/200.8

Blank (B212889-BLK1)

Prepared: 11/23/21 Analyzed: 12/01/21

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

LCS (B212889-BS1)

Prepared: 11/23/21 Analyzed: 12/01/21

Aluminum	4.66	0.050	mg/L	5.00	93.1	85-115
Calcium	4.56	0.100	mg/L	5.00	91.1	85-115
Iron	4.51	0.050	mg/L	5.00	90.2	85-115
Magnesium	23.3	0.100	mg/L	25.0	93.3	85-115
Potassium	9.66	1.00	mg/L	10.0	96.6	85-115
Silicon	4.90	0.500	mg/L	5.00	98.0	85-115
Sodium	3.72	1.00	mg/L	4.05	91.8	85-115

LCS Dup (B212889-BSD1)

Prepared: 11/23/21 Analyzed: 12/01/21

Aluminum	4.76	0.050	mg/L	5.00	95.2	85-115	2.24	20
Calcium	4.62	0.100	mg/L	5.00	92.4	85-115	1.40	20
Iron	4.56	0.050	mg/L	5.00	91.2	85-115	1.10	20
Magnesium	23.7	0.100	mg/L	25.0	94.8	85-115	1.64	20
Potassium	9.86	1.00	mg/L	10.0	98.6	85-115	2.09	20
Silicon	4.96	0.500	mg/L	5.00	99.3	85-115	1.26	20
Sodium	3.78	1.00	mg/L	4.05	93.4	85-115	1.66	20

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/06/21 09:56

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212883 - Diss. 200.7/200.8

Blank (B212883-BLK1)

Prepared & Analyzed: 11/22/21

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

LCS (B212883-BS1)

Prepared & Analyzed: 11/22/21

Arsenic	0.0480	0.0005	mg/L	0.0500	96.1	85-115
Cadmium	0.0477	0.0005	mg/L	0.0500	95.3	85-115
Copper	0.0471	0.0005	mg/L	0.0500	94.3	85-115
Lead	0.0475	0.0005	mg/L	0.0500	94.9	85-115
Manganese	0.0472	0.0005	mg/L	0.0500	94.4	85-115
Molybdenum	0.0481	0.0005	mg/L	0.0500	96.1	85-115
Selenium	0.246	0.0010	mg/L	0.250	98.2	85-115
Uranium	0.0487	0.0005	mg/L	0.0500	97.4	85-115
Zinc	0.0470	0.0020	mg/L	0.0500	94.1	85-115

LCS Dup (B212883-BSD1)

Prepared & Analyzed: 11/22/21

Arsenic	0.0472	0.0005	mg/L	0.0500	94.3	85-115	1.86	20
Cadmium	0.0488	0.0005	mg/L	0.0500	97.6	85-115	2.39	20
Copper	0.0474	0.0005	mg/L	0.0500	94.8	85-115	0.540	20
Lead	0.0489	0.0005	mg/L	0.0500	97.9	85-115	3.05	20
Manganese	0.0484	0.0005	mg/L	0.0500	96.8	85-115	2.43	20
Molybdenum	0.0482	0.0005	mg/L	0.0500	96.4	85-115	0.310	20
Selenium	0.245	0.0010	mg/L	0.250	97.8	85-115	0.426	20
Uranium	0.0497	0.0005	mg/L	0.0500	99.4	85-115	2.10	20
Zinc	0.0484	0.0020	mg/L	0.0500	96.7	85-115	2.80	20

Green Analytical Laboratories

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:56

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B212927 - EPA 245.1/7470										
Blank (B212927-BLK1)				Prepared: 11/30/21 Analyzed: 12/01/21						
Mercury	ND	0.0002	mg/L							
LCS (B212927-BS1)				Prepared: 11/30/21 Analyzed: 12/01/21						
Mercury	0.0044	0.0002	mg/L	0.00500		88.7	85-115			
LCS Dup (B212927-BSD1)				Prepared: 11/30/21 Analyzed: 12/01/21						
Mercury	0.0045	0.0002	mg/L	0.00500		90.4	85-115	1.99	20	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:56

Notes and Definitions

R1	Duplicate sample RPD exceeded laboratory acceptance criteria. Sample(s) may be difficult to homogenize.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis *Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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Durango, CO 81303
970.247.4220 Phone
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24 November 2021

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

Enclosed are the results of analyses for samples received by the laboratory on 11/10/21 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'.

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.
TNI Certificate Number: T104704514-21-12.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-21-14



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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:
11/24/21 10:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-3-C	2111173-01	Water	11/10/21 09:01	11/10/21 15:00	
MW-4-MI	2111173-02	Water	11/10/21 09:59	11/10/21 15:00	
MW-4-A	2111173-03	Water	11/10/21 10:32	11/10/21 15:00	
MW-4-C	2111173-04	Water	11/10/21 11:08	11/10/21 15:00	
Well #2 Downgradient	2111173-05	Water	11/10/21 12:56	11/10/21 15:00	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
11/24/21 10:13

MW-3-C

2111173-01 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	1950	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	280	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	2230	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Chloride*	462	100	4.22	mg/L	100	11/22/21 12:29	EPA300.0		JDA
Fluoride*	3.16	0.500	0.0486	mg/L	5	11/19/21 23:16	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.040	0.040	0.012	mg/L as N	2	11/16/21 09:49	EPA353.2	E8	DTR
pH*	8.87			pH Units	1	11/11/21 10:50	EPA150.1		VJW
pH Temperature, degrees C	21.4			pH Units	1	11/11/21 10:50	EPA150.1		VJW
Total Dissolved Solids*	3200	10.0		mg/L	1	11/17/21 16:30	EPA160.1		VJW
Sulfate*	<5.00	5.00	0.762	mg/L	5	11/19/21 23:16	EPA300.0		JDA
Total Organic Carbon*	16.4	0.500	0.0616	mg/L	1	11/22/21 14:57	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.064	mg/L	5	11/17/21 18:10	EPA200.7		JDA
Calcium*	3.76	0.500	0.289	mg/L	5	11/17/21 18:10	EPA200.7		JDA
Hardness as CaCO ₃	16.7	3.31	2.07	mg/L	5	11/17/21 18:10	2340 B		JDA
Iron*	0.310	0.250	0.089	mg/L	5	11/17/21 18:10	EPA200.7		JDA
Magnesium*	1.78	0.500	0.327	mg/L	5	11/17/21 18:10	EPA200.7		JDA
Potassium*	<5.00	5.00	0.403	mg/L	5	11/17/21 18:10	EPA200.7		JDA
Silica (SiO ₂)	8.33	5.35	0.398	mg/L	5	11/17/21 18:10	Calculation		JDA
Silicon	3.89	2.50	0.186	mg/L	5	11/17/21 18:10	EPA200.7		JDA
Sodium*	1170	5.00	0.396	mg/L	5	11/17/21 18:10	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	0.0170	0.0025	0.0002	mg/L	5	11/19/21 16:26	EPA200.8		JDA
Cadmium*	<0.0025	0.0025	0.0005	mg/L	5	11/19/21 16:26	EPA200.8		JDA
Copper*	0.0323	0.0025	0.0005	mg/L	5	11/19/21 16:26	EPA200.8		JDA
Lead*	<0.0025	0.0025	0.00007	mg/L	5	11/19/21 16:26	EPA200.8		JDA
Manganese*	0.0032	0.0025	0.0006	mg/L	5	11/19/21 16:26	EPA200.8		JDA
Molybdenum*	0.0061	0.0025	0.0001	mg/L	5	11/19/21 16:26	EPA200.8		JDA
Selenium*	0.0319	0.0100	0.0008	mg/L	5	11/19/21 16:26	EPA200.8	B3	JDA
Uranium	<0.0025	0.0025	0.0002	mg/L	5	11/19/21 16:26	EPA200.8		JDA
Zinc*	0.0377	0.0100	0.0005	mg/L	5	11/19/21 16:26	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/24/21 10:13

MW-3-C

2111173-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
Cation/Anion Balance	-5.93								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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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:
11/24/21 10:13

MW-4-MI

2111173-02 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	1020	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	120	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	1140	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Chloride*	4.98	2.00	0.0845	mg/L	2	11/19/21 23:37	EPA300.0		JDA
Fluoride*	4.78	0.200	0.0194	mg/L	2	11/19/21 23:37	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 09:53	EPA353.2		DTR
pH*	8.59			pH Units	1	11/11/21 10:50	EPA150.1		VJW
pH Temperature, degrees C	21.4			pH Units	1	11/11/21 10:50	EPA150.1		VJW
Total Dissolved Solids*	1090	10.0		mg/L	1	11/17/21 16:30	EPA160.1		VJW
Sulfate*	13.7	2.00	0.305	mg/L	2	11/19/21 23:37	EPA300.0		JDA
Total Organic Carbon*	5.09	0.500	0.0616	mg/L	1	11/22/21 15:15	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	11/17/21 18:14	EPA200.7		JDA
Calcium*	1.09	0.200	0.116	mg/L	2	11/17/21 18:14	EPA200.7		JDA
Hardness as CaCO ₃	4.53	1.32	0.827	mg/L	2	11/17/21 18:14	2340 B		JDA
Iron*	<0.100	0.100	0.036	mg/L	2	11/17/21 18:14	EPA200.7		JDA
Magnesium*	0.441	0.200	0.131	mg/L	2	11/17/21 18:14	EPA200.7		JDA
Potassium*	<2.00	2.00	0.161	mg/L	2	11/17/21 18:14	EPA200.7		JDA
Silica (SiO ₂)	8.54	2.14	0.159	mg/L	2	11/17/21 18:14	Calculation		JDA
Silicon	3.99	1.00	0.075	mg/L	2	11/17/21 18:14	EPA200.7		JDA
Sodium*	418	2.00	0.159	mg/L	2	11/17/21 18:14	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	0.0093	0.0010	0.0001	mg/L	2	11/19/21 16:28	EPA200.8		JDA
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	11/19/21 16:28	EPA200.8		JDA
Copper*	0.0107	0.0010	0.0002	mg/L	2	11/19/21 16:28	EPA200.8		JDA
Lead*	<0.0010	0.0010	0.00003	mg/L	2	11/19/21 16:28	EPA200.8		JDA
Manganese*	0.0077	0.0010	0.0003	mg/L	2	11/19/21 16:28	EPA200.8		JDA
Molybdenum*	0.0065	0.0010	0.00006	mg/L	2	11/19/21 16:28	EPA200.8		JDA
Selenium*	<0.0040	0.0040	0.0003	mg/L	2	11/19/21 16:28	EPA200.8	B3	JDA
Uranium	0.0097	0.0010	0.00009	mg/L	2	11/19/21 16:28	EPA200.8		JDA
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	11/19/21 16:28	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/24/21 10:13

MW-4-MI

2111173-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
Cation/Anion Balance	-12.36								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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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:
11/24/21 10:13

MW-4-A

2111173-03 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	670	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	670	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Chloride*	9.04	2.00	0.0845	mg/L	2	11/19/21 23:57	EPA300.0		JDA
Fluoride*	<0.200	0.200	0.0194	mg/L	2	11/19/21 23:57	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 09:54	EPA353.2		DTR
pH*	8.21			pH Units	1	11/11/21 10:50	EPA150.1		VJW
pH Temperature, degrees C	21.3			pH Units	1	11/11/21 10:50	EPA150.1		VJW
Total Dissolved Solids*	1470	10.0		mg/L	1	11/17/21 16:30	EPA160.1		VJW
Sulfate*	551	20.0	3.05	mg/L	20	11/22/21 12:49	EPA300.0		JDA
Total Organic Carbon*	3.28	0.500	0.0616	mg/L	1	11/22/21 15:36	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	11/17/21 18:17	EPA200.7		JDA
Calcium*	1.76	0.200	0.116	mg/L	2	11/17/21 18:17	EPA200.7		JDA
Hardness as CaCO ₃	7.54	1.32	0.827	mg/L	2	11/17/21 18:17	2340 B		JDA
Iron*	<0.100	0.100	0.036	mg/L	2	11/17/21 18:17	EPA200.7		JDA
Magnesium*	0.765	0.200	0.131	mg/L	2	11/17/21 18:17	EPA200.7		JDA
Potassium*	<2.00	2.00	0.161	mg/L	2	11/17/21 18:17	EPA200.7		JDA
Silica (SiO ₂)	10.0	2.14	0.159	mg/L	2	11/17/21 18:17	Calculation		JDA
Silicon	4.67	1.00	0.075	mg/L	2	11/17/21 18:17	EPA200.7		JDA
Sodium*	488	2.00	0.159	mg/L	2	11/17/21 18:17	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0001	mg/L	2	11/19/21 16:30	EPA200.8		JDA
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	11/19/21 16:30	EPA200.8		JDA
Copper*	0.0126	0.0010	0.0002	mg/L	2	11/19/21 16:30	EPA200.8		JDA
Lead*	<0.0010	0.0010	0.00003	mg/L	2	11/19/21 16:30	EPA200.8		JDA
Manganese*	0.0030	0.0010	0.0003	mg/L	2	11/19/21 16:30	EPA200.8		JDA
Molybdenum*	<0.0010	0.0010	0.00006	mg/L	2	11/19/21 16:30	EPA200.8		JDA
Selenium*	<0.0040	0.0040	0.0003	mg/L	2	11/19/21 16:30	EPA200.8	B3	JDA
Uranium	<0.0010	0.0010	0.00009	mg/L	2	11/19/21 16:30	EPA200.8		JDA
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	11/19/21 16:30	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/24/21 10:13

MW-4-A

2111173-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
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Cation/Anion Balance	-7.98
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Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
11/24/21 10:13

MW-4-C

2111173-04 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	2410	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	220	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	2630	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Chloride*	561	50.0	2.11	mg/L	50	11/22/21 13:10	EPA300.0		JDA
Fluoride*	2.04	0.500	0.0486	mg/L	5	11/20/21 00:17	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 09:55	EPA353.2		DTR
pH*	8.08			pH Units	1	11/11/21 10:50	EPA150.1		VJW
pH Temperature, degrees C	21.2			pH Units	1	11/11/21 10:50	EPA150.1		VJW
Total Dissolved Solids*	3630	10.0		mg/L	1	11/17/21 16:30	EPA160.1		VJW
Sulfate*	<5.00	5.00	0.762	mg/L	5	11/20/21 00:17	EPA300.0		JDA
Total Organic Carbon*	4.70	0.500	0.0616	mg/L	1	11/22/21 15:57	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.064	mg/L	5	11/17/21 18:22	EPA200.7		JDA
Calcium*	4.77	0.500	0.289	mg/L	5	11/17/21 18:22	EPA200.7		JDA
Hardness as CaCO ₃	20.9	3.31	2.07	mg/L	5	11/17/21 18:22	2340 B		JDA
Iron*	0.551	0.250	0.089	mg/L	5	11/17/21 18:22	EPA200.7		JDA
Magnesium*	2.19	0.500	0.327	mg/L	5	11/17/21 18:22	EPA200.7		JDA
Potassium*	<5.00	5.00	0.403	mg/L	5	11/17/21 18:22	EPA200.7		JDA
Silica (SiO ₂)	9.37	5.35	0.398	mg/L	5	11/17/21 18:22	Calculation		JDA
Silicon	4.38	2.50	0.186	mg/L	5	11/17/21 18:22	EPA200.7		JDA
Sodium*	1270	5.00	0.396	mg/L	5	11/17/21 18:22	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	0.0213	0.0025	0.0002	mg/L	5	11/19/21 16:31	EPA200.8		JDA
Cadmium*	<0.0025	0.0025	0.0005	mg/L	5	11/19/21 16:31	EPA200.8		JDA
Copper*	0.0370	0.0025	0.0005	mg/L	5	11/19/21 16:31	EPA200.8		JDA
Lead*	<0.0025	0.0025	0.00007	mg/L	5	11/19/21 16:31	EPA200.8		JDA
Manganese*	0.0047	0.0025	0.0006	mg/L	5	11/19/21 16:31	EPA200.8		JDA
Molybdenum*	0.0031	0.0025	0.0001	mg/L	5	11/19/21 16:31	EPA200.8		JDA
Selenium*	0.0269	0.0100	0.0008	mg/L	5	11/19/21 16:31	EPA200.8	B3	JDA
Uranium	<0.0025	0.0025	0.0002	mg/L	5	11/19/21 16:31	EPA200.8		JDA
Zinc*	<0.0100	0.0100	0.0005	mg/L	5	11/19/21 16:31	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/24/21 10:13

MW-4-C

2111173-04 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
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Cation/Anion Balance **-10.26**

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/24/21 10:13

Well #2 Downgradient**211173-05 (Ground Water)**

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

Alkalinity, Bicarbonate as CaCO ₃ *	540	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 10:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	540	10.0	4.53	mg/L	10	11/22/21 10:40	2320 B		VJW
Chloride*	44.3	1.00	0.0422	mg/L	1	11/20/21 00:38	EPA300.0		JDA
Fluoride*	0.210	0.100	0.00971	mg/L	1	11/20/21 00:38	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 09:56	EPA353.2		DTR
pH*	7.24			pH Units	1	11/11/21 10:50	EPA150.1		VJW
pH Temperature, degrees C	21.2			pH Units	1	11/11/21 10:50	EPA150.1		VJW
Total Dissolved Solids*	655	10.0		mg/L	1	11/17/21 16:30	EPA160.1		VJW
Sulfate*	176	10.0	1.52	mg/L	10	11/22/21 13:30	EPA300.0		JDA
Total Organic Carbon*	1.73	0.500	0.0616	mg/L	1	11/22/21 16:17	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.013	mg/L	1	11/17/21 18:30	EPA200.7		JDA
Calcium*	80.1	0.100	0.058	mg/L	1	11/17/21 18:30	EPA200.7		JDA
Hardness as CaCO ₃	521	0.662	0.414	mg/L	1	11/17/21 18:30	2340 B		JDA
Iron*	0.076	0.050	0.018	mg/L	1	11/17/21 18:30	EPA200.7		JDA
Magnesium*	77.9	0.100	0.065	mg/L	1	11/17/21 18:30	EPA200.7		JDA
Potassium*	2.12	1.00	0.081	mg/L	1	11/17/21 18:30	EPA200.7		JDA
Silica (SiO ₂)	12.2	1.07	0.0797	mg/L	1	11/17/21 18:30	Calculation		JDA
Silicon	5.72	0.500	0.037	mg/L	1	11/17/21 18:30	EPA200.7		JDA
Sodium*	23.3	1.00	0.079	mg/L	1	11/17/21 18:30	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	<0.0025	0.0025	0.0002	mg/L	5	11/19/21 16:33	EPA200.8		JDA
Cadmium*	<0.0025	0.0025	0.0005	mg/L	5	11/19/21 16:33	EPA200.8		JDA
Copper*	<0.0025	0.0025	0.0005	mg/L	5	11/19/21 16:33	EPA200.8		JDA
Lead*	<0.0025	0.0025	0.00007	mg/L	5	11/19/21 16:33	EPA200.8		JDA
Manganese*	0.438	0.0025	0.0006	mg/L	5	11/19/21 16:33	EPA200.8		JDA
Molybdenum*	0.0027	0.0025	0.0001	mg/L	5	11/19/21 16:33	EPA200.8		JDA
Selenium*	<0.0100	0.0100	0.0008	mg/L	5	11/19/21 16:33	EPA200.8	B3	JDA
Uranium	<0.0025	0.0025	0.0002	mg/L	5	11/19/21 16:33	EPA200.8		JDA
Zinc*	<0.0100	0.0100	0.0005	mg/L	5	11/19/21 16:33	EPA200.8		JDA

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/24/21 10:13

Well #2 Downgradient

2111173-05 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
Cation/Anion Balance	-15.61								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
11/24/21 10:13

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212791 - General Prep - Wet Chem

Duplicate (B212791-DUP2)		Source: 2111176-01		Prepared & Analyzed: 11/11/21						
pH	7.38		pH Units		7.28			1.36	20	
pH Temperature, degrees C	20.1		pH Units		19.9			1.00	200	

Reference (B212791-SRM1)		Prepared & Analyzed: 11/11/21								
pH	6.99		pH Units	7.00		99.9	98.57-101.42			

Batch B212812 - Lachat

Blank (B212812-BLK1)		Prepared: 11/15/21 Analyzed: 11/16/21								
Nitrate/Nitrite as N	ND	0.020	mg/L as N							

LCS (B212812-BS1)		Prepared: 11/15/21 Analyzed: 11/16/21								
Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00		104	90-110			

LCS Dup (B212812-BSD1)		Prepared: 11/15/21 Analyzed: 11/16/21								
Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00		104	90-110	0.568	20	

Batch B212834 - General Prep - Wet Chem

Blank (B212834-BLK1)		Prepared & Analyzed: 11/17/21								
Total Dissolved Solids	ND	10.0	mg/L							

Duplicate (B212834-DUP1)		Source: 2111173-01		Prepared & Analyzed: 11/17/21						
Total Dissolved Solids	3220	10.0	mg/L		3200			0.779	20	

Reference (B212834-SRM1)		Prepared & Analyzed: 11/17/21								
Total Dissolved Solids	400	10.0	mg/L	400		100	85-115			

Batch B212841 - General Prep - Wet Chem

Blank (B212841-BLK1)		Prepared: 11/18/21 Analyzed: 11/22/21								
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L							
Alkalinity, Total as CaCO3	ND	10.0	mg/L							

LCS (B212841-BS1)		Prepared: 11/18/21 Analyzed: 11/22/21								
Alkalinity, Bicarbonate as CaCO3	105	10.0	mg/L	100		105	85-115			
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Total as CaCO3	105	10.0	mg/L	100		105	85-115			

LCS Dup (B212841-BSD1)		Prepared: 11/18/21 Analyzed: 11/22/21								
Alkalinity, Bicarbonate as CaCO3	103	10.0	mg/L	100		103	85-115	1.92	20	
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L				85-115		20	
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L				85-115		20	
Alkalinity, Total as CaCO3	103	10.0	mg/L	100		103	85-115	1.92	20	

Green Analytical Laboratories

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/24/21 10:13

General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212852 - IC- Ion Chromatograph

Blank (B212852-BLK1)

Prepared: 11/18/21 Analyzed: 11/19/21

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

LCS (B212852-BS1)

Prepared: 11/18/21 Analyzed: 11/19/21

Chloride	25.0	1.00	mg/L	25.0	100	90-110
Fluoride	2.44	0.100	mg/L	2.50	97.8	90-110
Sulfate	24.2	1.00	mg/L	25.0	97.0	90-110

LCS Dup (B212852-BSD1)

Prepared: 11/18/21 Analyzed: 11/19/21

Chloride	24.9	1.00	mg/L	25.0	99.6	90-110	0.361	20
Fluoride	2.45	0.100	mg/L	2.50	98.1	90-110	0.368	20
Sulfate	24.2	1.00	mg/L	25.0	97.0	90-110	0.0124	20

Batch B212872 - General Prep - Wet Chem

Blank (B212872-BLK1)

Prepared & Analyzed: 11/22/21

Total Organic Carbon	ND	0.500	mg/L
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LCS (B212872-BS1)

Prepared & Analyzed: 11/22/21

Total Organic Carbon	10.1	0.500	mg/L	10.0	101	85-115
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LCS Dup (B212872-BSD1)

Prepared & Analyzed: 11/22/21

Total Organic Carbon	10.1	0.500	mg/L	10.0	101	85-115	0.198	20
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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/24/21 10:13

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212803 - Diss. 200.7/200.8

Blank (B212803-BLK1)

Prepared: 11/15/21 Analyzed: 11/17/21

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

LCS (B212803-BS1)

Prepared: 11/15/21 Analyzed: 11/17/21

Aluminum	4.78	0.050	mg/L	5.00	95.6	85-115
Calcium	4.73	0.100	mg/L	5.00	94.6	85-115
Iron	4.54	0.050	mg/L	5.00	90.9	85-115
Magnesium	24.2	0.100	mg/L	25.0	96.9	85-115
Potassium	9.23	1.00	mg/L	10.0	92.3	85-115
Silicon	4.89	0.500	mg/L	5.00	97.9	85-115
Sodium	3.74	1.00	mg/L	4.05	92.3	85-115

LCS Dup (B212803-BSD1)

Prepared: 11/15/21 Analyzed: 11/17/21

Aluminum	4.79	0.050	mg/L	5.00	95.9	85-115	0.231	20
Calcium	4.72	0.100	mg/L	5.00	94.5	85-115	0.0973	20
Iron	4.54	0.050	mg/L	5.00	90.7	85-115	0.154	20
Magnesium	24.3	0.100	mg/L	25.0	97.4	85-115	0.530	20
Potassium	9.31	1.00	mg/L	10.0	93.1	85-115	0.875	20
Silicon	4.89	0.500	mg/L	5.00	97.8	85-115	0.0259	20
Sodium	3.72	1.00	mg/L	4.05	91.9	85-115	0.487	20

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Debbie Zufelt, Reports Manager

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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:
11/24/21 10:13

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212804 - Diss. 200.7/200.8

Blank (B212804-BLK1)

Prepared: 11/15/21 Analyzed: 11/19/21

Arsenic	ND	0.0005	mg/L							
Cadmium	ND	0.0005	mg/L							
Copper	ND	0.0005	mg/L							
Lead	ND	0.0005	mg/L							
Manganese	ND	0.0005	mg/L							
Molybdenum	ND	0.0005	mg/L							
Selenium	ND	0.0010	mg/L							B3
Uranium	ND	0.0005	mg/L							
Zinc	ND	0.0020	mg/L							

LCS (B212804-BS1)

Prepared: 11/15/21 Analyzed: 11/19/21

Arsenic	0.0491	0.0005	mg/L	0.0500		98.2	85-115			
Cadmium	0.0495	0.0005	mg/L	0.0500		99.0	85-115			
Copper	0.0463	0.0005	mg/L	0.0500		92.6	85-115			
Lead	0.0484	0.0005	mg/L	0.0500		96.8	85-115			
Manganese	0.0489	0.0005	mg/L	0.0500		97.7	85-115			
Molybdenum	0.0473	0.0005	mg/L	0.0500		94.5	85-115			
Selenium	0.249	0.0010	mg/L	0.250		99.7	85-115			
Uranium	0.0499	0.0005	mg/L	0.0500		99.8	85-115			
Zinc	0.0480	0.0020	mg/L	0.0500		96.0	85-115			

LCS Dup (B212804-BSD1)

Prepared: 11/15/21 Analyzed: 11/19/21

Arsenic	0.0504	0.0005	mg/L	0.0500		101	85-115	2.57	20	
Cadmium	0.0499	0.0005	mg/L	0.0500		99.8	85-115	0.810	20	
Copper	0.0465	0.0005	mg/L	0.0500		93.1	85-115	0.516	20	
Lead	0.0483	0.0005	mg/L	0.0500		96.6	85-115	0.150	20	
Manganese	0.0490	0.0005	mg/L	0.0500		98.1	85-115	0.342	20	
Molybdenum	0.0472	0.0005	mg/L	0.0500		94.4	85-115	0.130	20	
Selenium	0.254	0.0010	mg/L	0.250		102	85-115	2.12	20	
Uranium	0.0498	0.0005	mg/L	0.0500		99.6	85-115	0.196	20	
Zinc	0.0484	0.0020	mg/L	0.0500		96.8	85-115	0.848	20	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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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:
11/24/21 10:13

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
Batch B212828 - EPA 245.1/7470									
Blank (B212828-BLK1)				Prepared: 11/16/21 Analyzed: 11/19/21					
Mercury	ND	0.0002	mg/L						
LCS (B212828-BS1)				Prepared: 11/16/21 Analyzed: 11/19/21					
Mercury	0.0051	0.0002	mg/L	0.00500	102	85-115			
LCS Dup (B212828-BSD1)				Prepared: 11/16/21 Analyzed: 11/19/21					
Mercury	0.0052	0.0002	mg/L	0.00500	103	85-115	1.15	20	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/24/21 10:13

Notes and Definitions

E8	Possible interference from sample matrix. Sample required dilution to eliminate an inference resulting in an elevated reporting limit. Sample cannot be analyzed at a lesser dilution with this method.
B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis *Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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DOY AND ANALYSIS REQUEST
FORM-006
COC - Revision 6.0
ANALYSIS REQUEST

Page 19 of 19 2111173 GAL FINAL 11 24 21 1013 11/24/21 10:14:14



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06 December 2021

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

Enclosed are the results of analyses for samples received by the laboratory on 11/17/21 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.
TNI Certificate Number: T104704514-21-12.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-21-14



GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:53

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-5-M1	2111243-01	Water	11/17/21 11:30	11/17/21 15:00	
MW-5-C	2111243-02	Water	11/17/21 12:12	11/17/21 15:00	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/06/21 09:53

MW-5-M1

2111243-01 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	920	10.0	4.53	mg/L	10	11/22/21 09:00	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	80.0	10.0		mg/L	10	11/22/21 09:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/22/21 09:00	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	1000	10.0	4.53	mg/L	10	11/22/21 09:00	2320 B		VJW
Chloride*	6.80	5.00	0.211	mg/L	5	11/24/21 15:01	EPA300.0		JDA
Fluoride*	<0.500	0.500	0.0486	mg/L	5	11/24/21 15:01	EPA300.0		JDA
Nitrate/Nitrite as N*	0.104	0.020	0.006	mg/L as N	1	11/30/21 13:42	EPA353.2		DTR
pH*	8.20			pH Units	1	11/18/21 16:10	EPA150.1		VJW
pH Temperature, degrees C	20.2			pH Units	1	11/18/21 16:10	EPA150.1		VJW
Total Dissolved Solids*	945	10.0		mg/L	1	11/22/21 16:40	EPA160.1		VJW
Sulfate*	6.94	5.00	0.762	mg/L	5	11/24/21 15:01	EPA300.0		JDA
Total Organic Carbon*	2.40	0.500	0.0616	mg/L	1	11/22/21 22:44	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	12/01/21 15:43	EPA200.7		AES
Calcium*	2.30	0.200	0.116	mg/L	2	12/01/21 15:43	EPA200.7		AES
Hardness as CaCO ₃	9.30	1.32	0.827	mg/L	2	12/01/21 15:43	2340 B		AES
Iron*	<0.100	0.100	0.036	mg/L	2	12/01/21 15:43	EPA200.7		AES
Magnesium*	0.863	0.200	0.131	mg/L	2	12/01/21 15:43	EPA200.7		AES
Potassium*	<2.00	2.00	0.161	mg/L	2	12/01/21 15:43	EPA200.7		AES
Silica (SiO ₂)	8.12	2.14	0.159	mg/L	2	12/01/21 15:43	Calculation		AES
Silicon	3.80	1.00	0.075	mg/L	2	12/01/21 15:43	EPA200.7		AES
Sodium*	391	2.00	0.159	mg/L	2	12/01/21 15:43	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0076	0.0025	0.0002	mg/L	5	11/24/21 11:59	EPA200.8		JDA
Cadmium*	<0.0025	0.0025	0.0005	mg/L	5	11/24/21 11:59	EPA200.8		JDA
Copper*	0.0095	0.0025	0.0005	mg/L	5	11/24/21 11:59	EPA200.8		JDA
Lead*	<0.0025	0.0025	0.00007	mg/L	5	11/24/21 11:59	EPA200.8		JDA
Manganese*	0.0181	0.0025	0.0006	mg/L	5	11/24/21 11:59	EPA200.8		JDA
Molybdenum*	<0.0025	0.0025	0.0001	mg/L	5	11/24/21 11:59	EPA200.8		JDA
Selenium*	<0.0050	0.0050	0.0008	mg/L	5	11/24/21 11:59	EPA200.8		JDA
Uranium	0.0053	0.0025	0.0002	mg/L	5	11/24/21 11:59	EPA200.8		JDA
Zinc*	0.0782	0.0100	0.0005	mg/L	5	11/24/21 11:59	EPA200.8		JDA

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:53

MW-5-M1

2111243-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	12/01/21 16:30	EPA245.1		DTR
Cation/Anion Balance	-8.3								

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/06/21 09:53

MW-5-C

2111243-02 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	1450	10.0	4.53	mg/L	10	11/29/21 13:00	2320 B	M5	VJW
Alkalinity, Carbonate as CaCO ₃ *	240	10.0		mg/L	10	11/29/21 13:00	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	10	11/29/21 13:00	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	1690	10.0	4.53	mg/L	10	11/29/21 13:00	2320 B		VJW
Chloride*	5.93	5.00	0.211	mg/L	5	11/24/21 15:21	EPA300.0		JDA
Fluoride*	1.96	0.500	0.0486	mg/L	5	11/24/21 15:21	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.040	0.040	0.012	mg/L as N	2	11/30/21 13:46	EPA353.2	E8	DTR
pH*	7.81			pH Units	1	11/18/21 16:10	EPA150.1		VJW
pH Temperature, degrees C	19.9			pH Units	1	11/18/21 16:10	EPA150.1		VJW
Total Dissolved Solids*	2520	10.0		mg/L	1	11/22/21 16:40	EPA160.1		VJW
Sulfate*	560	25.0	3.81	mg/L	25	11/29/21 11:10	EPA300.0		JDA
Total Organic Carbon*	2.54	0.500	0.0616	mg/L	1	11/22/21 23:04	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.064	mg/L	5	12/01/21 15:50	EPA200.7		AES
Calcium*	5.78	0.500	0.289	mg/L	5	12/01/21 15:50	EPA200.7		AES
Hardness as CaCO ₃	26.0	3.31	2.07	mg/L	5	12/01/21 15:50	2340 B		AES
Iron*	0.273	0.250	0.089	mg/L	5	12/01/21 15:50	EPA200.7		AES
Magnesium*	2.82	0.500	0.327	mg/L	5	12/01/21 15:50	EPA200.7		AES
Potassium*	<5.00	5.00	0.403	mg/L	5	12/01/21 15:50	EPA200.7		AES
Silica (SiO ₂)	7.79	5.35	0.398	mg/L	5	12/01/21 15:50	Calculation		AES
Silicon	3.64	2.50	0.186	mg/L	5	12/01/21 15:50	EPA200.7		AES
Sodium*	922	5.00	0.396	mg/L	5	12/01/21 15:50	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0025	0.0025	0.0002	mg/L	5	11/24/21 12:04	EPA200.8		JDA
Cadmium*	<0.0025	0.0025	0.0005	mg/L	5	11/24/21 12:04	EPA200.8		JDA
Copper*	0.0242	0.0025	0.0005	mg/L	5	11/24/21 12:04	EPA200.8		JDA
Lead*	<0.0025	0.0025	0.00007	mg/L	5	11/24/21 12:04	EPA200.8		JDA
Manganese*	0.0029	0.0025	0.0006	mg/L	5	11/24/21 12:04	EPA200.8		JDA
Molybdenum*	0.0032	0.0025	0.0001	mg/L	5	11/24/21 12:04	EPA200.8		JDA
Selenium*	<0.0050	0.0050	0.0008	mg/L	5	11/24/21 12:04	EPA200.8		JDA
Uranium	<0.0025	0.0025	0.0002	mg/L	5	11/24/21 12:04	EPA200.8		JDA
Zinc*	<0.0100	0.0100	0.0005	mg/L	5	11/24/21 12:04	EPA200.8		JDA

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:53

MW-5-C

2111243-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	12/01/21 16:30	EPA245.1		DTR
Cation/Anion Balance	-5.81								

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/06/21 09:53

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212847 - General Prep - Wet Chem

Blank (B212847-BLK1)

Prepared: 11/18/21 Analyzed: 11/22/21

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 (B212847-BS1)

Prepared: 11/18/21 Analyzed: 11/22/21

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

LCS Dup (B212847-BSD1)

Prepared: 11/18/21 Analyzed: 11/22/21

Alkalinity, Bicarbonate as CaCO ₃	104	10.0	mg/L	100	104	85-115	0.00	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	104	10.0	mg/L	100	104	85-115	0.00	20

Batch B212857 - General Prep - Wet Chem

Duplicate (B212857-DUP2)

Source: 2111245-01

Prepared & Analyzed: 11/18/21

pH	7.52		pH Units	7.46		0.801	20
pH Temperature, degrees C	19.8		pH Units	19.9		0.504	200

Reference (B212857-SRM1)

Prepared & Analyzed: 11/18/21

pH	6.96		pH Units	7.00	99.4	98.57-101.42
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Batch B212860 - General Prep - Wet Chem

Blank (B212860-BLK1)

Prepared: 11/19/21 Analyzed: 11/22/21

Total Dissolved Solids	ND	10.0	mg/L
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Duplicate (B212860-DUP1)

Source: 2111208-01

Prepared: 11/19/21 Analyzed: 11/22/21

Total Dissolved Solids	175	10.0	mg/L	120		37.2	20	R1
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Reference (B212860-SRM1)

Prepared: 11/19/21 Analyzed: 11/22/21

Total Dissolved Solids	375	10.0	mg/L	400	93.7	85-115
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Batch B212872 - General Prep - Wet Chem

Blank (B212872-BLK1)

Prepared & Analyzed: 11/22/21

Total Organic Carbon	ND	0.500	mg/L
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LCS (B212872-BS1)

Prepared & Analyzed: 11/22/21

Total Organic Carbon	10.1	0.500	mg/L	10.0	101	85-115
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LCS Dup (B212872-BSD1)

Prepared & Analyzed: 11/22/21

Total Organic Carbon	10.1	0.500	mg/L	10.0	101	85-115	0.198	20
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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/06/21 09:53General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212891 - IC- Ion Chromatograph

Blank (B212891-BLK1)

Prepared: 11/23/21 Analyzed: 11/24/21

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

LCS (B212891-BS1)

Prepared: 11/23/21 Analyzed: 11/24/21

Chloride	24.1	1.00	mg/L	25.0	96.4	90-110
Fluoride	2.42	0.100	mg/L	2.50	96.6	90-110
Sulfate	23.5	1.00	mg/L	25.0	93.9	90-110

LCS Dup (B212891-BSD1)

Prepared: 11/23/21 Analyzed: 11/24/21

Chloride	24.9	1.00	mg/L	25.0	99.8	90-110	3.41	20
Fluoride	2.50	0.100	mg/L	2.50	100	90-110	3.58	20
Sulfate	25.3	1.00	mg/L	25.0	101	90-110	7.35	20

Batch B212900 - General Prep - Wet Chem

Blank (B212900-BLK1)

Prepared: 11/24/21 Analyzed: 11/29/21

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 (B212900-BS1)

Prepared: 11/24/21 Analyzed: 11/29/21

Alkalinity, Bicarbonate as CaCO ₃	107	10.0	mg/L	100	107	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	107	10.0	mg/L	100	107	85-115

LCS Dup (B212900-BSD1)

Prepared: 11/24/21 Analyzed: 11/29/21

Alkalinity, Bicarbonate as CaCO ₃	108	10.0	mg/L	100	108	85-115	0.930	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	108	10.0	mg/L	100	108	85-115	0.930	20

Batch B212920 - Lachat

Blank (B212920-BLK1)

Prepared: 11/29/21 Analyzed: 11/30/21

Nitrate/Nitrite as N	ND	0.020	mg/L as N
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LCS (B212920-BS1)

Prepared: 11/29/21 Analyzed: 11/30/21

Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00	104	90-110
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LCS Dup (B212920-BSD1)

Prepared: 11/29/21 Analyzed: 11/30/21

Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00	104	90-110	0.636	20
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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:
12/06/21 09:53

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212889 - Diss. 200.7/200.8

Blank (B212889-BLK1)

Prepared: 11/23/21 Analyzed: 12/01/21

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

LCS (B212889-BS1)

Prepared: 11/23/21 Analyzed: 12/01/21

Aluminum	4.66	0.050	mg/L	5.00	93.1	85-115
Calcium	4.56	0.100	mg/L	5.00	91.1	85-115
Iron	4.51	0.050	mg/L	5.00	90.2	85-115
Magnesium	23.3	0.100	mg/L	25.0	93.3	85-115
Potassium	9.66	1.00	mg/L	10.0	96.6	85-115
Silicon	4.90	0.500	mg/L	5.00	98.0	85-115
Sodium	3.72	1.00	mg/L	4.05	91.8	85-115

LCS Dup (B212889-BSD1)

Prepared: 11/23/21 Analyzed: 12/01/21

Aluminum	4.76	0.050	mg/L	5.00	95.2	85-115	2.24	20
Calcium	4.62	0.100	mg/L	5.00	92.4	85-115	1.40	20
Iron	4.56	0.050	mg/L	5.00	91.2	85-115	1.10	20
Magnesium	23.7	0.100	mg/L	25.0	94.8	85-115	1.64	20
Potassium	9.86	1.00	mg/L	10.0	98.6	85-115	2.09	20
Silicon	4.96	0.500	mg/L	5.00	99.3	85-115	1.26	20
Sodium	3.78	1.00	mg/L	4.05	93.4	85-115	1.66	20

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:53

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212883 - Diss. 200.7/200.8

Blank (B212883-BLK1)

Prepared & Analyzed: 11/22/21

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

LCS (B212883-BS1)

Prepared & Analyzed: 11/22/21

Arsenic	0.0480	0.0005	mg/L	0.0500	96.1	85-115
Cadmium	0.0477	0.0005	mg/L	0.0500	95.3	85-115
Copper	0.0471	0.0005	mg/L	0.0500	94.3	85-115
Lead	0.0475	0.0005	mg/L	0.0500	94.9	85-115
Manganese	0.0472	0.0005	mg/L	0.0500	94.4	85-115
Molybdenum	0.0481	0.0005	mg/L	0.0500	96.1	85-115
Selenium	0.246	0.0010	mg/L	0.250	98.2	85-115
Uranium	0.0487	0.0005	mg/L	0.0500	97.4	85-115
Zinc	0.0470	0.0020	mg/L	0.0500	94.1	85-115

LCS Dup (B212883-BSD1)

Prepared & Analyzed: 11/22/21

Arsenic	0.0472	0.0005	mg/L	0.0500	94.3	85-115	1.86	20
Cadmium	0.0488	0.0005	mg/L	0.0500	97.6	85-115	2.39	20
Copper	0.0474	0.0005	mg/L	0.0500	94.8	85-115	0.540	20
Lead	0.0489	0.0005	mg/L	0.0500	97.9	85-115	3.05	20
Manganese	0.0484	0.0005	mg/L	0.0500	96.8	85-115	2.43	20
Molybdenum	0.0482	0.0005	mg/L	0.0500	96.4	85-115	0.310	20
Selenium	0.245	0.0010	mg/L	0.250	97.8	85-115	0.426	20
Uranium	0.0497	0.0005	mg/L	0.0500	99.4	85-115	2.10	20
Zinc	0.0484	0.0020	mg/L	0.0500	96.7	85-115	2.80	20

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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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:
12/06/21 09:53

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B212927 - EPA 245.1/7470										
Blank (B212927-BLK1)				Prepared: 11/30/21 Analyzed: 12/01/21						
Mercury	ND	0.0002	mg/L							
LCS (B212927-BS1)				Prepared: 11/30/21 Analyzed: 12/01/21						
Mercury	0.0044	0.0002	mg/L	0.00500		88.7	85-115			
LCS Dup (B212927-BSD1)				Prepared: 11/30/21 Analyzed: 12/01/21						
Mercury	0.0045	0.0002	mg/L	0.00500		90.4	85-115	1.99	20	

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/06/21 09:53

Notes and Definitions

R1	Duplicate sample RPD exceeded laboratory acceptance criteria. Sample(s) may be difficult to homogenize.
M5	Sample was chosen for matrix spike. Spike recovery did not meet laboratory acceptance criteria, possible matrix interference in sample.
E8	Possible interference from sample matrix. Sample required dilution to eliminate an inference resulting in an elevated reporting limit. Sample cannot be analyzed at a lesser dilution with this method.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis *Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

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Debbie Zufelt, Reports Manager

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23 November 2021

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

Enclosed are the results of analyses for samples received by the laboratory on 11/09/21 15:05.
If you need any further assistance, please feel free to contact me.

Sincerely,

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

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.
TNI Certificate Number: T104704514-21-12.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-21-14



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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/23/21 10:37

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-6-A	2111152-01	Water	11/09/21 10:46	11/09/21 15:05	
MW-6-LM	2111152-02	Water	11/09/21 11:51	11/09/21 15:05	
MW-3-MI	2111152-03	Water	11/09/21 12:57	11/09/21 15:05	
MW-3-A	2111152-04	Water	11/09/21 13:22	11/09/21 15:05	
MW-99-A	2111152-05	Water	11/09/21 14:00	11/09/21 15:05	

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/23/21 10:37

MW-6-A

211152-01 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	295	10.0	4.53	mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	295	10.0	4.53	mg/L	5	11/19/21 15:35	2320 B		VJW
Chloride*	26.6	5.00	0.211	mg/L	5	11/19/21 04:34	EPA300.0		JDA
Fluoride*	<0.500	0.500	0.0486	mg/L	5	11/19/21 04:34	EPA300.0		JDA
Nitrate/Nitrite as N*	0.096	0.040	0.012	mg/L as N	2	11/16/21 09:29	EPA353.2		DTR
pH*	6.98			pH Units	1	11/10/21 13:55	EPA150.1		VJW
pH Temperature, degrees C	23.4			pH Units	1	11/10/21 13:55	EPA150.1		VJW
Total Dissolved Solids*	4310	10.0		mg/L	1	11/15/21 16:42	EPA160.1		VJW
Sulfate*	2790	100	15.2	mg/L	100	11/19/21 17:50	EPA300.0		JDA
Total Organic Carbon*	3.25	0.500	0.0616	mg/L	1	11/10/21 22:02	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.250	0.250	0.064	mg/L	5	11/17/21 17:33	EPA200.7		JDA
Calcium*	370	0.500	0.289	mg/L	5	11/17/21 17:33	EPA200.7		JDA
Hardness as CaCO ₃	2510	3.31	2.07	mg/L	5	11/17/21 17:33	2340 B		JDA
Iron*	1.15	0.250	0.089	mg/L	5	11/17/21 17:33	EPA200.7		JDA
Magnesium*	385	0.500	0.327	mg/L	5	11/17/21 17:33	EPA200.7		JDA
Potassium*	10.4	5.00	0.403	mg/L	5	11/17/21 17:33	EPA200.7		JDA
Silica (SiO ₂)	13.6	5.35	0.398	mg/L	5	11/17/21 17:33	Calculation		JDA
Silicon	6.36	2.50	0.186	mg/L	5	11/17/21 17:33	EPA200.7		JDA
Sodium*	254	5.00	0.396	mg/L	5	11/17/21 17:33	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	<0.0025	0.0025	0.0002	mg/L	5	11/19/21 16:10	EPA200.8		JDA
Cadmium*	<0.0025	0.0025	0.0005	mg/L	5	11/19/21 16:10	EPA200.8		JDA
Copper*	0.0063	0.0025	0.0005	mg/L	5	11/19/21 16:10	EPA200.8		JDA
Lead*	<0.0025	0.0025	0.00007	mg/L	5	11/19/21 16:10	EPA200.8		JDA
Manganese*	0.391	0.0025	0.0006	mg/L	5	11/19/21 16:10	EPA200.8		JDA
Molybdenum*	<0.0025	0.0025	0.0001	mg/L	5	11/19/21 16:10	EPA200.8		JDA
Selenium*	<0.0100	0.0100	0.0008	mg/L	5	11/19/21 16:10	EPA200.8	B3	JDA
Uranium	<0.0025	0.0025	0.0002	mg/L	5	11/19/21 16:10	EPA200.8		JDA
Zinc*	<0.0100	0.0100	0.0005	mg/L	5	11/19/21 16:10	EPA200.8		JDA

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/23/21 10:37

MW-6-A

2111152-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
Cation/Anion Balance	-2.58								

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/23/21 10:37

MW-6-LM

211152-02 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	380	10.0	4.53	mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0		mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	380	10.0	4.53	mg/L	5	11/19/21 15:35	2320 B		VJW
Chloride*	11.1	2.00	0.0845	mg/L	2	11/19/21 04:54	EPA300.0		JDA
Fluoride*	0.306	0.200	0.0194	mg/L	2	11/19/21 04:54	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 09:30	EPA353.2		DTR
pH*	7.57			pH Units	1	11/10/21 13:55	EPA150.1		VJW
pH Temperature, degrees C	21.0			pH Units	1	11/10/21 13:55	EPA150.1		VJW
Total Dissolved Solids*	2050	10.0		mg/L	1	11/15/21 16:44	EPA160.1		VJW
Sulfate*	1100	40.0	6.10	mg/L	40	11/19/21 18:51	EPA300.0		JDA
Total Organic Carbon*	1.94	0.500	0.0616	mg/L	1	11/10/21 22:19	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	11/17/21 17:37	EPA200.7		JDA
Calcium*	174	0.200	0.116	mg/L	2	11/17/21 17:37	EPA200.7		JDA
Hardness as CaCO ₃	1130	1.32	0.827	mg/L	2	11/17/21 17:37	2340 B		JDA
Iron*	<0.100	0.100	0.036	mg/L	2	11/17/21 17:37	EPA200.7		JDA
Magnesium*	170	0.200	0.131	mg/L	2	11/17/21 17:37	EPA200.7		JDA
Potassium*	4.99	2.00	0.161	mg/L	2	11/17/21 17:37	EPA200.7		JDA
Silica (SiO ₂)	16.6	2.14	0.159	mg/L	2	11/17/21 17:37	Calculation		JDA
Silicon	7.75	1.00	0.075	mg/L	2	11/17/21 17:37	EPA200.7		JDA
Sodium*	166	2.00	0.159	mg/L	2	11/17/21 17:37	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	0.0038	0.0010	0.0001	mg/L	2	11/19/21 16:11	EPA200.8		JDA
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	11/19/21 16:11	EPA200.8		JDA
Copper*	0.0040	0.0010	0.0002	mg/L	2	11/19/21 16:11	EPA200.8		JDA
Lead*	<0.0010	0.0010	0.00003	mg/L	2	11/19/21 16:11	EPA200.8		JDA
Manganese*	0.263	0.0010	0.0003	mg/L	2	11/19/21 16:11	EPA200.8		JDA
Molybdenum*	0.0013	0.0010	0.00006	mg/L	2	11/19/21 16:11	EPA200.8		JDA
Selenium*	<0.0040	0.0040	0.0003	mg/L	2	11/19/21 16:11	EPA200.8	B3	JDA
Uranium	0.0032	0.0010	0.00009	mg/L	2	11/19/21 16:11	EPA200.8		JDA
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	11/19/21 16:11	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/23/21 10:37

MW-6-LM

2111152-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
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Cation/Anion Balance	-1.33
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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/23/21 10:37

MW-3-MI

211152-03 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	565	10.0	4.53	mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	140	10.0		mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	705	10.0	4.53	mg/L	5	11/19/21 15:35	2320 B		VJW
Chloride*	10.4	2.00	0.0845	mg/L	2	11/19/21 05:15	EPA300.0		JDA
Fluoride*	0.980	0.200	0.0194	mg/L	2	11/19/21 05:15	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 09:34	EPA353.2		DTR
pH*	8.88			pH Units	1	11/10/21 13:55	EPA150.1		VJW
pH Temperature, degrees C	20.8			pH Units	1	11/10/21 13:55	EPA150.1		VJW
Total Dissolved Solids*	1130	10.0		mg/L	1	11/15/21 16:46	EPA160.1		VJW
Sulfate*	230	10.0	1.52	mg/L	10	11/19/21 19:12	EPA300.0		JDA
Total Organic Carbon*	5.26	0.500	0.0616	mg/L	1	11/10/21 22:37	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	11/17/21 17:41	EPA200.7		JDA
Calcium*	1.25	0.200	0.116	mg/L	2	11/17/21 17:41	EPA200.7		JDA
Hardness as CaCO ₃	5.21	1.32	0.827	mg/L	2	11/17/21 17:41	2340 B		JDA
Iron*	<0.100	0.100	0.036	mg/L	2	11/17/21 17:41	EPA200.7		JDA
Magnesium*	0.508	0.200	0.131	mg/L	2	11/17/21 17:41	EPA200.7		JDA
Potassium*	<2.00	2.00	0.161	mg/L	2	11/17/21 17:41	EPA200.7		JDA
Silica (SiO ₂)	8.82	2.14	0.159	mg/L	2	11/17/21 17:41	Calculation		JDA
Silicon	4.12	1.00	0.075	mg/L	2	11/17/21 17:41	EPA200.7		JDA
Sodium*	390	2.00	0.159	mg/L	2	11/17/21 17:41	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	0.0078	0.0010	0.0001	mg/L	2	11/19/21 16:13	EPA200.8		JDA
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	11/19/21 16:13	EPA200.8		JDA
Copper*	0.0097	0.0010	0.0002	mg/L	2	11/19/21 16:13	EPA200.8		JDA
Lead*	<0.0010	0.0010	0.00003	mg/L	2	11/19/21 16:13	EPA200.8		JDA
Manganese*	0.0054	0.0010	0.0003	mg/L	2	11/19/21 16:13	EPA200.8		JDA
Molybdenum*	0.0140	0.0010	0.00006	mg/L	2	11/19/21 16:13	EPA200.8		JDA
Selenium*	0.0091	0.0040	0.0003	mg/L	2	11/19/21 16:13	EPA200.8	B3	JDA
Uranium	0.0033	0.0010	0.00009	mg/L	2	11/19/21 16:13	EPA200.8		JDA
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	11/19/21 16:13	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/23/21 10:37

MW-3-MI

2111152-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
Cation/Anion Balance	-5.87								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
11/23/21 10:37

MW-3-A

211152-04 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	435	10.0	4.53	mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	50.0	10.0		mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	485	10.0	4.53	mg/L	5	11/19/21 15:35	2320 B		VJW
Chloride*	14.6	2.00	0.0845	mg/L	2	11/19/21 05:35	EPA300.0		JDA
Fluoride*	0.314	0.200	0.0194	mg/L	2	11/19/21 05:35	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 09:40	EPA353.2		DTR
pH*	8.19			pH Units	1	11/10/21 13:55	EPA150.1		VJW
pH Temperature, degrees C	21.1			pH Units	1	11/10/21 13:55	EPA150.1		VJW
Total Dissolved Solids*	1360	10.0		mg/L	1	11/15/21 16:48	EPA160.1		VJW
Sulfate*	515	40.0	6.10	mg/L	40	11/19/21 19:32	EPA300.0		JDA
Total Organic Carbon*	3.02	0.500	0.0616	mg/L	1	11/10/21 23:00	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	11/17/21 17:48	EPA200.7		JDA
Calcium*	2.53	0.200	0.116	mg/L	2	11/17/21 17:48	EPA200.7		JDA
Hardness as CaCO ₃	8.68	1.32	0.827	mg/L	2	11/17/21 17:48	2340 B		JDA
Iron*	<0.100	0.100	0.036	mg/L	2	11/17/21 17:48	EPA200.7		JDA
Magnesium*	0.577	0.200	0.131	mg/L	2	11/17/21 17:48	EPA200.7		JDA
Potassium*	<2.00	2.00	0.161	mg/L	2	11/17/21 17:48	EPA200.7		JDA
Silica (SiO ₂)	10.9	2.14	0.159	mg/L	2	11/17/21 17:48	Calculation		JDA
Silicon	5.11	1.00	0.075	mg/L	2	11/17/21 17:48	EPA200.7		JDA
Sodium*	448	2.00	0.159	mg/L	2	11/17/21 17:48	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	0.0018	0.0010	0.0001	mg/L	2	11/19/21 16:14	EPA200.8		JDA
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	11/19/21 16:14	EPA200.8		JDA
Copper*	0.0113	0.0010	0.0002	mg/L	2	11/19/21 16:14	EPA200.8		JDA
Lead*	<0.0010	0.0010	0.00003	mg/L	2	11/19/21 16:14	EPA200.8		JDA
Manganese*	0.0101	0.0010	0.0003	mg/L	2	11/19/21 16:14	EPA200.8		JDA
Molybdenum*	<0.0010	0.0010	0.00006	mg/L	2	11/19/21 16:14	EPA200.8		JDA
Selenium*	0.0855	0.0040	0.0003	mg/L	2	11/19/21 16:14	EPA200.8	B3	JDA
Uranium	<0.0010	0.0010	0.00009	mg/L	2	11/19/21 16:14	EPA200.8		JDA
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	11/19/21 16:14	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/23/21 10:37

MW-3-A

2111152-04 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
Cation/Anion Balance	-2.85								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
11/23/21 10:37

MW-99-A

211152-05 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	425	10.0	4.53	mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	50.0	10.0		mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0		mg/L	5	11/19/21 15:35	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	475	10.0	4.53	mg/L	5	11/19/21 15:35	2320 B		VJW
Chloride*	13.8	2.00	0.0845	mg/L	2	11/19/21 06:57	EPA300.0		JDA
Fluoride*	0.298	0.200	0.0194	mg/L	2	11/19/21 06:57	EPA300.0		JDA
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	11/16/21 09:41	EPA353.2		DTR
pH*	8.14			pH Units	1	11/10/21 13:55	EPA150.1		VJW
pH Temperature, degrees C	20.8			pH Units	1	11/10/21 13:55	EPA150.1		VJW
Total Dissolved Solids*	1430	10.0		mg/L	1	11/15/21 16:50	EPA160.1		VJW
Sulfate*	529	40.0	6.10	mg/L	40	11/20/21 04:43	EPA300.0		JDA
Total Organic Carbon*	2.94	0.500	0.0616	mg/L	1	11/10/21 23:16	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	11/17/21 17:52	EPA200.7		JDA
Calcium*	2.49	0.200	0.116	mg/L	2	11/17/21 17:52	EPA200.7		JDA
Hardness as CaCO ₃	8.80	1.32	0.827	mg/L	2	11/17/21 17:52	2340 B		JDA
Iron*	<0.100	0.100	0.036	mg/L	2	11/17/21 17:52	EPA200.7		JDA
Magnesium*	0.627	0.200	0.131	mg/L	2	11/17/21 17:52	EPA200.7		JDA
Potassium*	<2.00	2.00	0.161	mg/L	2	11/17/21 17:52	EPA200.7		JDA
Silica (SiO ₂)	10.8	2.14	0.159	mg/L	2	11/17/21 17:52	Calculation		JDA
Silicon	5.06	1.00	0.075	mg/L	2	11/17/21 17:52	EPA200.7		JDA
Sodium*	449	2.00	0.159	mg/L	2	11/17/21 17:52	EPA200.7		JDA

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0001	mg/L	2	11/19/21 16:16	EPA200.8		JDA
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	11/19/21 16:16	EPA200.8		JDA
Copper*	0.0114	0.0010	0.0002	mg/L	2	11/19/21 16:16	EPA200.8		JDA
Lead*	<0.0010	0.0010	0.00003	mg/L	2	11/19/21 16:16	EPA200.8		JDA
Manganese*	0.0098	0.0010	0.0003	mg/L	2	11/19/21 16:16	EPA200.8		JDA
Molybdenum*	<0.0010	0.0010	0.00006	mg/L	2	11/19/21 16:16	EPA200.8		JDA
Selenium*	0.0809	0.0040	0.0003	mg/L	2	11/19/21 16:16	EPA200.8	B3	JDA
Uranium	<0.0010	0.0010	0.00009	mg/L	2	11/19/21 16:16	EPA200.8		JDA
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	11/19/21 16:16	EPA200.8		JDA

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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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:
11/23/21 10:37

MW-99-A

2111152-05 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	11/19/21 13:05	EPA245.1		DTR
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Cation/Anion Balance	-2.9
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Green Analytical Laboratories

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
11/23/21 10:37

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212759 - General Prep - Wet Chem

Blank (B212759-BLK1)

Prepared & Analyzed: 11/10/21

Total Organic Carbon ND 0.500 mg/L

LCS (B212759-BS1)

Prepared & Analyzed: 11/10/21

Total Organic Carbon 9.76 0.500 mg/L 10.0 97.6 85-115

LCS Dup (B212759-BSD1)

Prepared & Analyzed: 11/10/21

Total Organic Carbon 9.79 0.500 mg/L 10.0 97.9 85-115 0.317 20

Batch B212790 - General Prep - Wet Chem

Duplicate (B212790-DUP1)

Source: 2111154-07

Prepared & Analyzed: 11/10/21

pH 7.01 pH Units 6.92 1.29 20

pH Temperature, degrees C 20.5 pH Units 20.4 0.489 200

Reference (B212790-SRM1)

Prepared & Analyzed: 11/10/21

pH 6.98 pH Units 7.00 99.7 98.57-101.42

Batch B212797 - General Prep - Wet Chem

Blank (B212797-BLK1)

Prepared & Analyzed: 11/15/21

Total Dissolved Solids ND 10.0 mg/L

Duplicate (B212797-DUP1)

Source: 2111141-01

Prepared & Analyzed: 11/15/21

Total Dissolved Solids 935 10.0 mg/L 945 1.07 20

Reference (B212797-SRM1)

Prepared & Analyzed: 11/15/21

Total Dissolved Solids 415 10.0 mg/L 400 104 85-115

Batch B212811 - IC- Ion Chromatograph

Blank (B212811-BLK1)

Prepared: 11/15/21 Analyzed: 11/18/21

Chloride ND 1.00 mg/L

Fluoride ND 0.100 mg/L

Sulfate ND 1.00 mg/L

LCS (B212811-BS1)

Prepared: 11/15/21 Analyzed: 11/18/21

Chloride 24.1 1.00 mg/L 25.0 96.3 90-110

Fluoride 2.38 0.100 mg/L 2.50 95.0 90-110

Sulfate 23.2 1.00 mg/L 25.0 92.6 90-110

LCS Dup (B212811-BSD1)

Prepared: 11/15/21 Analyzed: 11/18/21

Chloride 24.6 1.00 mg/L 25.0 98.4 90-110 2.21 20

Fluoride 2.44 0.100 mg/L 2.50 97.7 90-110 2.74 20

Sulfate 23.7 1.00 mg/L 25.0 94.9 90-110 2.49 20

Batch B212812 - Lachat

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
11/23/21 10:37General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B212812 - Lachat (Continued)										
Blank (B212812-BLK1)				Prepared: 11/15/21 Analyzed: 11/16/21						
Nitrate/Nitrite as N	ND	0.020	mg/L as N							
LCS (B212812-BS1)				Prepared: 11/15/21 Analyzed: 11/16/21						
Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00	104	90-110				
LCS Dup (B212812-BSD1)				Prepared: 11/15/21 Analyzed: 11/16/21						
Nitrate/Nitrite as N	1.04	0.020	mg/L as N	1.00	104	90-110	0.568	20		
Batch B212840 - General Prep - Wet Chem										
Blank (B212840-BLK1)				Prepared: 11/18/21 Analyzed: 11/19/21						
Alkalinity, Bicarbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L							
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L							
Alkalinity, Total as CaCO3	ND	10.0	mg/L							
LCS (B212840-BS1)				Prepared: 11/18/21 Analyzed: 11/19/21						
Alkalinity, Bicarbonate as CaCO3	104	10.0	mg/L	100	104	85-115				
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Total as CaCO3	104	10.0	mg/L	100	104	85-115				
LCS Dup (B212840-BSD1)				Prepared: 11/18/21 Analyzed: 11/19/21						
Alkalinity, Bicarbonate as CaCO3	103	10.0	mg/L	100	103	85-115	0.966	20		
Alkalinity, Carbonate as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Hydroxide as CaCO3	ND	10.0	mg/L				85-115			
Alkalinity, Total as CaCO3	103	10.0	mg/L	100	103	85-115	0.966	20		
Batch B212852 - IC- Ion Chromatograph										
Blank (B212852-BLK1)				Prepared: 11/18/21 Analyzed: 11/19/21						
Chloride	ND	1.00	mg/L							
Fluoride	ND	0.100	mg/L							
Sulfate	ND	1.00	mg/L							
LCS (B212852-BS1)				Prepared: 11/18/21 Analyzed: 11/19/21						
Chloride	25.0	1.00	mg/L	25.0	100	90-110				
Fluoride	2.44	0.100	mg/L	2.50	97.8	90-110				
Sulfate	24.2	1.00	mg/L	25.0	97.0	90-110				
LCS Dup (B212852-BSD1)				Prepared: 11/18/21 Analyzed: 11/19/21						
Chloride	24.9	1.00	mg/L	25.0	99.6	90-110	0.361	20		
Fluoride	2.45	0.100	mg/L	2.50	98.1	90-110	0.368	20		
Sulfate	24.2	1.00	mg/L	25.0	97.0	90-110	0.0124	20		

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/23/21 10:37

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212803 - Diss. 200.7/200.8

Blank (B212803-BLK1)

Prepared: 11/15/21 Analyzed: 11/17/21

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

LCS (B212803-BS1)

Prepared: 11/15/21 Analyzed: 11/17/21

Aluminum	4.78	0.050	mg/L	5.00	95.6	85-115
Calcium	4.73	0.100	mg/L	5.00	94.6	85-115
Iron	4.54	0.050	mg/L	5.00	90.9	85-115
Magnesium	24.2	0.100	mg/L	25.0	96.9	85-115
Potassium	9.23	1.00	mg/L	10.0	92.3	85-115
Silicon	4.89	0.500	mg/L	5.00	97.9	85-115
Sodium	3.74	1.00	mg/L	4.05	92.3	85-115

LCS Dup (B212803-BSD1)

Prepared: 11/15/21 Analyzed: 11/17/21

Aluminum	4.79	0.050	mg/L	5.00	95.9	85-115	0.231	20
Calcium	4.72	0.100	mg/L	5.00	94.5	85-115	0.0973	20
Iron	4.54	0.050	mg/L	5.00	90.7	85-115	0.154	20
Magnesium	24.3	0.100	mg/L	25.0	97.4	85-115	0.530	20
Potassium	9.31	1.00	mg/L	10.0	93.1	85-115	0.875	20
Silicon	4.89	0.500	mg/L	5.00	97.8	85-115	0.0259	20
Sodium	3.72	1.00	mg/L	4.05	91.9	85-115	0.487	20

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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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:
11/23/21 10:37

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212804 - Diss. 200.7/200.8

Blank (B212804-BLK1)

Prepared: 11/15/21 Analyzed: 11/19/21

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

B3

LCS (B212804-BS1)

Prepared: 11/15/21 Analyzed: 11/19/21

Arsenic	0.0491	0.0005	mg/L	0.0500	98.2	85-115		
Cadmium	0.0495	0.0005	mg/L	0.0500	99.0	85-115		
Copper	0.0463	0.0005	mg/L	0.0500	92.6	85-115		
Lead	0.0484	0.0005	mg/L	0.0500	96.8	85-115		
Manganese	0.0489	0.0005	mg/L	0.0500	97.7	85-115		
Molybdenum	0.0473	0.0005	mg/L	0.0500	94.5	85-115		
Selenium	0.249	0.0010	mg/L	0.250	99.7	85-115		
Uranium	0.0499	0.0005	mg/L	0.0500	99.8	85-115		
Zinc	0.0480	0.0020	mg/L	0.0500	96.0	85-115		

LCS Dup (B212804-BSD1)

Prepared: 11/15/21 Analyzed: 11/19/21

Arsenic	0.0504	0.0005	mg/L	0.0500	101	85-115	2.57	20
Cadmium	0.0499	0.0005	mg/L	0.0500	99.8	85-115	0.810	20
Copper	0.0465	0.0005	mg/L	0.0500	93.1	85-115	0.516	20
Lead	0.0483	0.0005	mg/L	0.0500	96.6	85-115	0.150	20
Manganese	0.0490	0.0005	mg/L	0.0500	98.1	85-115	0.342	20
Molybdenum	0.0472	0.0005	mg/L	0.0500	94.4	85-115	0.130	20
Selenium	0.254	0.0010	mg/L	0.250	102	85-115	2.12	20
Uranium	0.0498	0.0005	mg/L	0.0500	99.6	85-115	0.196	20
Zinc	0.0484	0.0020	mg/L	0.0500	96.8	85-115	0.848	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:
11/23/21 10:37

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212828 - EPA 245.1/7470

Blank (B212828-BLK1)

Prepared: 11/16/21 Analyzed: 11/19/21

Mercury	ND	0.0002	mg/L							
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LCS (B212828-BS1)

Prepared: 11/16/21 Analyzed: 11/19/21

Mercury	0.0051	0.0002	mg/L	0.00500	102	85-115				
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LCS Dup (B212828-BSD1)

Prepared: 11/16/21 Analyzed: 11/19/21

Mercury	0.0052	0.0002	mg/L	0.00500	103	85-115	1.15	20		
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Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
11/23/21 10:37

Notes and Definitions

B3	Target analyte detected in method blank or continuing calibration blank. Reporting limit elevated to account for blank result.
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis *Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GAL
Analytical
Laboratories

(970) 247-4220 dzufelt@greenanalytical.com
Fax: (970) 247-4227 75 Suttle St Durango, CO 81303

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

FORM-006
COC - Revision 6.0

Company or Client: GCC Energy LLC		P.O. #:		Bill to (if different):		ANALYSIS REQUEST											
Address: 6473 COUNTRY ROAD 120		Company:															
City: HESPERUS		Attn:															
Phone #: 970 385 4528		Address:															
Contact Person: TOM BIRD / TOM@HAYGULCHSERVICES.COM		City:															
Email Report to: BECK, LAUDON		State:		Zip:													
Project Name (optional): L BECK @ RESOURCES HYDRO GEOLOGIC.COM		Phone #:															
Sampler Name (Print): MATTHEW BENNETT & 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:	
211152-01	MW 6 A	11/9/21	10:46	X							1	1	4				X
-02	MW 6 LM	11/9/21	11:51	X							1	1	4				X
-03	MW 3 M1	11/9/21	12:57	X							1	1	4				X
-04	MW 3 A	11/9/21	1:22	X							1	1	4				X
-05	MW 99 A	11/9/21	2:30	X							1	1	4				X
PLEASE NOTE: GAL's liability and client's exclusive remedy for any claim arising whether based in contract or tort, shall be limited to the amount paid by the client for the analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by GAL within 30 days after completion. In no event shall GAL be liable for incidental or consequential damages, including without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder.		Relinquished by:		Date: 11/9/21		Received by:		Date: 11/9/21		Time: 3:05		Report to State? (Circle)		Yes		No	
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75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

13 December 2021

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

Enclosed are the results of analyses for samples received by the laboratory on 11/30/21 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.
TNI Certificate Number: T104704514-21-12.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water through the Colorado Department of Public Health and Environment and EPA region 8. TNI Certificate Number: T104704398-21-14



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:
12/13/21 14:34

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received	Notes
MW-8-PL	2112002-01	Water	11/30/21 10:09	11/30/21 15:00	
MW-8-LM	2112002-02	Water	11/30/21 10:30	11/30/21 15:00	
MW-8-MI	2112002-03	Water	11/30/21 11:01	11/30/21 15:00	
MW-8-EAA	2112002-04	Water	11/30/21 11:35	11/30/21 15:00	
MW-7-EAA	2112002-05	Water	11/30/21 12:41	11/30/21 15:00	

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

MW-8-PL**2112002-01 (Ground Water)**

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

Alkalinity, Bicarbonate as CaCO ₃ *	385	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	385	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Chloride*	3.38	1.00	0.0422	mg/L	1	12/04/21 21:35	EPA300.0		AES
Fluoride*	0.196	0.100	0.00971	mg/L	1	12/04/21 21:35	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	12/07/21 15:26	EPA353.2		DTR
pH*	7.16			pH Units	1	12/01/21 12:50	EPA150.1		VJW
pH Temperature, degrees C	20.4			pH Units	1	12/01/21 12:50	EPA150.1		VJW
Total Dissolved Solids*	465	10.0		mg/L	1	12/06/21 10:50	EPA160.1		VJW
Sulfate*	98.4	5.00	0.762	mg/L	5	12/06/21 15:52	EPA300.0		AES
Total Organic Carbon*	1.40	0.500	0.0616	mg/L	1	12/09/21 20:09	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.050	0.050	0.013	mg/L	1	12/07/21 15:58	EPA200.7		AES
Calcium*	51.1	0.100	0.058	mg/L	1	12/07/21 15:57	EPA200.7		AES
Hardness as CaCO ₃	272	0.662	0.414	mg/L	1	12/07/21 15:58	2340 B		AES
Iron*	0.070	0.050	0.018	mg/L	1	12/07/21 15:58	EPA200.7		AES
Magnesium*	35.0	0.100	0.065	mg/L	1	12/07/21 15:58	EPA200.7		AES
Potassium*	1.54	1.00	0.081	mg/L	1	12/07/21 15:57	EPA200.7		AES
Silica (SiO ₂)	20.8	1.07	0.0797	mg/L	1	12/07/21 15:58	Calculation		AES
Silicon	9.71	0.500	0.037	mg/L	1	12/07/21 15:58	EPA200.7		AES
Sodium*	73.7	1.00	0.079	mg/L	1	12/07/21 15:57	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0051	0.0005	0.00005	mg/L	1	12/07/21 16:20	EPA200.8		AES
Cadmium*	<0.0005	0.0005	0.0001	mg/L	1	12/07/21 16:20	EPA200.8		AES
Copper*	0.0015	0.0005	0.00009	mg/L	1	12/07/21 16:20	EPA200.8		AES
Lead*	<0.0005	0.0005	0.00001	mg/L	1	12/07/21 16:20	EPA200.8		AES
Manganese*	0.161	0.0005	0.0001	mg/L	1	12/07/21 16:20	EPA200.8		AES
Molybdenum*	<0.0005	0.0005	0.00003	mg/L	1	12/07/21 16:20	EPA200.8		AES
Selenium*	0.0031	0.0010	0.0002	mg/L	1	12/07/21 16:20	EPA200.8		AES
Uranium	<0.0005	0.0005	0.00004	mg/L	1	12/07/21 16:20	EPA200.8		AES
Zinc*	<0.0020	0.0020	0.0001	mg/L	1	12/07/21 16:20	EPA200.8		AES

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Debbie Zufelt, Reports Manager

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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:
12/13/21 14:34

MW-8-PL

2112002-01 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	12/08/21 14:27	EPA245.1		DTR
Cation/Anion Balance	1.31								

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/13/21 14:34

MW-8-LM

2112002-02 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	620	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	150	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	770	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Chloride*	2.47	1.00	0.0422	mg/L	1	12/06/21 16:11	EPA300.0		AES
Fluoride*	3.40	0.100	0.00971	mg/L	1	12/06/21 16:11	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	12/07/21 15:30	EPA353.2		DTR
pH*	8.31			pH Units	1	12/01/21 12:50	EPA150.1		VJW
pH Temperature, degrees C	20.2			pH Units	1	12/01/21 12:50	EPA150.1		VJW
Total Dissolved Solids*	760	10.0		mg/L	1	12/06/21 10:50	EPA160.1		VJW
Sulfate*	<1.00	1.00	0.152	mg/L	1	12/06/21 16:11	EPA300.0		AES
Total Organic Carbon*	1.60	0.500	0.0616	mg/L	1	12/09/21 20:29	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	12/07/21 15:59	EPA200.7		AES
Calcium*	1.88	0.200	0.116	mg/L	2	12/07/21 15:59	EPA200.7		AES
Hardness as CaCO ₃	7.11	1.32	0.827	mg/L	2	12/07/21 15:59	2340 B		AES
Iron*	<0.100	0.100	0.036	mg/L	2	12/07/21 15:59	EPA200.7		AES
Magnesium*	0.587	0.200	0.131	mg/L	2	12/07/21 15:59	EPA200.7		AES
Potassium*	2.12	2.00	0.161	mg/L	2	12/07/21 15:59	EPA200.7		AES
Silica (SiO ₂)	8.28	2.14	0.159	mg/L	2	12/07/21 15:59	Calculation		AES
Silicon	3.87	1.00	0.075	mg/L	2	12/07/21 15:59	EPA200.7		AES
Sodium*	291	2.00	0.159	mg/L	2	12/07/21 15:59	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0001	mg/L	2	12/07/21 16:22	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	12/07/21 16:22	EPA200.8		AES
Copper*	0.0065	0.0010	0.0002	mg/L	2	12/07/21 16:22	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00003	mg/L	2	12/07/21 16:22	EPA200.8		AES
Manganese*	0.0023	0.0010	0.0003	mg/L	2	12/07/21 16:22	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.00006	mg/L	2	12/07/21 16:22	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0003	mg/L	2	12/07/21 16:22	EPA200.8		AES
Uranium	<0.0010	0.0010	0.00009	mg/L	2	12/07/21 16:22	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	12/07/21 16:22	EPA200.8		AES

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

MW-8-LM

2112002-02 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	12/08/21 14:27	EPA245.1		DTR
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Cation/Anion Balance	-9.07
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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

MW-8-MI

2112002-03 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	605	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B	M5	VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	605	10.0	4.53	mg/L	5	12/02/21 09:35	2320 B		VJW
Chloride*	7.91	2.00	0.0845	mg/L	2	12/08/21 17:14	EPA300.0		AES
Fluoride*	<0.200	0.200	0.0194	mg/L	2	12/08/21 17:14	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	12/07/21 15:36	EPA353.2		DTR
pH*	7.06			pH Units	1	12/01/21 12:50	EPA150.1		VJW
pH Temperature, degrees C	19.7			pH Units	1	12/01/21 12:50	EPA150.1		VJW
Total Dissolved Solids*	1100	10.0		mg/L	1	12/06/21 10:50	EPA160.1		VJW
Sulfate*	312	10.0	1.52	mg/L	10	12/08/21 17:34	EPA300.0		AES
Total Organic Carbon*	2.66	0.500	0.0616	mg/L	1	12/09/21 20:45	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	12/07/21 16:02	EPA200.7		AES
Calcium*	59.8	0.200	0.116	mg/L	2	12/07/21 16:02	EPA200.7		AES
Hardness as CaCO ₃	317	1.32	0.827	mg/L	2	12/07/21 16:02	2340 B		AES
Iron*	0.168	0.100	0.036	mg/L	2	12/07/21 16:02	EPA200.7		AES
Magnesium*	40.8	0.200	0.131	mg/L	2	12/07/21 16:02	EPA200.7		AES
Potassium*	5.14	2.00	0.161	mg/L	2	12/07/21 16:02	EPA200.7		AES
Silica (SiO ₂)	13.7	2.14	0.159	mg/L	2	12/07/21 16:02	Calculation		AES
Silicon	6.39	1.00	0.075	mg/L	2	12/07/21 16:02	EPA200.7		AES
Sodium*	238	2.00	0.159	mg/L	2	12/07/21 16:02	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	<0.0010	0.0010	0.0001	mg/L	2	12/07/21 16:23	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	12/07/21 16:23	EPA200.8		AES
Copper*	0.0054	0.0010	0.0002	mg/L	2	12/07/21 16:23	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00003	mg/L	2	12/07/21 16:23	EPA200.8		AES
Manganese*	0.0443	0.0010	0.0003	mg/L	2	12/07/21 16:23	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.00006	mg/L	2	12/07/21 16:23	EPA200.8		AES
Selenium*	0.0264	0.0020	0.0003	mg/L	2	12/07/21 16:23	EPA200.8		AES
Uranium	<0.0010	0.0010	0.00009	mg/L	2	12/07/21 16:23	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	12/07/21 16:23	EPA200.8		AES

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

MW-8-MI

2112002-03 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	12/08/21 14:27	EPA245.1		DTR
Cation/Anion Balance	.58								

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

MW-8-EAA

2112002-04 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	490	10.0	4.53	mg/L	5	12/10/21 14:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0	4.53	mg/L	5	12/10/21 14:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	4.53	mg/L	5	12/10/21 14:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	490	10.0	4.53	mg/L	5	12/10/21 14:40	2320 B		VJW
Chloride*	10.5	2.00	0.0845	mg/L	2	12/08/21 18:32	EPA300.0		AES
Fluoride*	0.272	0.200	0.0194	mg/L	2	12/08/21 18:32	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	12/07/21 15:37	EPA353.2		DTR
pH*	6.81			pH Units	1	12/01/21 12:50	EPA150.1		VJW
pH Temperature, degrees C	20.0			pH Units	1	12/01/21 12:50	EPA150.1		VJW
Total Dissolved Solids*	1340	10.0		mg/L	1	12/06/21 10:50	EPA160.1		VJW
Sulfate*	599	20.0	3.05	mg/L	20	12/08/21 18:51	EPA300.0		AES
Total Organic Carbon*	3.48	0.500	0.0616	mg/L	1	12/09/21 21:30	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	12/07/21 16:06	EPA200.7		AES
Calcium*	149	0.200	0.116	mg/L	2	12/07/21 16:06	EPA200.7		AES
Hardness as CaCO ₃	859	1.32	0.827	mg/L	2	12/07/21 16:06	2340 B		AES
Iron*	2.22	0.100	0.036	mg/L	2	12/07/21 16:06	EPA200.7		AES
Magnesium*	118	0.200	0.131	mg/L	2	12/07/21 16:06	EPA200.7		AES
Potassium*	3.36	2.00	0.161	mg/L	2	12/07/21 16:06	EPA200.7		AES
Silica (SiO ₂)	16.4	2.14	0.159	mg/L	2	12/07/21 16:06	Calculation		AES
Silicon	7.68	1.00	0.075	mg/L	2	12/07/21 16:06	EPA200.7		AES
Sodium*	74.9	2.00	0.159	mg/L	2	12/07/21 16:06	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0017	0.0010	0.0001	mg/L	2	12/07/21 16:25	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	12/07/21 16:25	EPA200.8		AES
Copper*	0.0017	0.0010	0.0002	mg/L	2	12/07/21 16:25	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00003	mg/L	2	12/07/21 16:25	EPA200.8		AES
Manganese*	3.66	0.0010	0.0003	mg/L	2	12/07/21 16:25	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.00006	mg/L	2	12/07/21 16:25	EPA200.8		AES
Selenium*	0.0035	0.0020	0.0003	mg/L	2	12/07/21 16:25	EPA200.8		AES
Uranium	0.0015	0.0010	0.00009	mg/L	2	12/07/21 16:25	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	12/07/21 16:25	EPA200.8		AES

Green Analytical Laboratories

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

MW-8-EAA

2112002-04 (Ground Water)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	12/08/21 14:27	EPA245.1		DTR
Cation/Anion Balance	.06								

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

MW-7-EAA

2112002-05 (Ground Water)

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

Alkalinity, Bicarbonate as CaCO ₃ *	440	10.0	4.53	mg/L	5	12/10/21 14:40	2320 B		VJW
Alkalinity, Carbonate as CaCO ₃ *	<10.0	10.0	4.53	mg/L	5	12/10/21 14:40	2320 B		VJW
Alkalinity, Hydroxide as CaCO ₃ *	<10.0	10.0	4.53	mg/L	5	12/10/21 14:40	2320 B		VJW
Alkalinity, Total as CaCO ₃ *	440	10.0	4.53	mg/L	5	12/10/21 14:40	2320 B		VJW
Chloride*	10.3	2.00	0.0845	mg/L	2	12/08/21 19:11	EPA300.0		AES
Fluoride*	0.260	0.200	0.0194	mg/L	2	12/08/21 19:11	EPA300.0		AES
Nitrate/Nitrite as N*	<0.020	0.020	0.006	mg/L as N	1	12/07/21 15:38	EPA353.2		DTR
pH*	7.01			pH Units	1	12/01/21 12:50	EPA150.1		VJW
pH Temperature, degrees C	20.4			pH Units	1	12/01/21 12:50	EPA150.1		VJW
Total Dissolved Solids*	1580	10.0		mg/L	1	12/06/21 10:50	EPA160.1		VJW
Sulfate*	751	20.0	3.05	mg/L	20	12/08/21 19:30	EPA300.0		AES
Total Organic Carbon*	3.38	0.500	0.0616	mg/L	1	12/09/21 21:53	5310C		DTR

Dissolved Metals by ICP

Aluminum*	<0.100	0.100	0.026	mg/L	2	12/07/21 16:09	EPA200.7		AES
Calcium*	164	0.200	0.116	mg/L	2	12/07/21 16:09	EPA200.7		AES
Hardness as CaCO ₃	957	1.32	0.827	mg/L	2	12/07/21 16:09	2340 B		AES
Iron*	1.63	0.100	0.036	mg/L	2	12/07/21 16:09	EPA200.7		AES
Magnesium*	133	0.200	0.131	mg/L	2	12/07/21 16:09	EPA200.7		AES
Potassium*	3.69	2.00	0.161	mg/L	2	12/07/21 16:09	EPA200.7		AES
Silica (SiO ₂)	17.2	2.14	0.159	mg/L	2	12/07/21 16:09	Calculation		AES
Silicon	8.03	1.00	0.075	mg/L	2	12/07/21 16:09	EPA200.7		AES
Sodium*	72.0	2.00	0.159	mg/L	2	12/07/21 16:09	EPA200.7		AES

Dissolved Metals by ICPMS

Arsenic*	0.0011	0.0010	0.0001	mg/L	2	12/07/21 16:26	EPA200.8		AES
Cadmium*	<0.0010	0.0010	0.0002	mg/L	2	12/07/21 16:26	EPA200.8		AES
Copper*	0.0018	0.0010	0.0002	mg/L	2	12/07/21 16:26	EPA200.8		AES
Lead*	<0.0010	0.0010	0.00003	mg/L	2	12/07/21 16:26	EPA200.8		AES
Manganese*	4.66	0.0100	0.0025	mg/L	20	12/07/21 17:45	EPA200.8		AES
Molybdenum*	<0.0010	0.0010	0.00006	mg/L	2	12/07/21 16:26	EPA200.8		AES
Selenium*	<0.0020	0.0020	0.0003	mg/L	2	12/07/21 16:26	EPA200.8		AES
Uranium	0.0015	0.0010	0.00009	mg/L	2	12/07/21 16:26	EPA200.8		AES
Zinc*	<0.0040	0.0040	0.0002	mg/L	2	12/07/21 16:26	EPA200.8		AES

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Debbie Zufelt, Reports Manager

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

MW-7-EAA**2112002-05 (Ground Water)**

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
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Dissolved Mercury by CVAA

Mercury*	<0.0002	0.0002	0.00001	mg/L	1	12/08/21 14:27	EPA245.1		DTR
Cation/Anion Balance	-0.87								

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/13/21 14:34

General Chemistry - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212949 - General Prep - Wet Chem

Blank (B212949-BLK1)

Prepared: 12/01/21 Analyzed: 12/02/21

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 (B212949-BS1)

Prepared: 12/01/21 Analyzed: 12/02/21

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

LCS Dup (B212949-BSD1)

Prepared: 12/01/21 Analyzed: 12/02/21

Alkalinity, Bicarbonate as CaCO ₃	102	10.0	mg/L	100	102	85-115	1.94	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	1.94	20

Batch B212952 - IC- Ion Chromatograph

Blank (B212952-BLK1)

Prepared: 12/02/21 Analyzed: 12/04/21

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

LCS (B212952-BS1)

Prepared: 12/02/21 Analyzed: 12/04/21

Chloride	24.4	1.00	mg/L	25.0	97.7	90-110
Fluoride	2.45	0.100	mg/L	2.50	98.2	90-110
Sulfate	24.0	1.00	mg/L	25.0	95.9	90-110

LCS Dup (B212952-BSD1)

Prepared: 12/02/21 Analyzed: 12/04/21

Chloride	24.5	1.00	mg/L	25.0	98.0	90-110	0.331	20
Fluoride	2.47	0.100	mg/L	2.50	98.9	90-110	0.771	20
Sulfate	24.2	1.00	mg/L	25.0	96.8	90-110	0.884	20

Batch B212965 - General Prep - Wet Chem

Blank (B212965-BLK1)

Prepared: 12/02/21 Analyzed: 12/06/21

Total Dissolved Solids	ND	10.0	mg/L
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Duplicate (B212965-DUP1)

Source: 2111323-01

Prepared: 12/02/21 Analyzed: 12/06/21

Total Dissolved Solids	535	10.0	mg/L	530			0.949	20
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Reference (B212965-SRM1)

Prepared: 12/02/21 Analyzed: 12/06/21

Total Dissolved Solids	405	10.0	mg/L	400	101	85-115
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Batch B212976 - General Prep - Wet Chem

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326Project: GCC GW Baseline
Project Name / Number: GCC GW Baseline
Project Manager: Tom BirdReported:
12/13/21 14:34General Chemistry - Quality Control
(Continued)

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212976 - General Prep - Wet Chem (Continued)

Duplicate (B212976-DUP2)

Source: 2112004-01

Prepared & Analyzed: 12/01/21

pH	8.34		pH Units		8.41			0.836	20	
pH Temperature, degrees C	20.1		pH Units		20.2			0.496	200	

Reference (B212976-SRM1)

Prepared & Analyzed: 12/01/21

pH	6.99		pH Units	7.00		99.9	98.57-101.42			
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Batch B212985 - Lachat

Blank (B212985-BLK1)

Prepared: 12/06/21 Analyzed: 12/07/21

Nitrate/Nitrite as N	ND	0.020	mg/L as N							
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LCS (B212985-BS1)

Prepared: 12/06/21 Analyzed: 12/07/21

Nitrate/Nitrite as N	1.05	0.020	mg/L as N	1.00		105	90-110			
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LCS Dup (B212985-BSD1)

Prepared: 12/06/21 Analyzed: 12/07/21

Nitrate/Nitrite as N	1.06	0.020	mg/L as N	1.00		106	90-110	0.892	20	
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Batch B212988 - IC- Ion Chromatograph

Blank (B212988-BLK1)

Prepared: 12/06/21 Analyzed: 12/08/21

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

LCS (B212988-BS1)

Prepared: 12/06/21 Analyzed: 12/08/21

Chloride	24.5	1.00	mg/L	25.0		98.0	90-110			
Fluoride	2.42	0.100	mg/L	2.50		96.7	90-110			
Sulfate	23.7	1.00	mg/L	25.0		94.7	90-110			

LCS Dup (B212988-BSD1)

Prepared: 12/06/21 Analyzed: 12/08/21

Chloride	24.6	1.00	mg/L	25.0		98.4	90-110	0.379	20	
Fluoride	2.43	0.100	mg/L	2.50		97.4	90-110	0.660	20	
Sulfate	23.8	1.00	mg/L	25.0		95.1	90-110	0.375	20	

Batch B213017 - General Prep - Wet Chem

Blank (B213017-BLK1)

Prepared: 12/09/21 Analyzed: 12/10/21

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

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B213017 - General Prep - Wet Chem (Continued)

LCS (B213017-BS1)

Prepared: 12/09/21 Analyzed: 12/10/21

Alkalinity, Bicarbonate as CaCO ₃	105	10.0	mg/L	100		105	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	105	10.0	mg/L	100		105	85-115			

LCS Dup (B213017-BSD1)

Prepared: 12/09/21 Analyzed: 12/10/21

Alkalinity, Bicarbonate as CaCO ₃	105	10.0	mg/L	100		105	85-115	0.00	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	105	10.0	mg/L	100		105	85-115	0.00	20	

Batch B213022 - General Prep - Wet Chem

Blank (B213022-BLK1)

Prepared & Analyzed: 12/09/21

Total Organic Carbon	ND	0.500	mg/L							
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LCS (B213022-BS1)

Prepared & Analyzed: 12/09/21

Total Organic Carbon	9.81	0.500	mg/L	10.0		98.1	85-115			
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LCS Dup (B213022-BSD1)

Prepared & Analyzed: 12/09/21

Total Organic Carbon	10.1	0.500	mg/L	10.0		101	85-115	2.42	20	
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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

Dissolved Metals by ICP - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B212999 - Diss. 200.7/200.8

Blank (B212999-BLK1)

Prepared & Analyzed: 12/07/21

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

LCS (B212999-BS1)

Prepared: 12/07/21 Analyzed: 12/08/21

Aluminum	5.20	0.050	mg/L	5.00	104	85-115
Calcium	5.29	0.100	mg/L	5.00	106	85-115
Iron	5.34	0.050	mg/L	5.00	107	85-115
Magnesium	26.7	0.100	mg/L	25.0	107	85-115
Potassium	10.2	1.00	mg/L	10.0	102	85-115
Silicon	5.58	0.500	mg/L	5.00	112	85-115
Sodium	4.16	1.00	mg/L	4.05	103	85-115

LCS Dup (B212999-BSD1)

Prepared & Analyzed: 12/07/21

Aluminum	5.25	0.050	mg/L	5.00	105	85-115	0.953	20
Calcium	4.99	0.100	mg/L	5.00	99.9	85-115	5.67	20
Iron	5.17	0.050	mg/L	5.00	103	85-115	3.28	20
Magnesium	25.8	0.100	mg/L	25.0	103	85-115	3.20	20
Potassium	10.5	1.00	mg/L	10.0	105	85-115	2.53	20
Silicon	5.55	0.500	mg/L	5.00	111	85-115	0.458	20
Sodium	4.14	1.00	mg/L	4.05	102	85-115	0.528	20

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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:
12/13/21 14:34

Dissolved Metals by ICPMS - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B213000 - Diss. 200.7/200.8

Blank (B213000-BLK1)

Prepared & Analyzed: 12/07/21

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

LCS (B213000-BS1)

Prepared & Analyzed: 12/07/21

Arsenic	0.0489	0.0005	mg/L	0.0500	97.8	85-115				
Cadmium	0.0492	0.0005	mg/L	0.0500	98.5	85-115				
Copper	0.0476	0.0005	mg/L	0.0500	95.2	85-115				
Lead	0.0489	0.0005	mg/L	0.0500	97.9	85-115				
Manganese	0.0500	0.0005	mg/L	0.0500	100	85-115				
Molybdenum	0.0482	0.0005	mg/L	0.0500	96.5	85-115				
Selenium	0.244	0.0010	mg/L	0.250	97.7	85-115				
Uranium	0.0512	0.0005	mg/L	0.0500	102	85-115				
Zinc	0.0483	0.0020	mg/L	0.0500	96.6	85-115				

LCS Dup (B213000-BSD1)

Prepared & Analyzed: 12/07/21

Arsenic	0.0490	0.0005	mg/L	0.0500	98.0	85-115	0.241	20		
Cadmium	0.0484	0.0005	mg/L	0.0500	96.9	85-115	1.62	20		
Copper	0.0482	0.0005	mg/L	0.0500	96.5	85-115	1.34	20		
Lead	0.0487	0.0005	mg/L	0.0500	97.4	85-115	0.488	20		
Manganese	0.0512	0.0005	mg/L	0.0500	102	85-115	2.37	20		
Molybdenum	0.0473	0.0005	mg/L	0.0500	94.5	85-115	2.04	20		
Selenium	0.247	0.0010	mg/L	0.250	98.9	85-115	1.19	20		
Uranium	0.0507	0.0005	mg/L	0.0500	101	85-115	0.962	20		
Zinc	0.0490	0.0020	mg/L	0.0500	98.1	85-115	1.58	20		

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

Dissolved Mercury by CVAA - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch B212990 - EPA 245.1/7470										
Blank (B212990-BLK1)				Prepared: 12/06/21 Analyzed: 12/08/21						
Mercury	ND	0.0002	mg/L							
LCS (B212990-BS1)				Prepared: 12/06/21 Analyzed: 12/08/21						
Mercury	0.0048	0.0002	mg/L	0.00500		95.6	85-115			
LCS Dup (B212990-BSD1)				Prepared: 12/06/21 Analyzed: 12/08/21						
Mercury	0.0049	0.0002	mg/L	0.00500		97.5	85-115	1.97	20	

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GCC Energy, LLC
6473 CR 120
Hesperus CO, 81326

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

Reported:
12/13/21 14:34

Notes and Definitions

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

Green Analytical Laboratories

Debbie Zufelt, Reports Manager

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75 Suttle St Durango, CO

FORM-006
COC - Revision 6.0

ANALYSIS REQUEST

On Ice		CHECKED BY	11.3/11.2	Order #3
		Temperature at receipt:		

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