FOUTH QUARTER 2022

GROUNDWATER, MINE EFFLUENT, SURFACE WATER AND TREATMENT PLANT EFFLUENT QUALITY

REPORT COMPLIANT WITH THE TERMS OF TECHNICAL REVISION #10 (TR-10)

Prepared by Grand Island Resources

February 28, 2023

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1. Introduction

On April 28, 2022, the Division of Reclamation, Mining and Safety (Division) approved the Technical Revision application (TR-10) filed with the Division on February 28, 2022, addressing the following: ***Modify the water management and treatment program and provide a surface water and groundwater monitoring program (in accordance with corrective action #1 of the Board Order issued for Violation No. MV-2021-017)***.

The terms of TR-10 approved by the Division were thereby incorporated into Permit No. M-1977-410. All other conditions and requirements of Permit No. M-1977-410 remain in full force and effect. Grand Island Resources (The Operator) will need to provide five consecutive quarters of groundwater monitoring data that include all sampling parameters and standards required by ***WQCC's "Interim Narrative Standard".*** Water effluent from the mines is currently managed via the Treatment System into Coon Track Creek under CDPHE Water Quality Control Division (WQCD) National Pollutant Discharge Elimination System NPDES permit CO-0032751.

Technical Revision 10 (TR10) terms require The Operator to submit to DRMS Quarterly Water Monitoring Reports not later than 30 days from the end of the quarter. The Operator and GIR agreed to provide the reports on specific dates. Due to unforeseen data delivery issues with the December 2022 sampling event, GIR requested from the Division an extension for the delivery of this 4th Quarter 2022 Report. The Division granted a 30-day extension from the originally scheduled February 1, 2023.

The quarterly reports must include:

1.1. Analytical results for the 7 sampling locations described in Technical Revision #10 (TR10) and shown on Figure 6,
1.2. Monthly Potentiometric Surface (water table) maps constructed from water table measurements taken during the sampling events Figures 6, 7 and 8 for the months of October, November and December, respectively,
1.3. Water Quality analytical results summary tables highlighting exceedances of select parameters from Regulation 41, Tables 1-4 water quality standards,
1.4. Laboratory data packages,
1.5. Chain of Custody sheets,
1.6. Field sheets for the sampling event(s).

2. Ground Water Monitoring

Three groundwater monitoring locations corresponding to existing ground water wells, namely, Cabin Well (Compliance), Cross Well and Caribou Well were selected by DRMS for the program. All 3 wells have permanent pumping system installations and water level dataloggers. Water samples for water quality determination are collected via the existing permanent pumping systems.

2.1. Water Quality Analytical Results

Test results from water samples collected from the three monitoring wells are presented on the tables 2.1, 2.2 and 2.3 for the months of October, November, and December, respectively. In accordance with TR-10 requirements, the test results are compared with the most stringent concentrations (Standard) based on DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT Water Quality Control Commission REGULATION NO. 41 -THE BASIC STANDARDS FOR GROUNDWATER 5 CCR 1002-41. The complete Water Quality Analytical Results from the Laboratories are provided in the appendices.

Table 2.1.1 Groundwater Quality Test Results – October 2022

Sample Collected on:	October 27, 2022					
Parameter	**Standard**	**Cross Well**	**Caribou Well**	**Cabin Well (Compliance)**	**Unit**	**Comments**
2-Chlorophenol	**0.0002**	ND	ND	ND	mg/l	Total - Std in mg/l; results in ug/l
Aluminum (Al)	**5**	ND	0.003	ND	mg/l	Dissolved
Antimony (Sb)	**0.006**	ND	ND	ND	mg/l	Dissolved
Arsenic (As)	**0.01**	ND	ND	ND	mg/l	Dissolved
Asbestos	**7,000,000**	ND	ND	ND	fibers/liter	Total
Barium (Ba)	**2**	0.0275	0.0057	0.0382	mg/l	Dissolved
Beryllium (Be)	**0.004**	ND	ND	ND	mg/l	Dissolved
Beta and Photon Emitters	**4**	<3	<2.8	<3	mrem/year	Std is in mrem/year; Lab reports pCi/l
Boron (B)	**0.75**	ND	ND	ND	mg/l	Dissolved
Cadmium (Cd)	**0.005**	0.0002	ND	ND	mg/l	Dissolved
Chloride (Cl)	**250**	3.15	0.41	2.86	mg/l	Dissolved
Chromium (Cr)	**0.1**	ND	ND	ND	mg/l	Dissolved
Cobalt (Co)	**0.05**	0.0002	0.0003	0.0002	mg/l	Dissolved
Coliform (Max Total)	**23**	ND	ND	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Coliform 30-day avg. Total	**2.2**	ND	ND	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Color	**15**	ND	ND	ND	color units	--
Copper (Cu)	**0.2**	0.0070	0.4407	ND	mg/l	Dissolved
Corrosivity	**Non Corrosive**	-2.33	-3.52	-2.04	Langelier Units	--
Cyanide [Free] (Cn)	**0.2**	ND	ND	ND	mg/l	Total
Fluoride (F)	**2**	ND	ND	ND	mg/l	Dissolved
Foaming Agents	**0.5**	ND	ND	ND	mg/l	Total
Gross Alpha Particle Activity	**15**	<0.1	0.3	0.2	pCi/l	--
Iron (Fe)	**0.3**	ND	ND	0.005	mg/l	Dissolved
Lead (Pb)	**0.05**	0.0006	0.0004	0.0002	mg/l	Dissolved
Lithium (Li)	**2.5**	ND	ND	ND	mg/l	Dissolved
Manganese (Mn)	**0.05**	0.0010	ND	0.0092	mg/l	Dissolved
Mercury (inorganic) (Hg)	**0.002**	ND	ND	ND	mg/l	Dissolved
Molybdenum (Mo)	**0.21**	0.0006	ND	0.0042	mg/l	Dissolved
Nickel (Ni)	**0.1**	ND	ND	ND	mg/l	Dissolved
Nitrate (NO3)	**10**	0.25	0.12	0.30	mg/l as N	Dissolved
Nitrate-NitriteTotal	**10**	0.25	0.12	0.30	mg/l as N	Dissolved
Nitrite (NO2)	**1**	ND	ND	ND	mg/l as N	Dissolved
Odor	**3**	ND	ND	ND	threshold odor numbers	--
pH (field)	**6.5 - 8.5**	7.3	7	7.3	pH units	--
Phenol	**0.3**	ND	ND	ND	mg/l	Total - Std in mg/l; Lab reports in ug/l
Selenium (Se)	**0.02**	ND	ND	ND	mg/l	Dissolved
Silver (Ag)	**0.05**	ND	ND	ND	mg/l	Dissolved
Silver Total		ND	ND	ND	mg/l	Total
Sulfate (SO4)	**250**	9.29	2.66	9.27	mg/l	Dissolved
TDS	**400**	88	41	79	mg/l	Total
Thallium (Tl)	**0.002**	ND	ND	ND	mg/l	Dissolved
Uranium (U)	**0.0168 -0.03**	ND	ND	ND	mg/l	Dissolved
Vanadium (V)	**0.1**	ND	ND	ND	mg/l	Dissolved
Zinc (Zn)	**2**	1.25	0.005	0.080	mg/l	Dissolved

The highlighted cells Indicate Test Results Higher than the Reference Values from Reg. 5 CCR 1002-41

Table 2.1.2 Groundwater Quality Test Results – November 2022

Sample Collected on:	November 29, 2022					
Parameter	**Standard**	**Cross Well**	**Caribou Well**	**Cabin Well (Compliance)**	**Unit**	**Comments**
2-Chlorophenol	**0.0002**	ND	ND	ND	mg/l	Total - Std in mg/l; results
Aluminum (Al)	**5**	ND	0.002	0.001	mg/l	Dissolved
Antimony (Sb)	**0.006**	ND	ND	ND	mg/l	Dissolved
Arsenic (As)	**0.01**	ND	ND	ND	mg/l	Dissolved
Asbestos	**7,000,000**	ND	ND	ND	fibers/liter	Total
Barium (Ba)	**2**	0.0281	0.0061	0.0407	mg/l	Dissolved
Beryllium (Be)	**0.004**	ND	ND	ND	mg/l	Dissolved
Beta and Photon Emitters	**4**	<2.9	<3.0	<2.7	mrem/year	Std is in mrem/year; Lab r
Boron (B)	**0.75**	ND	0.03	ND	mg/l	Dissolved
Cadmium (Cd)	**0.005**	0.0002	ND	ND	mg/l	Dissolved
Chloride (Cl)	**250**	2.86	0.43	2.92	mg/l	Dissolved
Chromium (Cr)	**0.1**	ND	ND	ND	mg/l	Dissolved
Cobalt (Co)	**0.05**	ND	ND	ND	mg/l	Dissolved
Coliform (Max Total)	**23**	ND	ND	ND	org/100 ml	Total - Std in org/100 ml;
Coliform 30-day avg. Total	**2.2**	ND	ND	ND	org/100 ml	Total - Std in org/100 ml;
Color	**15**	ND	ND	ND	color units	--
Copper (Cu)	**0.2**	0.0038	0.1797	ND	mg/l	Dissolved
Corrosivity	**Non Corrosive**	-2.1	-3.96	-2.02	Langelier Units	--
Cyanide [Free] (Cn)	**0.2**	ND	ND	ND	mg/l	Total
Fluoride (F)	**2**	ND	ND	ND	mg/l	Dissolved
Foaming Agents	**0.5**	ND	ND	ND	mg/l	Total
Gross Alpha Particle Activity	**15**	0.8	0.7	0.8	pCi/l	--
Iron (Fe)	**0.3**	ND	ND	0.007	mg/l	Dissolved
Lead (Pb)	**0.05**	0.0005	0.0002	0.0001	mg/l	Dissolved
Lithium (Li)	**2.5**	ND	ND	ND	mg/l	Dissolved
Manganese (Mn)	**0.05**	ND	ND	0.0091	mg/l	Dissolved
Mercury (inorganic) (Hg)	**0.002**	ND	ND	ND	mg/l	Dissolved
Molybdenum (Mo)	**0.21**	0.0006	ND	0.0042	mg/l	Dissolved
Nickel (Ni)	**0.1**	ND	ND	ND	mg/l	Dissolved
Nitrate (NO3)	**10**	0.19	0.08	0.27	mg/l as N	Dissolved
Nitrate-NitriteTotal	**10**	0.19	0.08	0.27	mg/l as N	Dissolved
Nitrite (NO2)	**1**	ND	ND	ND	mg/l as N	Dissolved
Odor	**3**	ND	ND	ND	threshold odor numbers	--
pH (field)	**6.5 - 8.5**	7.5	6.7	7.2	pH units	--
Phenol	**0.3**	ND	ND	ND	mg/l	Total - Std in mg/l; Lab re
Selenium (Se)	**0.02**	ND	ND	ND	mg/l	Dissolved
Silver (Ag)	**0.05**	ND	ND	ND	mg/l	Dissolved
Silver Total		ND	ND	ND	mg/l	Total
Sulfate (SO4)	**250**	8.89	2.59	9.6	mg/l	Dissolved
TDS	**400**	80	87	26	mg/l	Total
Thallium (Tl)	**0.002**	ND	ND	ND	mg/l	Dissolved
Uranium (U)	**0.0168 -0.03**	ND	ND	ND	mg/l	Dissolved
Vanadium (V)	**0.1**	ND	ND	ND	mg/l	Dissolved
Zinc (Zn)	**2**	0.859	0.002	0.084	mg/l	Dissolved

The highlighted cells Indicate Test Results Higher than the Reference Values from Reg. 5 CCR 1002-41

Table 2.1.3 Groundwater Quality Test Results – December 2022

Sample Collected on:	December 20, 2022					
Parameter	**Standard**	**Cross Well**	**Caribou Well**	**Cabin Well (Compliance)**	**Unit**	**Comments**
2-Chlorophenol	**0.0002**	ND	ND	ND	mg/l	Total - Std in mg/l; results
Aluminum (Al)	**5**	ND	0.011	0.001	mg/l	Dissolved
Antimony (Sb)	**0.006**	ND	ND	ND	mg/l	Dissolved
Arsenic (As)	**0.01**	ND	ND	ND	mg/l	Dissolved
Asbestos	**7,000,000**	ND	ND	ND	fibers/liter	Total
Barium (Ba)	**2**	0.0313	0.0059	0.0421	mg/l	Dissolved
Beryllium (Be)	**0.004**	ND	ND	ND	mg/l	Dissolved
Beta and Photon Emitters	**4**	<2.9	<2.8	<2.8	mrem/year	Std is in mrem/year; Lab r
Boron (B)	**0.75**	ND	ND	ND	mg/l	Dissolved
Cadmium (Cd)	**0.005**	0.0002	ND	ND	mg/l	Dissolved
Chloride (Cl)	**250**	2.81	0.41	3.18	mg/l	Dissolved
Chromium (Cr)	**0.1**	ND	ND	ND	mg/l	Dissolved
Cobalt (Co)	**0.05**	ND	ND	ND	mg/l	Dissolved
Coliform (Max Total)	**23**	ND	ND	ND	org/100 ml	Total - Std in org/100 ml;
Coliform 30-day avg. Total	**2.2**	ND	ND	ND	org/100 ml	Total - Std in org/100 ml;
Color	**15**	ND	ND	ND	color units	--
Copper (Cu)	**0.2**	0.045	0.0841	ND	mg/l	Dissolved
Corrosivity	**Non Corrosive**	-1.9	-3.38	-1.93	Langelier Units	--
Cyanide [Free] (Cn)	**0.2**	ND	ND	ND	mg/l	Total
Fluoride (F)	**2**	ND	ND	ND	mg/l	Dissolved
Foaming Agents	**0.5**	ND	ND	ND	mg/l	Total
Gross Alpha Particle Activity	**15**	<0.1	0.5	0.9	pCi/l	--
Iron (Fe)	**0.3**	ND	0.007	0.005	mg/l	Dissolved
Lead (Pb)	**0.05**	0.0005	0.0002	0.0001	mg/l	Dissolved
Lithium (Li)	**2.5**	ND	ND	ND	mg/l	Dissolved
Manganese (Mn)	**0.05**	ND	ND	0.0086	mg/l	Dissolved
Mercury (inorganic) (Hg)	**0.002**	ND	ND	ND	mg/l	Dissolved
Molybdenum (Mo)	**0.21**	0.0005	ND	0.0045	mg/l	Dissolved
Nickel (Ni)	**0.1**	ND	ND	ND	mg/l	Dissolved
Nitrate (NO3)	**10**	ND	ND	ND	mg/l as N	Dissolved
Nitrate-NitriteTotal	**10**	0.23	0.11	0.31	mg/l as N	Dissolved
Nitrite (NO2)	**1**	ND	ND	ND	mg/l as N	Dissolved
Odor	**3**	ND	ND	ND	threshold odor numbers	--
pH (field)	**6.5 - 8.5**	6.7	6.7	6.6	pH units	--
Phenol	**0.3**	ND	ND	ND	mg/l	Total - Std in mg/l; Lab re
Selenium (Se)	**0.02**	ND	ND	ND	mg/l	Dissolved
Silver (Ag)	**0.05**	ND	ND	ND	mg/l	Dissolved
Silver Total		ND	ND	ND	mg/l	Total
Sulfate (SO4)	**250**	8.88	2.63	9.85	mg/l	Dissolved
TDS	**400**	109	96	34	mg/l	Total
Thallium (Tl)	**0.002**	ND	ND	ND	mg/l	Dissolved
Uranium (U)	**0.0168 -0.03**	ND	ND	ND	mg/l	Dissolved
Vanadium (V)	**0.1**	ND	ND	ND	mg/l	Dissolved
Zinc (Zn)	**2**	0.59	0.004	0.087	mg/l	Dissolved

The highlighted cells Indicate Test Results Higher than the Reference Values from Reg. 5 CCR 1002-41

2.2. Groundwater Levels and Potentiometric Water Surface

Potentiometric Figures were developed based on recorded (automated dataloggers) groundwater levels at each of the three monitoring wells at the time the water quality samples were collected. The Cross Winze water levels are also included.

Tables 2.2.1, 2.2.2, and 2.2.3 for the months of October, November and December 2022, respectively, provide sampling date and groundwater elevations taken at the time of water sample collection. The groundwater elevations were used to develop the potentiometric water surfaces depicted on Figures 6, 7, and 8 for the month of October, November, and December, respectively.

Table 2.2.1 Wells Groundwater Elevation – October 2022

Groundwater Elevation - October		
WELL	**COLLAR ELEV.**	**10/27/2022**
	Ft. AMSL	
Caribou	9,744.25	9,714.87
Cabin (Compliance)	9,677.35	9,625.78
Cross	9,692.85	9,664.74
Winze	9,697.48	9,617.81

Table 2.2.2 Wells Groundwater Elevation – November 2022

Groundwater Elevation - November		
WELL	**COLLAR ELEV.**	**11/29/2022**
	Ft. AMSL	
Caribou	9,744.25	9,713.73
Cabin (Compliance)	9,677.35	9,637.96
Cross	9,692.85	9,660.92
Winze	9,697.48	9,608.58

Table 2.2.3 Wells Groundwater Elevation – December 2022

Groundwater Elevation - December		
WELL	**COLLAR ELEV.**	**12/20/2022**
	Ft. AMSL	
Caribou	9,744.25	9,706.16
Cabin (Compliance)	9,677.35	9,637.44
Cross	9,692.85	9,659.22
Winze	9,697.48	9,604.66

Figure 6 Potentiometric Water Surface – October 2022

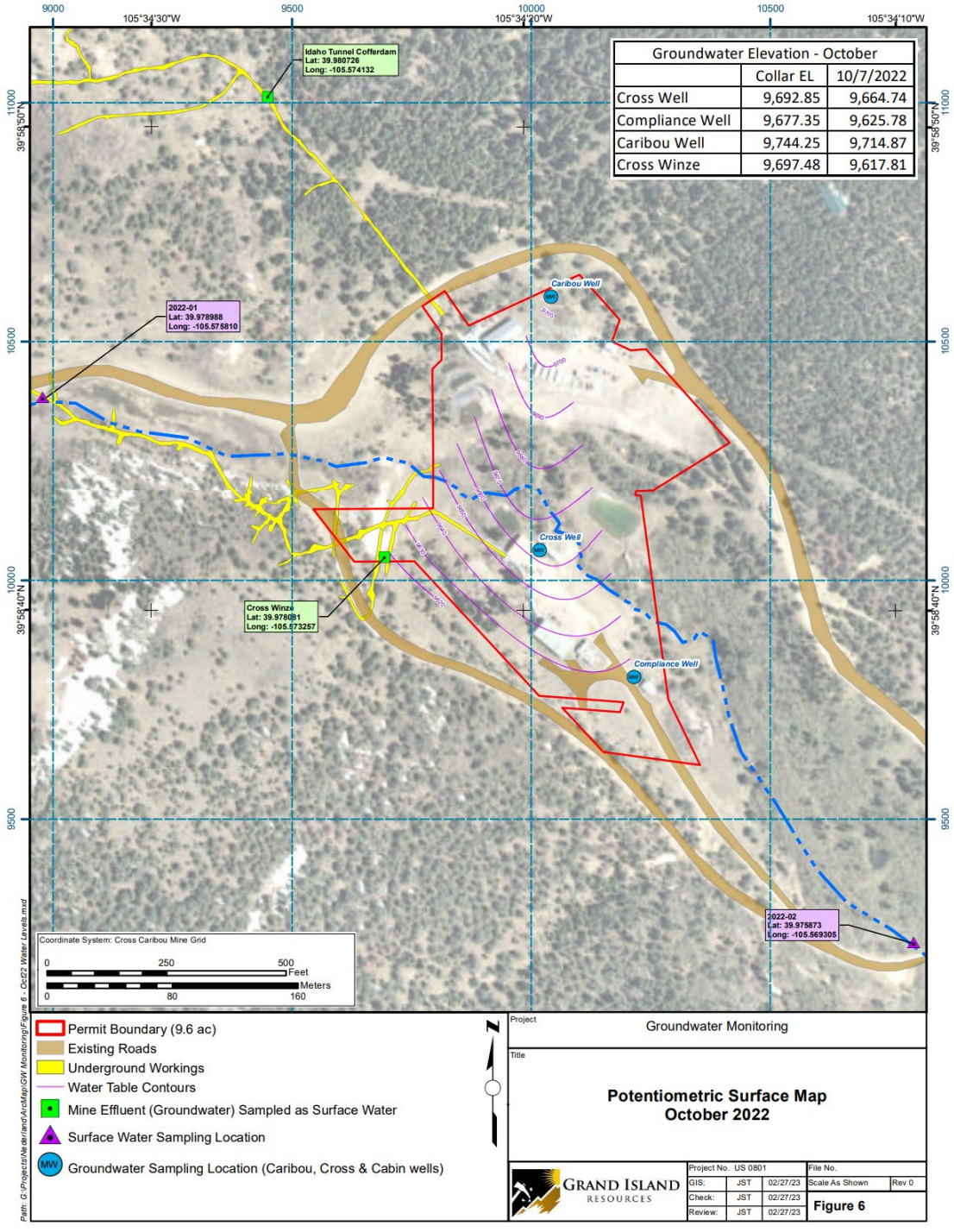


Figure 7 Potentiometric Water Surface – November 2022

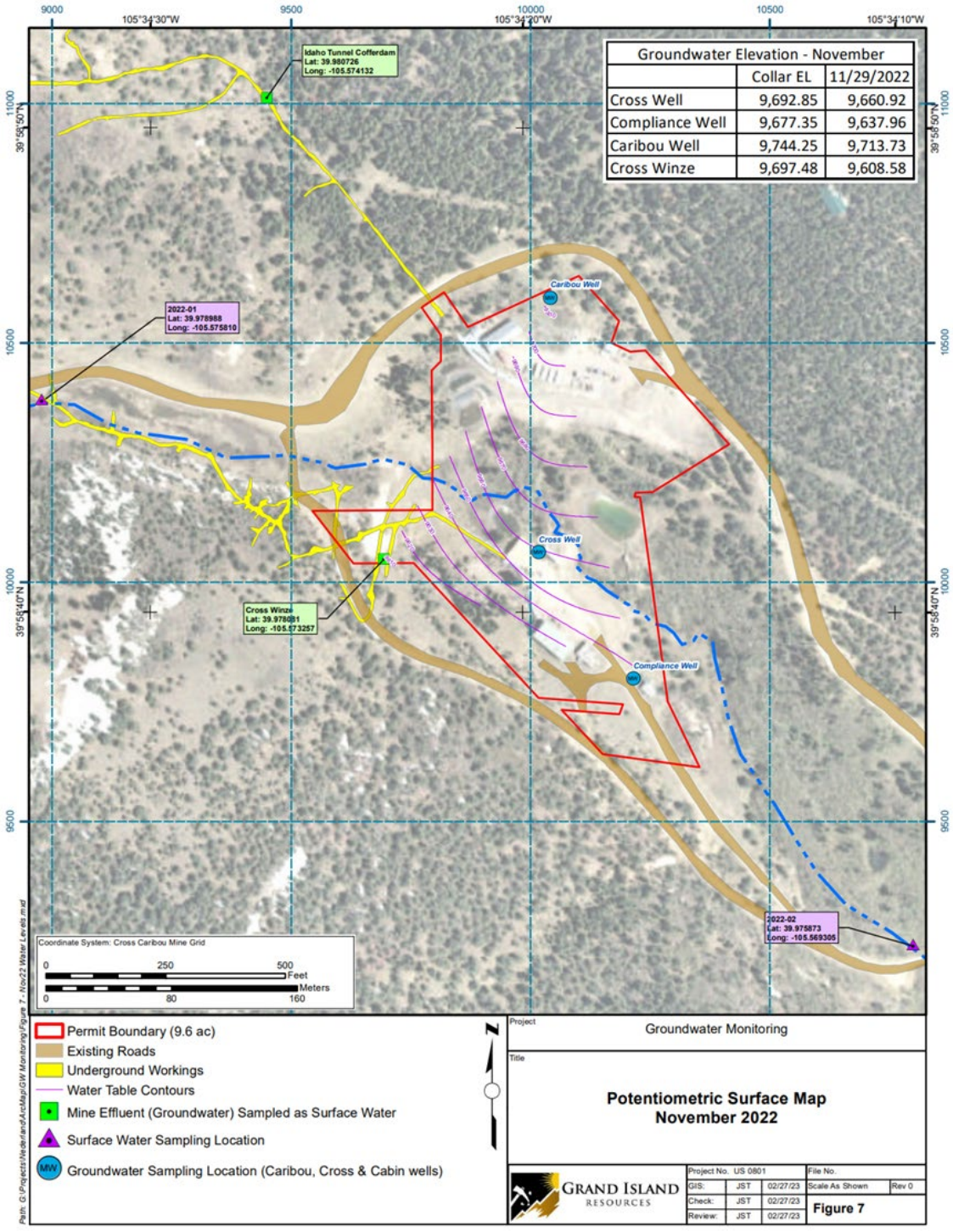
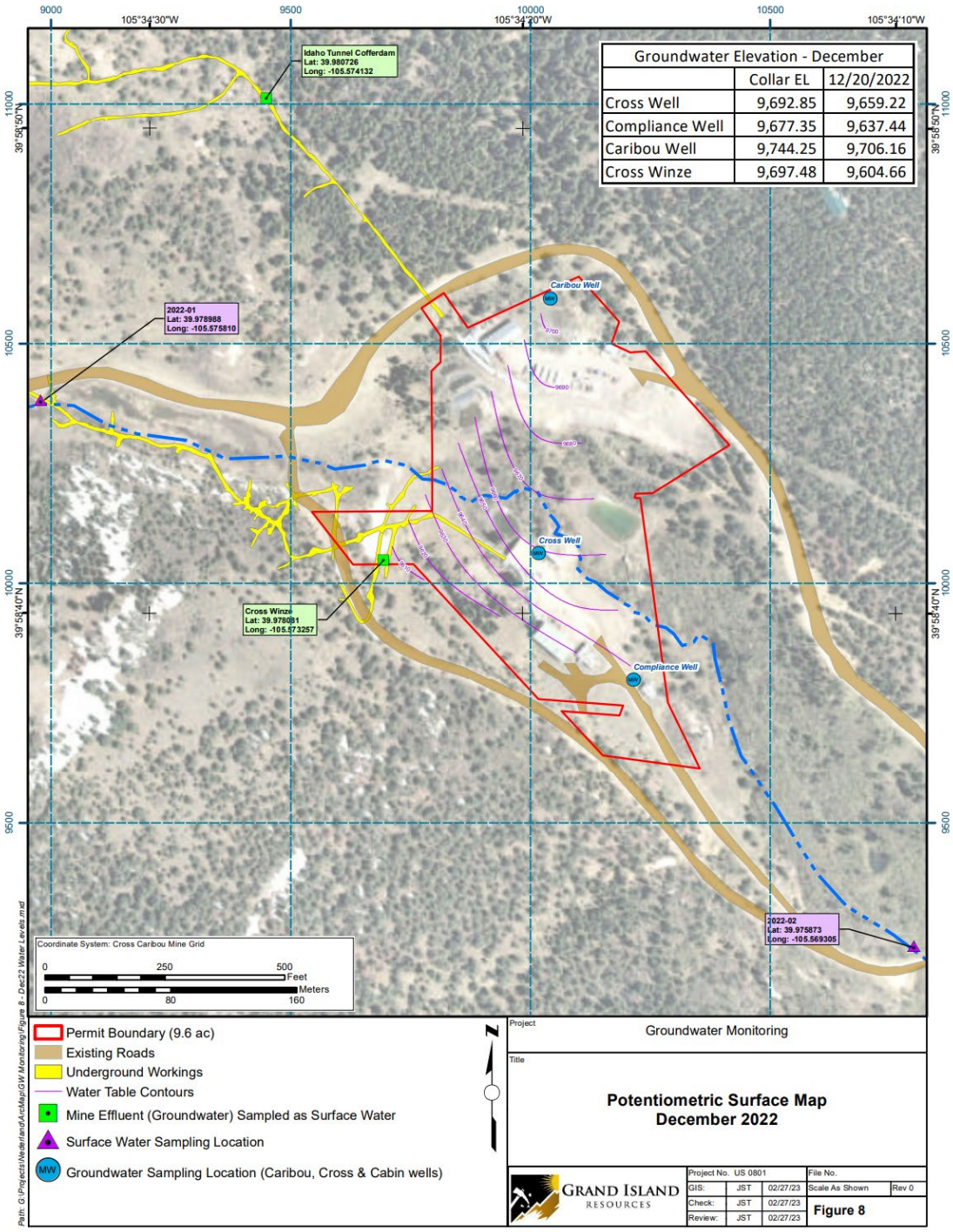


Figure 8 Potentiometric Water Surface – December 2022



3. Mine Effluent Monitoring

Two mine effluent monitoring locations corresponding to points of interest within the GIR site were selected by DRMS as part of the program. One station is located in the Cross Mine and one station is located in the Idaho Tunnel/Caribou Mine, namely Cross Portal and Caribou Portal, respectively. Water Quality Analytical Results are summarized on Tables 3.1., 3.2., and 3.3 for the months of October, November, and December 2022, respectively. The complete Water Quality Analytical Results from the Laboratories are provided in Appendix A.

Mine effluent reports to the Water Treatment Plant and it is discharges via the NPDES permit CO-0032751 Outfall 001.

Table 3.1 Mine Effluent Test Results – October 2022

Sample Collected on:	October 27, 2022			
Parameter	**Standard**	**Cross Portal**	**Caribou Portal**	**Unit**
2-Chlorophenol	**0.0002**	ND	ND	mg/l
Aluminum (Al)	**5**	0.004	0.004	mg/l
Antimony (Sb)	**0.006**	ND	ND	mg/l
Arsenic (As)	**0.01**	ND	0.0007	mg/l
Asbestos	**7,000,000**	ND	ND	fibers/liter
Barium (Ba)	**2**	0.0702	0.0529	mg/l
Beryllium (Be)	**0.004**	ND	ND	mg/l
Beta and Photon Emitters	**4**	<3	<2.9	mrem/year
Boron (B)	**0.75**	0.02	ND	mg/l
Cadmium (Cd)	**0.005**	0.0011	ND	mg/l
Chloride (Cl)	**250**	0.41	0.49	mg/l
Chromium (Cr)	**0.1**	ND	ND	mg/l
Cobalt (Co)	**0.05**	ND	ND	mg/l
Coliform (Max Total)	**23**	ND	ND	org/100 ml
Coliform 30-day avg. Total	**2.2**	ND	ND	org/100 ml
Color	**15**	ND	ND	color units
Copper (Cu)	**0.2**	0.0026	ND	mg/l
Corrosivity	**Non Corrosive**	-1.16	-0.61	Langelier Units
Cyanide [Free] (Cn)	**0.2**	ND	ND	mg/l
Fluoride (F)	**2**	ND	ND	mg/l
Foaming Agents	**0.5**	ND	ND	mg/l
Gross Alpha Particle Activity	**15**	1.6	4	pCi/l
Iron (Fe)	**0.3**	0.028	0.069	mg/l
Lead (Pb)	**0.05**	0.0025	0.0018	mg/l
Lithium (Li)	**2.5**	ND	ND	mg/l
Manganese (Mn)	**0.05**	0.0149	0.0020	mg/l
Mercury (inorganic) (Hg)	**0.002**	ND	ND	mg/l
Molybdenum (Mo)	**0.21**	0.0073	0.0067	mg/l
Nickel (Ni)	**0.1**	ND	ND	mg/l
Nitrate (NO3)	**10**	0.14	0.20	mg/l as N
Nitrate-NitriteTotal	**10**	0.14	0.20	mg/l as N
Nitrite (NO2)	**1**	ND	ND	mg/l as N
Odor	**3**	ND	ND	threshold odor numbers
pH (field)	**6.5 - 8.5**	7.9	8.3	pH units
Phenol	**0.3**	ND	ND	mg/l
Selenium (Se)	**0.02**	ND	ND	mg/l
Silver (Ag)	**0.05**	ND	ND	mg/l
Silver Total		ND	ND	mg/l
Sulfate (SO4)	**250**	10.81	10.58	mg/l
TDS	**400**	105	135	mg/l
Thallium (Tl)	**0.002**	ND	ND	mg/l
Uranium (U)	**0.0168 -0.03**	0.0009	0.0059	mg/l
Vanadium (V)	**0.1**	ND	ND	mg/l
Zinc (Zn)	**2**	0.217	0.010	mg/l

The highlighted cells Indicate Test Results Higher than the Reference Values from Reg. 5 CCR 1002-41

Table 3.2 Mine Effluent Test Results – November 2022

Sample Collected on:	November 29, 2022			
Parameter	**Standard**	**Cross Portal**	**Caribou Portal**	**Unit**
2-Chlorophenol	**0.0002**	ND	ND	mg/l
Aluminum (Al)	**5**	0.002	0.002	mg/l
Antimony (Sb)	**0.006**	ND	ND	mg/l
Arsenic (As)	**0.01**	ND	0.0007	mg/l
Asbestos	**7,000,000**	ND	ND	fibers/liter
Barium (Ba)	**2**	0.0711	0.054	mg/l
Beryllium (Be)	**0.004**	ND	ND	mg/l
Beta and Photon Emitters	**4**	<2.9	<2.7	mrem/year
Boron (B)	**0.75**	ND	ND	mg/l
Cadmium (Cd)	**0.005**	0.0009	ND	mg/l
Chloride (Cl)	**250**	0.38	0.54	mg/l
Chromium (Cr)	**0.1**	ND	ND	mg/l
Cobalt (Co)	**0.05**	ND	ND	mg/l
Coliform (Max Total)	**23**	ND	ND	org/100 ml
Coliform 30-day avg. Total	**2.2**	ND	ND	org/100 ml
Color	**15**	ND	ND	color units
Copper (Cu)	**0.2**	0.0019	ND	mg/l
Corrosivity	**Non Corrosive**	-1.11	-0.31	Langelier Units
Cyanide [Free] (Cn)	**0.2**	ND	ND	mg/l
Fluoride (F)	**2**	ND	ND	mg/l
Foaming Agents	**0.5**	ND	ND	mg/l
Gross Alpha Particle Activity	**15**	1.6	4	pCi/l
Iron (Fe)	**0.3**	0.007	0.005	mg/l
Lead (Pb)	**0.05**	0.0009	0.0002	mg/l
Lithium (Li)	**2.5**	ND	ND	mg/l
Manganese (Mn)	**0.05**	0.0129	0.0031	mg/l
Mercury (inorganic) (Hg)	**0.002**	ND	ND	mg/l
Molybdenum (Mo)	**0.21**	0.0073	0.0057	mg/l
Nickel (Ni)	**0.1**	ND	ND	mg/l
Nitrate (NO3)	**10**	0.07	0.12	mg/l as N
Nitrate-NitriteTotal	**10**	0.07	0.12	mg/l as N
Nitrite (NO2)	**1**	ND	ND	mg/l as N
Odor	**3**	ND	ND	threshold odor numbers
pH (field)	**6.5 - 8.5**	8.2	8.6	pH units
Phenol	**0.3**	ND	ND	mg/l
Selenium (Se)	**0.02**	ND	ND	mg/l
Silver (Ag)	**0.05**	ND	ND	mg/l
Silver Total		ND	ND	mg/l
Sulfate (SO4)	**250**	10.97	10.51	mg/l
TDS	**400**	143	136	mg/l
Thallium (Tl)	**0.002**	ND	ND	mg/l
Uranium (U)	**0.0168 -0.03**	0.0009	0.0059	mg/l
Vanadium (V)	**0.1**	ND	ND	mg/l
Zinc (Zn)	**2**	0.206	0.008	mg/l

The highlighted cells Indicate Test Results Higher than the Reference Values from Reg. 5 CCR 1002-41

Table 3.3 Mine Effluent Test Results – December 2022

Sample Collected on:	December 20, 2022			
Parameter	**Standard**	**Cross Portal**	**Caribou Portal**	**Unit**
2-Chlorophenol	**0.0002**	ND	ND	mg/l
Aluminum (Al)	**5**	0.001	ND	mg/l
Antimony (Sb)	**0.006**	ND	ND	mg/l
Arsenic (As)	**0.01**	ND	ND	mg/l
Asbestos	**7,000,000**	ND	ND	fibers/liter
Barium (Ba)	**2**	0.073	0.06	mg/l
Beryllium (Be)	**0.004**	ND	ND	mg/l
Beta and Photon Emitters	**4**	<2.8	2.8	mrem/year
Boron (B)	**0.75**	ND	ND	mg/l
Cadmium (Cd)	**0.005**	0.001	ND	mg/l
Chloride (Cl)	**250**	0.33	0.49	mg/l
Chromium (Cr)	**0.1**	ND	ND	mg/l
Cobalt (Co)	**0.05**	ND	ND	mg/l
Coliform (Max Total)	**23**	ND	ND	org/100 ml
Coliform 30-day avg. Total	**2.2**	ND	ND	org/100 ml
Color	**15**	ND	ND	color units
Copper (Cu)	**0.2**	0.0017	ND	mg/l
Corrosivity	**Non Corrosive**	-0.12	-0.61	Langelier Units
Cyanide [Free] (Cn)	**0.2**	ND	ND	mg/l
Fluoride (F)	**2**	ND	ND	mg/l
Foaming Agents	**0.5**	ND	ND	mg/l
Gross Alpha Particle Activity	**15**	1	3.7	pCi/l
Iron (Fe)	**0.3**	0.005	0.006	mg/l
Lead (Pb)	**0.05**	0.0006	0.0004	mg/l
Lithium (Li)	**2.5**	ND	ND	mg/l
Manganese (Mn)	**0.05**	0.0115	0.0014	mg/l
Mercury (inorganic) (Hg)	**0.002**	ND	ND	mg/l
Molybdenum (Mo)	**0.21**	0.0082	0.0067	mg/l
Nickel (Ni)	**0.1**	ND	ND	mg/l
Nitrate (NO3)	**10**	ND	ND	mg/l as N
Nitrate-NitriteTotal	**10**	0.08	0.14	mg/l as N
Nitrite (NO2)	**1**	ND	ND	mg/l as N
Odor	**3**	ND	ND	threshold odor numbers
pH (field)	**6.5 - 8.5**	8	8.6	pH units
Phenol	**0.3**	ND	ND	mg/l
Selenium (Se)	**0.02**	ND	ND	mg/l
Silver (Ag)	**0.05**	ND	ND	mg/l
Silver Total		ND	ND	mg/l
Sulfate (SO4)	**250**	10.99	10.38	mg/l
TDS	**400**	80	141	mg/l
Thallium (Tl)	**0.002**	ND	ND	mg/l
Uranium (U)	**0.0168 -0.03**	0.001	0.0072	mg/l
Vanadium (V)	**0.1**	ND	ND	mg/l
Zinc (Zn)	**2**	0.202	0.034	mg/l

The highlighted cells Indicate Test Results Higher than the Reference Values from Reg. 5 CCR 1002-41

4. Surface Water Monitoring

Two surface water monitoring stations were considered by DRMS to be sufficient and adequate to characterize surface water within the basin of interest. Station 2022-01 is located upstream of The Operator's facility and Station 2022-02 is located downstream of The Operator's facility.

4.1. Water Quality Analytical Results

Tables 4.1.1, 4.1.2, and 4.1.3 for the months of October, November, and December, respectively, summarize Surface Water Analytical Results for the 4th quarter 2022.

Table 4.1.1 Surface Water Analytical Results – October 2022

Sample Collected on:	October 26, 2022		
Parameter	**Sta. 2022-01**	**Sta. 2022-02**	**Unit**
Arsenic Potentially Dissolved	DRY BED - NO SAMPLE	ND	ug/L
Arsenic Total Recoverable		ND	ug/L
Cadmium Potentially Dissolved		ND	ug/L
Cadmium Total Recoverable		ND	ug/L
Chromium Potentially Dissolved		ND	ug/L
Chromium Total Recoverable		ND	ug/L
Chromium, hexavalent Dissolved		ND	mg/L
Chromium, hexavalent Total		ND	mg/L
Chromium, trivalent Potentially Dissolved		ND	mg/L
Chromium, trivalent Total Recoverable		ND	mg/L
Copper Potentially Dissolved		1	ug/L
Copper Total Recoverable		1.4	ug/L
Field pH		8.3	SU
Field Water Temperature		5	Degrees C
Iron Total Recoverable		49	ug/L
Lead Potentially Dissolved		0.89	ug/L
Lead Total Recoverable		0.86	ug/L
Manganese Potentially Dissolved		3.5	ug/L
Mercury		ND	ng/L
Mercury Total		2.8	ug/L
Nickel Potentially Dissolved		ND	ug/L
pH adj. to 25 deg C		8.1	SU
Selenium Potentially Dissolved		ND	ug/L
Silver Potentially Dissolved		ND	ug/L
Specific Conductance		23	umhos/cm
Specific Conductance Total		23	umhos/cm
Sulfide Total		ND	mg/L
Sulfide Total		ND	mg/L
Temperature		22.2	Degrees C
Total Suspended Solids		7.2	mg/L
Un-ionized Hydrogen Sulfide Total		ND	mg/L
Zinc Total Recoverable		5.2	ug/L
Zinc Potentially Dissolved		14	ug/L
Field Ambient Temperature		1.1	Degrees C
Field Specific Conductivity		0.3	uS/cm

Table 4.1.2 Surface Water Analytical Results – November 2022

Sample Collected on:	November 28, 2022		
Parameter	**Sta. 2022-01**	**Sta. 2022-02**	**Unit**
Arsenic Potentially Dissolved	DRY BED - NO SAMPLE	ND	ug/L
Arsenic Total Recoverable		ND	ug/L
Cadmium Potentially Dissolved		ND	ug/L
Cadmium Total Recoverable		0.13	ug/L
Chromium Potentially Dissolved		ND	ug/L
Chromium Total Recoverable		ND	ug/L
Chromium, hexavalent Dissolved		ND	mg/L
Chromium, hexavalent Total		ND	mg/L
Chromium, trivalent Potentially Dissolved		ND	mg/L
Chromium, trivalent Total Recoverable		ND	mg/L
Copper Potentially Dissolved		ND	ug/L
Copper Total Recoverable		0.78	ug/L
Field pH		8.5	SU
Field Water Temperature		2.6	Degrees C
Iron Total Recoverable		37	ug/L
Lead Potentially Dissolved		0.63	ug/L
Lead Total Recoverable		0.95	ug/L
Manganese Potentially Dissolved		1.6	ug/L
Mercury		ND	ng/L
Mercury Total		1.8	ug/L
Nickel Potentially Dissolved		ND	ug/L
pH adj. to 25 deg C		8.2	SU
Selenium Potentially Dissolved		ND	ug/L
Silver Potentially Dissolved		ND	ug/L
Specific Conductance		230	umhos/cm
Specific Conductance Total		230	umhos/cm
Sulfide Total		0.036	mg/L
Sulfide Total		ND	mg/L
Temperature		23.4	Degrees C
Total Suspended Solids		ND	mg/L
Un-ionized Hydrogen Sulfide Total		ND	mg/L
Zinc Total Recoverable		5.5	ug/L
Zinc Potentially Dissolved		8.9	ug/L
Field Ambient Temperature		-2	Degrees C
Field Specific Conductivity		0.3	uS/cm

Table 4.1.3 Surface Water Analytical Results – December 2022

Sample Collected on:	December 19, 2022		
Parameter	**Sta. 2022-01**	**Sta. 2022-02**	**Unit**
Arsenic Potentially Dissolved	DRY BED - NO SAMPLE	DRY BED - NO SAMPLE	ug/L
Arsenic Total Recoverable			ug/L
Cadmium Potentially Dissolved			ug/L
Cadmium Total Recoverable			ug/L
Chromium Potentially Dissolved			ug/L
Chromium Total Recoverable			ug/L
Chromium, hexavalent Dissolved			mg/L
Chromium, hexavalent Total			mg/L
Chromium, trivalent Potentially Dissolved			mg/L
Chromium, trivalent Total Recoverable			mg/L
Copper Potentially Dissolved			ug/L
Copper Total Recoverable			ug/L
Field pH			SU
Field Water Temperature			Degrees C
Iron Total Recoverable			ug/L
Lead Potentially Dissolved			ug/L
Lead Total Recoverable			ug/L
Manganese Potentially Dissolved			ug/L
Mercury			ng/L
Mercury Total			ug/L
Nickel Potentially Dissolved			ug/L
pH adj. to 25 deg C			SU
Selenium Potentially Dissolved			ug/L
Silver Potentially Dissolved			ug/L
Specific Conductance			umhos/cm
Specific Conductance Total			umhos/cm
Sulfide Total			mg/L
Sulfide Total			mg/L
Temperature			Degrees C
Total Suspended Solids			mg/L
Un-ionized Hydrogen Sulfide Total			mg/L
Zinc Total Recoverable			ug/L
Zinc Potentially Dissolved			ug/L
Field Ambient Temperature			Degrees C
Field Specific Conductivity			uS/cm

4.2. Surface Water Flows

Flow measurements were taken at the Surface Water Sampling Stations 2022-01 and 2022-02 utilizing the stopwatch method. Estimated flows are shown on Tables 4.2.1 Month of July; 4.2.2 Month of August and 4.2.3 Month of September.

Table 4.2.1 Surface Water Flow Estimates – October 2022

Surface Water Flow Estimate - October				
Station	**Velocity fps**	**Depth ft**	**Width ft**	**Flow cfs**
2022-01	Dry Bed			
2022-02	4.22	0.37	0.60	420

Table 4.2.2 Surface Water Flow Estimates – November 2022

Surface Water Flow Estimate - November				
Station	**Velocity fps**	**Depth ft**	**Width ft**	**Flow cfs**
2022-01	Dry Bed			
2022-02	0.53	0.35	2.08	176

Table 4.2.3 Surface Water Flow Estimates – December 2022

Surface Water Flow Estimate - December				
Station	**Velocity fps**	**Depth ft**	**Width ft**	**Flow gpm**
2022-01	Dry Bed			
2022-02	Dry Bed			

5. Quality Management (Quality Control & Quality Assurance)

Grand Island Resources (GIR) is committed to meeting expectations pertaining to the TR10 water quality data collection including proper water sample collection and testing via a Quality Management Program which is founded on Quality Assurance aimed to prevent errors. The program incorporates, among others, Standard Operating Procedures, Sample Collection Protocols, Chains of Custody and the selection of State Credited Testing Laboratories which have internal Quality Control and Quality Assurance Methods and Standards. Quality Control aimed to identify errors is implemented via testing of one or more of the following field or laboratory: Duplicates, Field Blanks and Matrix Spikes.

5.1. Groundwater

Quality Control Samples were collected from the Cabin Well (Compliance) and consisted of a Field Blank. Duplicate and Matrix Spike tests were performed for select parameters which are incorporated in the QC section of the Laboratory Report. No Rinsate samples were collected because water samples were collected from permanently installed equipment at each well.

Tables 5.1.1, 5.1.2 and 5.1.3 present Groundwater Quality Control results for the months of October, November, and December 2022, respectively.

5.2. Mine Effluent

Quality Control Samples were collected from the Caribou Portal and consisted of a Field Blank. Duplicate tests were performed for select parameters which are incorporated in the QC section of the Laboratory Report. No Rinsate samples were collected because disposable samplers was used.

Tables 5.2.1, and 5.2.2 present Effluent Quality Control results for the months of November and December 2022, respectively.

5.3. Surface Water

Quality Control Samples were collected from surface water Station 2022-02 and consisted of Field Duplicate, Field Blank and Matrix Spike. No Rinsate samples were collected because disposable samplers were used.

Tables 5.3.1, and 5.3.2 present Surface Quality Control results for the months of October and November 2022, respectively.

No samples were collected during the month of December 2022 given that the stream on both sampling stations were dry.

Table 5.1.1 Groundwater Quality Control Results – October 2022

Sample Collected on:	October 27, 2022			
Parameter	**Standard**	**Field Blank -Cabin Well (Compliance)**	**Unit**	**Comments**
2-Chlorophenol	**0.0002**	ND	mg/l	Total - Std in mg/l; results in ug/l
Aluminum (Al)	**5**	ND	mg/l	Dissolved
Antimony (Sb)	**0.006**	ND	mg/l	Dissolved
Arsenic (As)	**0.01**	ND	mg/l	Dissolved
Asbestos	**7,000,000**	ND	fibers/liter	Total
Barium (Ba)	**2**	ND	mg/l	Dissolved
Beryllium (Be)	**0.004**	ND	mg/l	Dissolved
Beta and Photon Emitters	**4**	<2.9	mrem/year	Std is in mrem/year; Lab reports pCi/l
Boron (B)	**0.75**	ND	mg/l	Dissolved
Cadmium (Cd)	**0.005**	ND	mg/l	Dissolved
Chloride (Cl)	**250**	ND	mg/l	Dissolved
Chromium (Cr)	**0.1**	ND	mg/l	Dissolved
Cobalt (Co)	**0.05**	ND	mg/l	Dissolved
Coliform (Max Total)	**23**	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Coliform 30-day avg. Total	**2.2**	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Color	**15**	ND	color units	--
Copper (Cu)	**0.2**	ND	mg/l	Dissolved
Corrosivity	**Non Corrosive**	-7.09	Langelier Units	--
Cyanide [Free] (Cn)	**0.2**	ND	mg/l	Total
Fluoride (F)	**2**	ND	mg/l	Dissolved
Foaming Agents	**0.5**	ND	mg/l	Total
Gross Alpha Particle Activity	**15**	0.4	pCi/l	--
Iron (Fe)	**0.3**	ND	mg/l	Dissolved
Lead (Pb)	**0.05**	ND	mg/l	Dissolved
Lithium (Li)	**2.5**	ND	mg/l	Dissolved
Manganese (Mn)	**0.05**	ND	mg/l	Dissolved
Mercury (inorganic) (Hg)	**0.002**	ND	mg/l	Dissolved
Molybdenum (Mo)	**0.21**	ND	mg/l	Dissolved
Nickel (Ni)	**0.1**	ND	mg/l	Dissolved
Nitrate (NO3)	**10**	ND	mg/l as N	Dissolved
Nitrate-NitriteTotal	**10**	ND	mg/l as N	Dissolved
Nitrite (NO2)	**1**	ND	mg/l as N	Dissolved
Odor	**3**	ND	threshold odor numbers	--
pH (field)	**6.5 - 8.5**	--	pH units	--
Phenol	**0.3**	ND	mg/l	Total - Std in mg/l; Lab reports in ug/l
Selenium (Se)	**0.02**	ND	mg/l	Dissolved
Silver (Ag)	**0.05**	ND	mg/l	Dissolved
Silver Total		ND	mg/l	Total
Sulfate (SO4)	**250**	ND	mg/l	Dissolved
TDS	**400**	ND	mg/l	Total
Thallium (Tl)	**0.002**	ND	mg/l	Dissolved
Uranium (U)	**0.0168 -0.03**	ND	mg/l	Dissolved
Vanadium (V)	**0.1**	ND	mg/l	Dissolved
Zinc (Zn)	**2**	ND	mg/l	Dissolved
The highlighted cells Indicate Test Results Higher than the Reference Values from			Reg. 5 CCR 1002-41	

Table 5.1.2 Groundwater Quality Control Results – November 2022

Sample Collected on:	November 29, 2022			
Parameter	**Standard**	**Field Blank Cabin Well (Compliance)**	**Unit**	**Comments**
2-Chlorophenol	**0.0002**	ND	mg/l	Total - Std in mg/l; results in ug/l
Aluminum (Al)	**5**	ND	mg/l	Dissolved
Antimony (Sb)	**0.006**	ND	mg/l	Dissolved
Arsenic (As)	**0.01**	ND	mg/l	Dissolved
Asbestos	**7,000,000**	ND	fibers/liter	Total
Barium (Ba)	**2**	ND	mg/l	Dissolved
Beryllium (Be)	**0.004**	ND	mg/l	Dissolved
Beta and Photon Emitters	**4**	<2.8	mrem/year	Std is in mrem/year; Lab reports pCi/l
Boron (B)	**0.75**	ND	mg/l	Dissolved
Cadmium (Cd)	**0.005**	ND	mg/l	Dissolved
Chloride (Cl)	**250**	ND	mg/l	Dissolved
Chromium (Cr)	**0.1**	ND	mg/l	Dissolved
Cobalt (Co)	**0.05**	ND	mg/l	Dissolved
Coliform (Max Total)	**23**	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Coliform 30-day avg. Total	**2.2**	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Color	**15**	ND	color units	--
Copper (Cu)	**0.2**	ND	mg/l	Dissolved
Corrosivity	**Non Corrosive**	-7.64	Langelier Units	--
Cyanide [Free] (Cn)	**0.2**	ND	mg/l	Total
Fluoride (F)	**2**	ND	mg/l	Dissolved
Foaming Agents	**0.5**	ND	mg/l	Total
Gross Alpha Particle Activity	**15**	0.3	pCi/l	--
Iron (Fe)	**0.3**	ND	mg/l	Dissolved
Lead (Pb)	**0.05**	ND	mg/l	Dissolved
Lithium (Li)	**2.5**	ND	mg/l	Dissolved
Manganese (Mn)	**0.05**	ND	mg/l	Dissolved
Mercury (inorganic) (Hg)	**0.002**	ND	mg/l	Dissolved
Molybdenum (Mo)	**0.21**	ND	mg/l	Dissolved
Nickel (Ni)	**0.1**	ND	mg/l	Dissolved
Nitrate (NO3)	**10**	ND	mg/l as N	Dissolved
Nitrate-NitriteTotal	**10**	ND	mg/l as N	Dissolved
Nitrite (NO2)	**1**	ND	mg/l as N	Dissolved
Odor	**3**	ND	threshold odor numbers	--
pH (field)	**6.5 - 8.5**	--	pH units	--
Phenol	**0.3**	ND	mg/l	Total - Std in mg/l; Lab reports in ug/l
Selenium (Se)	**0.02**	ND	mg/l	Dissolved
Silver (Ag)	**0.05**	ND	mg/l	Dissolved
Silver Total		ND	mg/l	Total
Sulfate (SO4)	**250**	ND	mg/l	Dissolved
TDS	**400**	ND	mg/l	Total
Thallium (Tl)	**0.002**	ND	mg/l	Dissolved
Uranium (U)	**0.0168 -0.03**	ND	mg/l	Dissolved
Vanadium (V)	**0.1**	ND	mg/l	Dissolved
Zinc (Zn)	**2**	ND	mg/l	Dissolved

The highlighted cells Indicate Test Results Higher than the Reference Values from Reg. 5 CCR 1002-41

Table 5.1.3 Groundwater Quality Control Results – December 2022

Sample Collected on:	December 20, 2022			
Parameter	**Standard**	**Field Blank Cabin Well (Compliance)**	**Unit**	**Comments**
2-Chlorophenol	**0.0002**	ND	mg/l	Total - Std in mg/l; results in ug/l
Aluminum (Al)	**5**	ND	mg/l	Dissolved
Antimony (Sb)	**0.006**	ND	mg/l	Dissolved
Arsenic (As)	**0.01**	ND	mg/l	Dissolved
Asbestos	**7,000,000**	ND	fibers/liter	Total
Barium (Ba)	**2**	ND	mg/l	Dissolved
Beryllium (Be)	**0.004**	ND	mg/l	Dissolved
Beta and Photon Emitters	**4**	<2.9	mrem/year	Std is in mrem/year; Lab reports pCi/l
Boron (B)	**0.75**	ND	mg/l	Dissolved
Cadmium (Cd)	**0.005**	ND	mg/l	Dissolved
Chloride (Cl)	**250**	ND	mg/l	Dissolved
Chromium (Cr)	**0.1**	ND	mg/l	Dissolved
Cobalt (Co)	**0.05**	ND	mg/l	Dissolved
Coliform (Max Total)	**23**	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Coliform 30-day avg. Total	**2.2**	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Color	**15**	ND	color units	--
Copper (Cu)	**0.2**	ND	mg/l	Dissolved
Corrosivity	**Non Corrosive**	-7.22	Langelier Units	--
Cyanide [Free] (Cn)	**0.2**	ND	mg/l	Total
Fluoride (F)	**2**	ND	mg/l	Dissolved
Foaming Agents	**0.5**	ND	mg/l	Total
Gross Alpha Particle Activity	**15**	0.2	pCi/l	--
Iron (Fe)	**0.3**	ND	mg/l	Dissolved
Lead (Pb)	**0.05**	ND	mg/l	Dissolved
Lithium (Li)	**2.5**	ND	mg/l	Dissolved
Manganese (Mn)	**0.05**	ND	mg/l	Dissolved
Mercury (inorganic) (Hg)	**0.002**	ND	mg/l	Dissolved
Molybdenum (Mo)	**0.21**	ND	mg/l	Dissolved
Nickel (Ni)	**0.1**	ND	mg/l	Dissolved
Nitrate (NO3)	**10**	ND	mg/l as N	Dissolved
Nitrate-NitriteTotal	**10**	ND	mg/l as N	Dissolved
Nitrite (NO2)	**1**	ND	mg/l as N	Dissolved
Odor	**3**	ND	threshold odor numbers	--
pH (field)	**6.5 - 8.5**	--	pH units	--
Phenol	**0.3**	ND	mg/l	Total - Std in mg/l; Lab reports in ug/l
Selenium (Se)	**0.02**	ND	mg/l	Dissolved
Silver (Ag)	**0.05**	ND	mg/l	Dissolved
Silver Total		ND	mg/l	Total
Sulfate (SO4)	**250**	ND	mg/l	Dissolved
TDS	**400**	ND	mg/l	Total
Thallium (Tl)	**0.002**	ND	mg/l	Dissolved
Uranium (U)	**0.0168 -0.03**	ND	mg/l	Dissolved
Vanadium (V)	**0.1**	ND	mg/l	Dissolved
Zinc (Zn)	**2**	ND	mg/l	Dissolved
The highlighted cells Indicate Test Results Higher than the Reference Values from Reg. 5 CCR 1002-41				

Table 5.2.1 Mine Effluent Quality Control Results – November 2022

Sample Collected on:	November 29, 2022			
Parameter	**Standard**	**Field Blank Caribou Portal**	**Unit**	**Comments**
2-Chlorophenol	**0.0002**	ND	mg/l	Total - Std in mg/l; results in ug/l
Aluminum (Al)	**5**	ND	mg/l	Dissolved
Antimony (Sb)	**0.006**	ND	mg/l	Dissolved
Arsenic (As)	**0.01**	ND	mg/l	Dissolved
Asbestos	**7,000,000**	ND	fibers/liter	Total
Barium (Ba)	**2**	ND	mg/l	Dissolved
Beryllium (Be)	**0.004**	ND	mg/l	Dissolved
Beta and Photon Emitters	**4**	<3.0	mrem/year	Std is in mrem/year; Lab reports pCi/l
Boron (B)	**0.75**	ND	mg/l	Dissolved
Cadmium (Cd)	**0.005**	ND	mg/l	Dissolved
Chloride (Cl)	**250**	ND	mg/l	Dissolved
Chromium (Cr)	**0.1**	ND	mg/l	Dissolved
Cobalt (Co)	**0.05**	ND	mg/l	Dissolved
Coliform (Max Total)	**23**	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Coliform 30-day avg. Total	**2.2**	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Color	**15**	ND	color units	--
Copper (Cu)	**0.2**	ND	mg/l	Dissolved
Corrosivity	**Non Corrosive**	-6.09	Langelier Units	--
Cyanide [Free] (Cn)	**0.2**	ND	mg/l	Total
Fluoride (F)	**2**	ND	mg/l	Dissolved
Foaming Agents	**0.5**	ND	mg/l	Total
Gross Alpha Particle Activity	**15**	0.6	pCi/l	--
Iron (Fe)	**0.3**	ND	mg/l	Dissolved
Lead (Pb)	**0.05**	ND	mg/l	Dissolved
Lithium (Li)	**2.5**	ND	mg/l	Dissolved
Manganese (Mn)	**0.05**	ND	mg/l	Dissolved
Mercury (inorganic) (Hg)	**0.002**	ND	mg/l	Dissolved
Molybdenum (Mo)	**0.21**	ND	mg/l	Dissolved
Nickel (Ni)	**0.1**	ND	mg/l	Dissolved
Nitrate (NO3)	**10**	ND	mg/l as N	Dissolved
Nitrate-NitriteTotal	**10**	ND	mg/l as N	Dissolved
Nitrite (NO2)	**1**	ND	mg/l as N	Dissolved
Odor	**3**	ND	threshold odor numbers	--
pH (field)	**6.5 - 8.5**	--	pH units	--
Phenol	**0.3**	ND	mg/l	Total - Std in mg/l; Lab reports in ug/l
Selenium (Se)	**0.02**	ND	mg/l	Dissolved
Silver (Ag)	**0.05**	ND	mg/l	Dissolved
Silver Total		ND	mg/l	Total
Sulfate (SO4)	**250**	ND	mg/l	Dissolved
TDS	**400**	ND	mg/l	Total
Thallium (Tl)	**0.002**	ND	mg/l	Dissolved
Uranium (U)	**0.0168 -0.03**	ND	mg/l	Dissolved
Vanadium (V)	**0.1**	ND	mg/l	Dissolved
Zinc (Zn)	**2**	ND	mg/l	Dissolved

The highlighted cells Indicate Test Results Higher than the Reference Values from Reg. 5 CCR 1002-41

Table 5.2.2 Mine Effluent Quality Control Results – December 2022

Sample Collected on:	December 20, 2022			
Parameter	**Standard**	**Field Blank Caribou Portal**	**Unit**	**Comments**
2-Chlorophenol	**0.0002**	ND	mg/l	Total - Std in mg/l; results in ug/l
Aluminum (Al)	**5**	ND	mg/l	Dissolved
Antimony (Sb)	**0.006**	ND	mg/l	Dissolved
Arsenic (As)	**0.01**	ND	mg/l	Dissolved
Asbestos	**7,000,000**	ND	fibers/liter	Total
Barium (Ba)	**2**	ND	mg/l	Dissolved
Beryllium (Be)	**0.004**	ND	mg/l	Dissolved
Beta and Photon Emitters	**4**	<3.0	mrem/year	Std is in mrem/year; Lab reports pCi/l
Boron (B)	**0.75**	ND	mg/l	Dissolved
Cadmium (Cd)	**0.005**	ND	mg/l	Dissolved
Chloride (Cl)	**250**	ND	mg/l	Dissolved
Chromium (Cr)	**0.1**	ND	mg/l	Dissolved
Cobalt (Co)	**0.05**	ND	mg/l	Dissolved
Coliform (Max Total)	**23**	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Coliform 30-day avg. Total	**2.2**	ND	org/100 ml	Total - Std in org/100 ml; Lab reports mpn/100ml
Color	**15**	ND	color units	--
Copper (Cu)	**0.2**	ND	mg/l	Dissolved
Corrosivity	**Non Corrosive**	-5.26	Langelier Units	--
Cyanide [Free] (Cn)	**0.2**	ND	mg/l	Total
Fluoride (F)	**2**	ND	mg/l	Dissolved
Foaming Agents	**0.5**	ND	mg/l	Total
Gross Alpha Particle Activity	**15**	0.2	pCi/l	--
Iron (Fe)	**0.3**	ND	mg/l	Dissolved
Lead (Pb)	**0.05**	ND	mg/l	Dissolved
Lithium (Li)	**2.5**	ND	mg/l	Dissolved
Manganese (Mn)	**0.05**	ND	mg/l	Dissolved
Mercury (inorganic) (Hg)	**0.002**	ND	mg/l	Dissolved
Molybdenum (Mo)	**0.21**	ND	mg/l	Dissolved
Nickel (Ni)	**0.1**	ND	mg/l	Dissolved
Nitrate (NO3)	**10**	ND	mg/l as N	Dissolved
Nitrate-NitriteTotal	**10**	ND	mg/l as N	Dissolved
Nitrite (NO2)	**1**	ND	mg/l as N	Dissolved
Odor	**3**	ND	threshold odor numbers	--
pH (field)	**6.5 - 8.5**	--	pH units	--
Phenol	**0.3**	ND	mg/l	Total - Std in mg/l; Lab reports in ug/l
Selenium (Se)	**0.02**	ND	mg/l	Dissolved
Silver (Ag)	**0.05**	ND	mg/l	Dissolved
Silver Total		ND	mg/l	Total
Sulfate (SO4)	**250**	ND	mg/l	Dissolved
TDS	**400**	ND	mg/l	Total
Thallium (Tl)	**0.002**	ND	mg/l	Dissolved
Uranium (U)	**0.0168 -0.03**	ND	mg/l	Dissolved
Vanadium (V)	**0.1**	ND	mg/l	Dissolved
Zinc (Zn)	**2**	ND	mg/l	Dissolved

The highlighted cells Indicate Test Results Higher than the Reference Values from Reg. 5 CCR 1002-41

Table 5.3.1 Surface Water Quality Control Results – October 2022

Sample Collected on:	October 26, 2022			
Parameter	**Field Duplicate Sta. 2022-02**	**Field Blank Sta. 2022-02**	**Matrix Spike Sta. 2022-02**	**Unit**
Arsenic Potentially Dissolved	ND	ND	40.4	ug/L
Arsenic Total Recoverable	ND	ND	39.2	ug/L
Cadmium Potentially Dissolved	ND	ND	42	ug/L
Cadmium Total Recoverable	ND	ND	38	ug/L
Chromium Potentially Dissolved	ND	ND	39.7	ug/L
Chromium Total Recoverable	ND	ND	38	ug/L
Chromium, hexavalent Dissolved	ND	ND	0.097	mg/L
Chromium, hexavalent Total	ND	ND	0.0991	mg/L
Chromium, trivalent Potentially Dissolved	ND	ND	--	mg/L
Chromium, trivalent Total Recoverable	ND	ND	--	mg/L
Copper Potentially Dissolved	0.75	ND	40.2	ug/L
Copper Total Recoverable	0.84	ND	38.8	ug/L
Field pH	8.3	--	--	SU
Field Water Temperature	5	--	--	Degrees C
Iron Total Recoverable	53	22	10,200	ug/L
Lead Potentially Dissolved	0.9	ND	41.1	ug/L
Lead Total Recoverable	0.83	ND	41.2	ug/L
Manganese Potentially Dissolved	5.3	ND	42.9	ug/L
Mercury	NA	ND	4.93	ng/L
Mercury Total	2.7	ND	8.09	ug/L
Nickel Potentially Dissolved	ND	ND	39.6	ug/L
pH adj. to 25 deg C	8.3	8.9	--	SU
Selenium Potentially Dissolved	ND	ND	38.8	ug/L
Silver Potentially Dissolved	ND	ND	40.7	ug/L
Specific Conductance	220	4.2	--	umhos/cm
Specific Conductance Total	220	4.2	--	umhos/cm
Sulfide Total	ND	ND	0.473	mg/L
Sulfide Total	ND	ND	--	mg/L
Temperature	23	22.6	--	Degrees C
Total Suspended Solids	1.6	ND	--	mg/L
Un-ionized Hydrogen Sulfide Total	ND	ND	--	mg/L
Zinc Total Recoverable	5.3	ND	42	ug/L
Zinc Potentially Dissolved	16	34	63.4	ug/L
Field Ambient Temperature	1.1	--	--	Degrees C
Field Specific Conductivity	0.3	--	--	uS/cm

Table 5.3.2 Surface Water Quality Control Results – November 2022

Sample Collected on:	November 28, 2022			
Parameter	Field Duplicate Sta. 2022-02	Field Blank Sta. 2022-02	Matrix Spike Sta. 2022-02	Unit
Arsenic Potentially Dissolved	ND	ND	40.1	ug/L
Arsenic Total Recoverable	ND	ND	42.4	ug/L
Cadmium Potentially Dissolved	ND	ND	38.7	ug/L
Cadmium Total Recoverable	ND	ND	40.6	ug/L
Chromium Potentially Dissolved	ND	ND	39.5	ug/L
Chromium Total Recoverable	ND	ND	40.8	ug/L
Chromium, hexavalent Dissolved	ND	ND	0.105	mg/L
Chromium, hexavalent Total	ND	ND	0.119	mg/L
Chromium, trivalent Potentially Dissolved	ND	ND	--	mg/L
Chromium, trivalent Total Recoverable	ND	ND	--	mg/L
Copper Potentially Dissolved	ND	ND	40.4	ug/L
Copper Total Recoverable	ND	ND	41.3	ug/L
Field pH	8.3	--	--	SU
Field Water Temperature	2.6	--	--	Degrees C
Iron Total Recoverable	39	ND	10,300	ug/L
Lead Potentially Dissolved	0.62	ND	40.9	ug/L
Lead Total Recoverable	1.7	ND	41.5	ug/L
Manganese Potentially Dissolved	5.3	ND	41.1	ug/L
Mercury	ND	ND	4.94	ng/L
Mercury Total	1.9	ND	6.19	ug/L
Nickel Potentially Dissolved	ND	ND	39	ug/L
pH adj. to 25 deg C	8.3	6.4	--	SU
Selenium Potentially Dissolved	ND	ND	40.5	ug/L
Silver Potentially Dissolved	ND	ND	38.8	ug/L
Specific Conductance	230	ND	--	umhos/cm
Specific Conductance Total	230	ND	--	umhos/cm
Sulfide Total	0.032	ND	0.456	mg/L
Sulfide Total	ND	ND	--	mg/L
Temperature	23.4	23.9	--	Degrees C
Total Suspended Solids	ND	ND	--	mg/L
Un-ionized Hydrogen Sulfide Total	ND	ND	--	mg/L
Zinc Total Recoverable	3.9	ND	46.7	ug/L
Zinc Potentially Dissolved	8.6	4.5	46.7	ug/L
Field Ambient Temperature	-2	--	--	Degrees C
Field Specific Conductivity	0.3	--	--	uS/cm

6. NPDES permit CO-0032751 Outfall 001

Effluent from the Cross Mine and Idaho Tunnel/Caribou Mine is collected in sumps and ponds and it is pumped to the Water Treatment Plant (subject of TR-10). Treated water is released to Coon Track Creek via pipeline to Outfall-001 in accordance with CDPHE NPDES permit.

Tables 6.1 Month of October, 6.2 Month of November and 6.3 Month of December present the monthly DMRs filed by The Operator with CDPHE for the 4th quarter 2022.

Table 6.1 DMR October 2022

DMR Copy of Record

Permit					
Permit #:	**CO0032751**	**Permittee:**	Grand Island Resources LLC	**Facility:**	CROSS AND CARIBOU MINES
Major:	No	**Permittee Address:**	12567 W Cedar Dr Lakewood, CO 80228	**Facility Location:**	CROSS AND CARIBOU MINES BOULDER COUNTY, CO 80466
Permitted Feature:	001 External Outfall	**Discharge:**	**001-A** Treated Mine Water to Coon Track Creek		
Report Dates & Status					
Monitoring Period:	**From 10/01/22 to 10/31/22**	**DMR Due Date:**	**11/28/22**	**Status:**	**NetDMR Validated**
Considerations for Form Completion					
Oil and grease - see I.A.2, pg 3. 30 day average is the highest monthly average during period reported.					
Principal Executive Officer					
First Name:		**Title:**		**Telephone:**	
Last Name:					
No Data Indicator (NODI)					
Form NODI:	--				

Parameter		Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration							# of Ex.	Frequency of Analysis	Sample Type
Code	Name					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
00010	**Temperature, water deg. centigrade**	1 - Effluent Gross	0	--	Sample								=	6.66	=	16.8	04 - deg C		99/99 - Continuous	RC - Recorder (auto)
					Permit Req.									Req Mon MX WK AV		Req Mon DAILY MX	04 - deg C	0	99/99 - Continuous	RC - Recorder (auto)
					Value NODI															
00400	**pH**	1 - Effluent Gross	0	--	Sample						=	6.8			=	8.8	12 - SU		02/30 - Twice Per Month	GR - GRAB
					Permit Req.						>=	6.5 MINIMUM			<=	9.0 MAXIMUM	12 - SU	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI															
00530	**Solids, total suspended**	1 - Effluent Gross	0	--	Sample								<	4.0	<	4.0	19 - mg/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	30.0 30DA AVG	<=	45.0 DAILY MX	19 - mg/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
00978	**Arsenic, total recoverable**	1 - Effluent Gross	0	--	Sample								<	5.0			28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.									Req Mon 30DA AVG			28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
00980	**Iron, total recoverable**	1 - Effluent Gross	0	--	Sample								<	100.0			28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.									Req Mon 30DA AVG			28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
01094	**Zinc, total recoverable**	1 - Effluent Gross	0	--	Sample								<	10.0	<	10.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	750.0 30DA AVG	<=	1500.0 DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
01113	**Cadmium, total recoverable**	1 - Effluent Gross	0	--	Sample								<	1.0	<	1.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	50.0 30DA AVG	<=	300.0 DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
01114	**Lead, total recoverable**	1 - Effluent Gross	0	--	Sample								<	1.0	<	1.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.								<=	300.0 30DA AVG	<=	600.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI															
01119	**Copper, total recoverable**	1 - Effluent Gross	0	--	Sample								<	2.0	<	2.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.								<=	150.0 30DA AVG	<=	300.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI															
01220	**Chromium, hexavalent dissolved [as**	1 - Effluent	0	--	Sample								<	20.0	<	20.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.									Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB

Table 6.1 DMR October 2022 (continued)

	Cr]	Gross			Value NODI														
01303	Zinc, potentially dissolved	1 - Effluent Gross	10	--	Sample							=	6.0	=	12.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.							<=	262.0 30DA AVG	<=	291.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI														
01304	Silver, potentially dissolved	1 - Effluent Gross	10	--	Sample														
					Permit Req.							<=	0.17 30DA AVG	<=	4.5 DAILY MX	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Value NODI								B - Below Detection Limit/No Detection		B - Below Detection Limit/No Detection				
01306	Copper, potentially dissolved	1 - Effluent Gross	10	--	Sample							<	2.0	<	2.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.							<=	19.0 30DA AVG	<=	28.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI														
01309	Arsenic, potentially dissolved	1 - Effluent Gross	0	--	Sample									<	5.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.										Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
01313	Cadmium, potentially dissolvd	1 - Effluent Gross	10	--	Sample									<	1.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.							<=	0.89 30DA AVG	<=	3.6 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI								B - Below Detection Limit/No Detection						
01314	Chromium, trivalent, potentially dissolvd	1 - Effluent Gross	0	--	Sample							<	20.0			28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								Req Mon 30DA AVG			28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
01318	Lead, potentially dissolvd	1 - Effluent Gross	10	--	Sample							<	1.0	<	1.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.							<=	5.4 30DA AVG	<=	135.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI														
01319	Manganese, potentially dissolvd	1 - Effluent Gross	0	--	Sample							<	2.0	<	2.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L		01/30 - Monthly	GR - GRAB
					Value NODI														
01322	Nickel, potentially dissolvd	1 - Effluent Gross	0	--	Sample							<	2.0	<	2.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
01323	Selenium, potentially dissolvd	1 - Effluent Gross	0	--	Sample							<	5.0	<	5.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
03582	Oil and grease	1 - Effluent Gross	0	--	Sample														
					Permit Req.									<=	10.0 INST MAX	19 - mg/L		77/77 - Contingent	GR - GRAB
					Value NODI										9 - Conditional Monitoring - Not Required This Period				
04262	Chromium, trivalent total recoverable	1 - Effluent Gross	0	--	Sample									<	20.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.										Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
50050	Flow, in conduit or thru treatment plant	1 - Effluent Gross	10	--	Sample							=	0.1014	=	0.144	03 - MGD		99/99 - Continuous	RC - Recorder (auto)
					Permit Req.							<=	0.103 30DA AVG		Req Mon DAILY MX	03 - MGD	0	99/99 - Continuous	RC - Recorder (auto)
					Value NODI														
51202	Sulfide-hydrogen sulfide [undissociated]	1 - Effluent Gross	0	--	Sample							<	1.0			19 - mg/L		01/30 - Monthly	GR - GRAB
					Permit Req.								Req Mon 30DA AVG			19 - mg/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
					Sample							<	0.2	<	0.2	28 - ug/L		01/30 - Monthly	GR - GRAB

Table 6.1 DMR October 2022 (continued)

71900	**Mercury, total [as Hg]**	1 - Effluent Gross	0	--	Permit Req.							<=	1.0 30DA AVG	<=	2.0 DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
84066	**Oil and grease visual**	1 - Effluent Gross	0	--	Sample		=	0.0	AB - abst=0;prst=1									02/30 - Twice Per Month	VI - VISUAL
					Permit Req.			Req Mon INST MAX	AB - abst=0;prst=1								0	02/30 - Twice Per Month	VI - VISUAL
					Value NODI														

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

Name	Type	Size
2022_10_CrossCaribouMine_Results_1.pdf	pdf	948060.0
2022_10_CrossCaribouMine_Results_2.pdf	pdf	871931.0
2022_10_CrossCaribouMine_CoverLetter.pdf	pdf	189975.0

Report Last Saved By

Grand Island Resources LLC

User:	pdelaney@alexcoresource.com
Name:	Patrick Delaney
E-Mail:	pdelaney@blackfoxmining.com
Date/Time:	2022-11-28 18:16 (Time Zone: -07:00)

Report Last Signed By

User:	pdelaney@alexcoresource.com
Name:	Patrick Delaney
E-Mail:	pdelaney@blackfoxmining.com
Date/Time:	2022-11-28 18:17 (Time Zone: -07:00)

Table 6.2 DMR November 2022

DMR Copy of Record

Permit					
Permit #:	**CO0032751**	**Permittee:**	Grand Island Resources LLC	**Facility:**	CROSS AND CARIBOU MINES
Major:	No	**Permittee Address:**	12567 W Cedar Dr Lakewood, CO 80228	**Facility Location:**	CROSS AND CARIBOU MINES BOULDER COUNTY, CO 80466
Permitted Feature:	001 External Outfall	**Discharge:**	**001-A** Treated Mine Water to Coon Track Creek		
Report Dates & Status					
Monitoring Period:	**From 11/01/22 to 11/30/22**	**DMR Due Date:**	**12/28/22**	**Status:**	**NetDMR Validated**
Considerations for Form Completion					
Oil and grease - see I.A.2, pg 3. 30 day average is the highest monthly average during period reported.					
Principal Executive Officer					
First Name:		**Title:**		**Telephone:**	
Last Name:					
No Data Indicator (NODI)					
Form NODI:	--				

Parameter		Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration							# of Ex.	Frequency of Analysis	Sample Type
Code	Name					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
00010	**Temperature, water deg. centigrade**	1 - Effluent Gross	0	--	Sample								=	4.14	=	11.6	04 - deg C		99/99 - Continuous	RC - Recorder (auto)
					Permit Req.									Req Mon MX WK AV		Req Mon DAILY MX	04 - deg C	0	99/99 - Continuous	RC - Recorder (auto)
					Value NODI															
00400	**pH**	1 - Effluent Gross	0	--	Sample						=	7.5			=	8.0	12 - SU		99/99 - Continuous	RC - Recorder (auto)
					Permit Req.						>=	6.5 MINIMUM			<=	9.0 MAXIMUM	12 - SU	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI															
00530	**Solids, total suspended**	1 - Effluent Gross	0	--	Sample								<	4.0	<	4.0	19 - mg/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	30.0 30DA AVG	<=	45.0 DAILY MX	19 - mg/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
00978	**Arsenic, total recoverable**	1 - Effluent Gross	0	--	Sample								<	5.0			28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.									Req Mon 30DA AVG			28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
00980	**Iron, total recoverable**	1 - Effluent Gross	0	--	Sample								<	100.0			28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.									Req Mon 30DA AVG			28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
01094	**Zinc, total recoverable**	1 - Effluent Gross	0	--	Sample								<	10.0	<	10.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	750.0 30DA AVG	<=	1500.0 DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
01113	**Cadmium, total recoverable**	1 - Effluent Gross	0	--	Sample								<	1.0	<	1.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	50.0 30DA AVG	<=	300.0 DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
01114	**Lead, total recoverable**	1 - Effluent Gross	0	--	Sample								<	1.0	<	1.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.								<=	300.0 30DA AVG	<=	600.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI															
01119	**Copper, total recoverable**	1 - Effluent Gross	0	--	Sample								<	2.0	<	2.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.								<=	150.0 30DA AVG	<=	300.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI															
01220	**Chromium, hexavalent dissolved [as**	1 - Effluent	0	--	Sample								<	20.0	<	20.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.									Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB

Table 6.2 DMR November 2022 (continued)

	Cr]	Gross			Value NODI											
01303	Zinc, potentially dissolved	1 - Effluent Gross	11	--	Sample	=	7.0	=	14.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.	<=	202.0 30DA AVG	<=	232.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI								
01304	Silver, potentially dissolved	1 - Effluent Gross	11	--	Sample								
					Permit Req.	<=	0.13 30DA AVG	<=	3.6 DAILY MX	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Value NODI		B - Below Detection Limit/No Detection		B - Below Detection Limit/No Detection				
01306	Copper, potentially dissolved	1 - Effluent Gross	11	--	Sample	<	2.0	<	2.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.	<=	14.0 30DA AVG	<=	22.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI								
01309	Arsenic, potentially dissolved	1 - Effluent Gross	0	--	Sample			<	5.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.				Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI								
01313	Cadmium, potentially dissolvd	1 - Effluent Gross	11	--	Sample			<	1.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.	<=	0.69 30DA AVG	<=	2.8 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI		B - Below Detection Limit/No Detection						
01314	Chromium, trivalent, potentially dissolvd	1 - Effluent Gross	0	--	Sample	<	20.0			28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.		Req Mon 30DA AVG			28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI								
01318	Lead, potentially dissolvd	1 - Effluent Gross	11	--	Sample	<	1.0	<	1.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.	<=	4.2 30DA AVG	<=	108.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI								
01319	Manganese, potentially dissolvd	1 - Effluent Gross	0	--	Sample	<	2.0	<	2.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.		Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI								
01322	Nickel, potentially dissolvd	1 - Effluent Gross	0	--	Sample	<	2.0	<	2.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.		Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI								
01323	Selenium, potentially dissolvd	1 - Effluent Gross	0	--	Sample	<	5.0	<	5.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.		Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI								
03582	Oil and grease	1 - Effluent Gross	0	--	Sample								
					Permit Req.			<=	10.0 INST MAX	19 - mg/L		77/77 - Contingent	GR - GRAB
					Value NODI				9 - Conditional Monitoring - Not Required This Period				
04262	Chromium, trivalent total recoverable	1 - Effluent Gross	0	--	Sample			<	20.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.				Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI								
50050	Flow, in conduit or thru treatment plant	1 - Effluent Gross	11	--	Sample	=	0.101	=	0.154	03 - MGD		99/99 - Continuous	RC - Recorder (auto)
					Permit Req.	<=	0.103 30DA AVG		Req Mon DAILY MX	03 - MGD	0	99/99 - Continuous	RC - Recorder (auto)
					Value NODI								
51202	Sulfide-hydrogen sulfide [undissociated]	1 - Effluent Gross	0	--	Sample	<	1.0			19 - mg/L		01/30 - Monthly	GR - GRAB
					Permit Req.		Req Mon 30DA AVG			19 - mg/L	0	01/30 - Monthly	GR - GRAB
					Value NODI								
					Sample	<	0.2	<	0.2	28 - ug/L		01/30 - Monthly	GR - GRAB

Table 6.2 DMR November 2022 (continued)

71900	**Mercury, total [as Hg]**	1 - Effluent Gross	0	--	Permit Req.							<=	1.0 30DA AVG	<=	2.0 DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
84066	**Oil and grease visual**	1 - Effluent Gross	0	--	Sample		=	0.0	AB - abst=0;prst=1									02/30 - Twice Per Month	VI - VISUAL
					Permit Req.			Req Mon INST MAX	AB - abst=0;prst=1								0	02/30 - Twice Per Month	VI - VISUAL
					Value NODI														

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

Name	Type	Size
2022_11_CrossCaribouMine_Results_1.pdf	pdf	1069333.0
2022_11_CrossCaribouMine_Results_2.pdf	pdf	1003297.0
2022_11_CrossCaribouMine_CoverLetter.pdf	pdf	191064.0

Report Last Saved By

Grand Island Resources LLC

User:	pdelaney@alexcoresource.com
Name:	Patrick Delaney
E-Mail:	pdelaney@blackfoxmining.com
Date/Time:	2022-12-28 09:23 (Time Zone: -07:00)

Report Last Signed By

User:	pdelaney@alexcoresource.com
Name:	Patrick Delaney
E-Mail:	pdelaney@blackfoxmining.com
Date/Time:	2022-12-28 09:24 (Time Zone: -07:00)

Table 6.3 DMR December 2022

DMR Copy of Record

Permit					
Permit #:	**CO0032751**	**Permittee:**	Grand Island Resources LLC	**Facility:**	CROSS AND CARIBOU MINES
Major:	No	**Permittee Address:**	12567 W Cedar Dr Lakewood, CO 80228	**Facility Location:**	CROSS AND CARIBOU MINES BOULDER COUNTY, CO 80466
Permitted Feature:	001 External Outfall	**Discharge:**	**001-A** Treated Mine Water to Coon Track Creek		
Report Dates & Status					
Monitoring Period:	**From 12/01/22 to 12/31/22**	**DMR Due Date:**	**01/28/23**	**Status:**	**NetDMR Validated**
Considerations for Form Completion					
Oil and grease - see I.A.2, pg 3. 30 day average is the highest monthly average during period reported.					
Principal Executive Officer					
First Name:		**Title:**		**Telephone:**	
Last Name:					
No Data Indicator (NODI)					
Form NODI:	--				

Parameter		Monitoring Location	Season #	Param. NODI		Quantity or Loading					Quality or Concentration							# of Ex.	Frequency of Analysis	Sample Type
Code	Name					Qualifier 1	Value 1	Qualifier 2	Value 2	Units	Qualifier 1	Value 1	Qualifier 2	Value 2	Qualifier 3	Value 3	Units			
00010	**Temperature, water deg. centigrade**	1 - Effluent Gross	0	--	Sample								=	3.24	=	7.8	04 - deg C		99/99 - Continuous	RC - Recorder (auto)
					Permit Req.									Req Mon MX WK AV		Req Mon DAILY MX	04 - deg C	0	99/99 - Continuous	RC - Recorder (auto)
					Value NODI															
00400	**pH**	1 - Effluent Gross	0	--	Sample						=	7.4			=	7.7	12 - SU		02/30 - Twice Per Month	GR - GRAB
					Permit Req.						>=	6.5 MINIMUM			<=	9.0 MAXIMUM	12 - SU	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI															
00530	**Solids, total suspended**	1 - Effluent Gross	0	--	Sample								<	4.0	<	4.0	19 - mg/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	30.0 30DA AVG	<=	45.0 DAILY MX	19 - mg/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
00978	**Arsenic, total recoverable**	1 - Effluent Gross	0	--	Sample								<	5.0			28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.									Req Mon 30DA AVG			28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
00980	**Iron, total recoverable**	1 - Effluent Gross	0	--	Sample								<	100.0			28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.									Req Mon 30DA AVG			28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
01094	**Zinc, total recoverable**	1 - Effluent Gross	0	--	Sample								<	10.0	<	10.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	750.0 30DA AVG	<=	1500.0 DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
01113	**Cadmium, total recoverable**	1 - Effluent Gross	0	--	Sample								<	1.0	<	1.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								<=	50.0 30DA AVG	<=	300.0 DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI															
01114	**Lead, total recoverable**	1 - Effluent Gross	0	--	Sample								<	1.0	<	1.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.								<=	300.0 30DA AVG	<=	600.0 DAILY MX	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Value NODI															
01119	**Copper, total recoverable**	1 - Effluent Gross	0	--	Sample								<	2.0	<	2.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.								<=	150.0 30DA AVG	<=	300.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI															
01220	**Chromium, hexavalent dissolved [as**	1 - Effluent	0	--	Sample								<	20.0	<	20.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.									Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L		01/30 - Monthly	GR - GRAB

Table 6.3 DMR December 2022 (continued)

	Cr]	Gross			Value NODI													
01303	**Zinc, potentially dissolved**	1 - Effluent Gross	12	--	Sample							<	10.0	<	10.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.							<=	186.0 30DA AVG	<=	182.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI														
01304	**Silver, potentially dissolved**	1 - Effluent Gross	12	--	Sample														
					Permit Req.							<=	0.12 30DA AVG	<=	2.8 DAILY MX	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Value NODI								B - Below Detection Limit/No Detection		B - Below Detection Limit/No Detection				
01306	**Copper, potentially dissolved**	1 - Effluent Gross	12	--	Sample							<	2.0	<	2.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.							<=	13.0 30DA AVG	<=	18.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI														
01309	**Arsenic, potentially dissolved**	1 - Effluent Gross	0	--	Sample									<	5.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.										Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
01313	**Cadmium, potentially dissolvd**	1 - Effluent Gross	12	--	Sample														
					Permit Req.							<=	0.63 30DA AVG	<=	2.2 DAILY MX	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Value NODI								B - Below Detection Limit/No Detection		B - Below Detection Limit/No Detection				
01314	**Chromium, trivalent, potentially dissolvd**	1 - Effluent Gross	0	--	Sample							<	20.0			28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								Req Mon 30DA AVG			28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
01318	**Lead, potentially dissolvd**	1 - Effluent Gross	12	--	Sample							<	1.0	<	1.0	28 - ug/L		02/30 - Twice Per Month	GR - GRAB
					Permit Req.							<=	3.8 30DA AVG	<=	85.0 DAILY MX	28 - ug/L	0	02/30 - Twice Per Month	GR - GRAB
					Value NODI														
01319	**Manganese, potentially dissolvd**	1 - Effluent Gross	0	--	Sample							<	2.0	<	2.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
01322	**Nickel, potentially dissolvd**	1 - Effluent Gross	0	--	Sample							<	2.0	<	2.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
01323	**Selenium, potentially dissolvd**	1 - Effluent Gross	0	--	Sample							<	5.0	<	5.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.								Req Mon 30DA AVG		Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
03582	**Oil and grease**	1 - Effluent Gross	0	--	Sample														
					Permit Req.									<=	10.0 INST MAX	19 - mg/L		77/77 - Contingent	GR - GRAB
					Value NODI										9 - Conditional Monitoring - Not Required This Period				
04262	**Chromium, trivalent total recoverable**	1 - Effluent Gross	0	--	Sample									<	20.0	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit Req.										Req Mon DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
50050	**Flow, in conduit or thru treatment plant**	1 - Effluent Gross	12	--	Sample							=	0.08912	=	0.13061	03 - MGD		99/99 - Continuous	RC - Recorder (auto)
					Permit Req.							<=	0.103 30DA AVG		Req Mon DAILY MX	03 - MGD	0	99/99 - Continuous	RC - Recorder (auto)
					Value NODI														
51202	**Sulfide-hydrogen sulfide [undissociated]**	1 - Effluent Gross	0	--	Sample							<	1.0			19 - mg/L		01/30 - Monthly	GR - GRAB
					Permit Req.								Req Mon 30DA AVG			19 - mg/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
					Sample							<	0.2	<	0.2	28 - ug/L		01/30 - Monthly	GR - GRAB
					Permit														

Table 6.3 DMR December 2022 (continued)

71900	**Mercury, total [as Hg]**	1 - Effluent Gross	0	--	Req.							<=	1.0 30DA AVG	<=	2.0 DAILY MX	28 - ug/L	0	01/30 - Monthly	GR - GRAB
					Value NODI														
84066	**Oil and grease visual**	1 - Effluent Gross	0	--	Sample		=	0.0	AB - abst=0;prst=1									02/30 - Twice Per Month	VI - VISUAL
					Permit Req.			Req Mon INST MAX	AB - abst=0;prst=1								0	02/30 - Twice Per Month	VI - VISUAL
					Value NODI														

Submission Note

If a parameter row does not contain any values for the Sample nor Effluent Trading, then none of the following fields will be submitted for that row: Units, Number of Excursions, Frequency of Analysis, and Sample Type.

Edit Check Errors

No errors.

Comments

Attachments

Name	Type	Size
2022_12_CrossCaribouMine_Results_1.pdf	pdf	1479174.0
2022_12_CrossCaribouMine_Results_2.pdf	pdf	995519.0
2022_12_CrossCaribouMine_CoverLetter.pdf	pdf	190940.0

Report Last Saved By

Grand Island Resources LLC

User:	pdelaney@alexcoresource.com
Name:	Patrick Delaney
E-Mail:	pdelaney@blackfoxmining.com
Date/Time:	2023-01-27 17:23 (Time Zone: -07:00)

Report Last Signed By

User:	pdelaney@alexcoresource.com
Name:	Patrick Delaney
E-Mail:	pdelaney@blackfoxmining.com
Date/Time:	2023-01-27 17:24 (Time Zone: -07:00)

Appendices

APPENDIX A GROUNDWATER AND EFFLUENT ANALYTICAL RESULTS

APPENDIX A.1 OCTOBER 2022 GROUNDWATER AND EFFLUENT ANALYTICAL RESULTS

eurofins | Built Environment Reservoirs

October 28, 2022

Subcontractor Number:
Laboratory Report: **RES 541058-1**
Project #/P.O. #: **221027123**
Project Description: **Grand Island Resources**

Jessi Lupfer
Colorado Analytical Laboratories, Inc.
10411 Heinz Way
Commerce City CO 80640

Dear Jessi,

Eurofins Reservoirs is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA LAP, LLC), Lab ID 101533 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Eurofins Reservoirs has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 541058-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Eurofins Reservoirs will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed, as received by the customer. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Eurofins Reservoirs Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer
by Alejandro Mejia

Jeanne Spencer
President

DATA QA
10/28/2022

EUROFINS RESERVOIRS ENVIRONMENTAL, INC

NVLAP Lab Code 101896-0
AIHA LAP, LLC. LAB ID 101533

TABLE: I ANALYSIS: TEM WATER SAMPLE ANALYTICAL RESULTS

RES Job Number: **RES 541058-1**
Client: **Colorado Analytical Laboratories, Inc.**
Client Project/P.O.: **221027123**
Client Project Description: **Grand Island Resources**
Date Samples Received: **October 28, 2022**
Analysis Type: **REI TEM SOP / USEPA 100.2-M**
Turnaround: **Standard 10**
Date Samples Analyzed: **October 28, 2022**

NA = Not Analyzed
NR = Not Received
ND = None Detected
TR = Trace; <1 % Visual Estimate
Trem-Act = Tremolite-Actinolite

Laboratory Sample ID	Client ID Number	Aliquot Deposited on Filter (ml)	Dilution Factor	Total Number of Asbestos Structures Detected	Greater than 10 Micron Length Asbestos Structures Detected	Analytical Sensitivity (million struct/L)	Total Asbestos Concentration (million struct/L)	Greater than 10 Micron Length Asbestos Concentration (million struct/L)
541058 -	221027123-01G Cross Portal	20	1	**ND**	ND	0.17	BAS	BAS
541058 -	221027123-02H Compliance Well	20	1	**ND**	ND	0.17	BAS	BAS
541058 -	221027123-03H Cross Well	20	1	**ND**	ND	0.17	BAS	BAS
541058 -	221027123-04G Caribou Portal	20	1	**ND**	ND	0.17	BAS	BAS
541058 -	221027123-05H Caribou Well	20	1	**ND**	ND	0.17	BAS	BAS
541058 -	221027123-06G Compliance Well - FB	20	1	**ND**	ND	0.17	BAS	BAS

Filter Material = Mixed Cellulose Ester

Filter Diameter = 25mm

Effective Filter Area = 0mm²

Average Grid Opening = 0.010mm²

Analyst

eurofins | Built Environment Reservoirs

RES Job #: 541058

SUBMITTED BY		INVOICE TO		CONTACT INFORMATION		SERIES
Company:	Colorado Analytical Laboratories, Inc.	Company:	Colorado Analytical Laboratories, Inc.	Contact:	Jessi Lupfer	-1 TEM Standard 10
Address:	10411 Heinz Way	Address:	10411 Heinz Way	Phone:	(303) 659-2313	
				Fax:		
	Commerce City, CO 80640		Commerce City, CO 80640	Cell:		
Project Number and/or P.O. #:	221027123			Final Data Deliverable Email Address:		
Project Description/Location:	Grand Island Resources			jessilupfer@coloradolab.com (+ 6 ADDNL. CONTACTS)		

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm

PLM / PCM / TEM DTL RUSH PRIORITY STANDARD

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm

Dust RUSH PRIORITY STANDARD

Metals RUSH PRIORITY STANDARD *PRIOR NOTICE REQUIRED FOR SAME DAY TAT

Organics* SAME DAY RUSH PRIORITY STANDARD

MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm

Viable Analysis** PRIORITY STANDARD

**TAT DEPENDENT ON SPEED OF MICROBIAL GROWTH

Medical Device Analysis RUSH STANDARD

Mold Analysis RUSH PRIORITY STANDARD

****Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.****

Special Instructions:

REQUESTED ANALYSIS

- **PLM** - Short Report, Long Report, CARB 435
- **TEM - Drinking Water (EPA 100.2)**
- **PCM** - 7400A, 7400B, OSHA
- **DUST** - Total, Respirable
- **METALS** - Analyte(s) Lead Only (7082, 7420, Waste Water, Foodware), Multi Metals (7303,6020A, 200.8, Waste Water, Foodware, OSHA ID-125G), pH (Liquid or Non-Liquid), TCLP, RCRA 8 Scan, Welding Fume Scan, Full Metals Scan
- **ORGANICS** - Methamphetamine, TSS
- **VIABLES** - Campylobacter, Bacillus, Salmonella (Culturable or 1-2), Listeria, E. coli O157:H7, E.coli/Coliforms - Plated, S.aureus, Yeast & Mol, Aerobic Plate Count, Coliforms/E.coli - (State Water, Drinking Water, Non-Drinking Water, +/-, Quantification), Lactic Acid, Viable Microbial Count (w/o ID or w/ ID), Enterococcus (+/- or Quantification), Legionella (P, NP, C)
- **MEDICAL** - Bioburden, LAL
- **MOLD** - Spore Trap, Bulk Mold, Particulate Identification

VALID MATRIX CODES

Air = A	Bulk = B
Dust = D	Food = F
Paint = P	Soil = S
Surface = SU	Swab = SW
Tape = T	Wipe = W
Drinking Water = DW	
Waste Water = WW	
ASTM E1792 approved wipe media only	

LAB NOTES

Client Sample ID Number (Sample ID's must be unique)	ASBESTOS	CHEMISTRY				MICROBIOLOGY			Sample Volume (L) / Area	Length(or Aliquots) x Width(or Area per Aliquot)	Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hh:mm	Laboratory Analysis Instructions
1 221027123-01G Cross Portal		X							1L		W	1	10/27/22	11:30	
2 221027123-02H Compliance Well		X							1L		W	1	10/27/22	12:30	
3 221027123-03H Cross Well		X							1L		W	1	10/27/22	12:00	
4 221027123-04G Caribou Portal		X							1L		W	1	10/27/22	13:00	
5 221027123-05H Caribou Well		X							1L		W	1	10/27/22	14:00	
6 221027123-06G Compliance Well - FB		X							1L		W	1	10/27/22	12:30	

EREI establishes a unique Lab Sample ID, for each sample, by preceding each unique Client Sample ID with the laboratory RES Job Number.
EREI will analyze incoming samples based on information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing, client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall consitute an analytical services agreement with payment terms of NET 30 days. Failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By:		Jessi Lupfer	Date/Time: 10/28/2022 9:13:08	Sample Condition: Acceptable
Received By:		Jessica Shapiro	Date/Time: 10/28/2022 10:45:17	Carrier: Fed-Ex

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	AME
Primary Scope	JEM-100CX II	**Sample Type**	Water	**Analysis Date**	10/28/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	541058-1	**Date Received**	10/28/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221027123-01G Cross Portal	**Method**	EPA 100.2	**Scope Align**	10/28/2022
Suspension		**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	F4-1	ND									
	F4-4	ND									
	G4-1	ND									
	G4-4	ND									
	H4-1	ND									
B	G4-3	ND									
	G4-6	ND									
	H4-3	ND									
	H4-6	ND									
	K4-3	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	AME
Primary Scope	JEM-100CX II	**Sample Type**	Water	**Analysis Date**	10/28/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	541058-1	**Date Received**	10/28/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221027123-02H Compliance Well	**Method**	EPA 100.2	**Scope Align**	10/28/2022
Suspension		**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
B	C6-1	ND									
	C6-4	ND									
	E6-1	ND									
	E6-4	ND									
	F6-1	ND									
	F6-4	ND									
	G6-1	ND									
A	F3-3	ND									
	E3-3	ND									
	E3-6	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	AME
Primary Scope	JEM-100CX II	**Sample Type**	Water	**Analysis Date**	10/28/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	541058-1	**Date Received**	10/28/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221027123-03H Cross Well	**Method**	EPA 100.2	**Scope Align**	10/28/2022
Suspension		**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	F5-4	ND									
	G5-1	ND									
	G5-4	ND									
	H5-1	ND									
	H5-4	ND									
B	B3-1	ND									
	B3-4	ND									
	C3-1	ND									
	C3-4	ND									
	E3-1	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	AME
Primary Scope	JEM-100CX II	**Sample Type**	Water	**Analysis Date**	10/28/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	541058-1	**Date Received**	10/28/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221027123-04G Caribou Portal	**Method**	EPA 100.2	**Scope Align**	10/28/2022
Suspension		**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
B	C4-6	ND									
	E4-3	ND									
	E4-6	ND									
	F4-3	ND									
	F4-6	ND									
A	C4-1	ND									
	B4-4	ND									
	B4-1	ND									
	A4-4	ND									
	A4-1	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	AME
Primary Scope	JEM-100CX II	**Sample Type**	Water	**Analysis Date**	10/28/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	541058-1	**Date Received**	10/28/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221027123-05H Caribou Well	**Method**	EPA 100.2	**Scope Align**	10/28/2022
Suspension		**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	C3-1	ND									
	C3-4	ND									
	E3-1	ND									
	E3-4	ND									
	F3-1	ND									
B	G5-1	ND									
	G5-4	ND									
	H5-1	ND									
	H5-4	ND									
	K5-1	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	AME
Primary Scope	JEM-100CX II	**Sample Type**	Water	**Analysis Date**	10/28/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	541058-1	**Date Received**	10/28/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221027123-06G Compliance Well - FB	**Method**	EPA 100.2	**Scope Align**	10/28/2022
Suspension		**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
B	C4-4	ND									
	E4-1	ND									
	E4-4	ND									
	F4-1	ND									
	F4-4	ND									
A	E4-3	ND									
	E4-6	ND									
	F4-3	ND									
	F4-6	ND									
	G4-3	ND									

*NAM = Non Asbestos Material

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 10/27/22 11:30 AM
Lab Number: 221027123-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**97.3 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Calcium as CaCO3	**60.4 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Langelier Index	**-1.16 units**	SM 2330-B	units	11/7/22	-	SAN
pH	**6.85 units**	SM 4500-H-B	0.01 units	10/27/22	-	AKF
Temperature	**20 °C**	SM 4500-H-B	1 °C	10/27/22	-	AKF
Total Alkalinity	**97.3 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	11/1/22	QC60709	TAB
Total Dissolved Solids	**105 mg/L**	SM 2540-C	5 mg/L	11/3/22	QC60734	DEK

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 10/27/22 12:30 PM
Lab Number: 221027123-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**60.0 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Calcium as CaCO3	**38.6 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Langelier Index	**-2.04 units**	SM 2330-B	units	11/7/22	-	SAN
pH	**6.31 units**	SM 4500-H-B	0.01 units	10/27/22	-	AKF
Temperature	**20 °C**	SM 4500-H-B	1 °C	10/27/22	-	AKF
Total Alkalinity	**60.0 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	11/1/22	QC60709	TAB
Total Dissolved Solids	**79 mg/L**	SM 2540-C	5 mg/L	11/3/22	QC60734	DEK

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 10/27/22 12:00 PM
Lab Number: 221027123-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**62.0 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Calcium as CaCO3	**40.4 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Langelier Index	**-2.33 units**	SM 2330-B	units	11/7/22	-	SAN
pH	**5.98 units**	SM 4500-H-B	0.01 units	10/27/22	-	AKF
Temperature	**20 °C**	SM 4500-H-B	1 °C	10/27/22	-	AKF
Total Alkalinity	**62.0 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	11/1/22	QC60709	TAB
Total Dissolved Solids	**88 mg/L**	SM 2540-C	5 mg/L	11/3/22	QC60734	DEK

Abbreviations/ References:

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mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 10/27/22 1:00 PM
Lab Number: 221027123-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**120.0 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Calcium as CaCO3	**67.0 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Langelier Index	**-0.61 units**	SM 2330-B	units	11/7/22	-	SAN
pH	**7.26 units**	SM 4500-H-B	0.01 units	10/27/22	-	AKF
Temperature	**20 °C**	SM 4500-H-B	1 °C	10/27/22	-	AKF
Total Alkalinity	**120.0 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	11/1/22	QC60709	TAB
Total Dissolved Solids	**135 mg/L**	SM 2540-C	5 mg/L	11/3/22	QC60734	DEK

Abbreviations/ References:

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mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 10/27/22 2:00 PM
Lab Number: 221027123-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**19.2 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Calcium as CaCO3	**9.6 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Langelier Index	**-3.52 units**	SM 2330-B	units	11/7/22	-	SAN
pH	**5.92 units**	SM 4500-H-B	0.01 units	10/27/22	-	AKF
Temperature	**20 °C**	SM 4500-H-B	1 °C	10/27/22	-	AKF
Total Alkalinity	**19.2 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	11/1/22	QC60709	TAB
Total Dissolved Solids	**41 mg/L**	SM 2540-C	5 mg/L	11/3/22	QC60734	DEK

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 10/27/22 12:30 PM
Lab Number: 221027123-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Calcium as CaCO3	**0.2 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/1/22	-	TAB
Langelier Index	**-7.09 units**	SM 2330-B	units	11/7/22	-	SAN
pH	**4.99 units**	SM 4500-H-B	0.01 units	10/27/22	-	AKF
Temperature	**20 °C**	SM 4500-H-B	1 °C	10/27/22	-	AKF
Total Alkalinity	**ND**	SM 2320-B	4.0 mg/L as CaCO3	11/1/22	QC60709	TAB
Total Dissolved Solids	**ND**	SM 2540-C	5 mg/L	11/3/22	QC60734	DEK

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC

Receive Date: 10/27/22
Project Name: Monthly Groundwater

Test	QC Batch ID	QC Type	Result	Method
Total Alkalinity	QC60709	Blank	ND	SM 2320-B
Total Dissolved Solids	QC60734	Blank	ND	SM 2540-C

Test	QC Batch ID	QC Type	Limits	%Rec	RPD	Method
Total Alkalinity	QC60709	Duplicate	0 - 20	-	0.8	SM 2320-B
		LCS	90 - 110	100.2	-	
		LCS-2	90 - 110	105.6	-	
Total Dissolved Solids	QC60734	Duplicate	0 - 20	-	0.3	SM 2540-C
		LCS	85 - 115	102.6	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Moran	Contact Name:	
Address: 12567 W. Cedar Dr	Address:	Task Number (Lab Use Only) CAL Task 221027123 JML
City Lakewood State CO Zip 80228	City State Zip	
Phone: 303-506-1618	Phone:	
Email: bmolsonm@g-emporia.edu	Email:	
Sample Collector: Brooke Moran		
Sample Collector Phone: 303-506-1618	PO No.:	

Please also email results to:
sergio.rivera@novametallix.com

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Tests Requested

QB022050014
TO BE UPDATED BASED ON EMAIL TO JENNIFER KANMORE ON 10/27/22

Date	Time	Sample ID	No. of Containers	Grab or Composite
10/27/22	11:30	CROSS PORTAL	8	G
10/27/22	12:30	COMPLIANCE WELL	8	G
10/27/22	12:00	CROSS WELL	8	G
10/27/22	13:00	CARIBOU PORTAL	8	G
10/27/22	14:00	CARIBOU WELL	8	G
10/27/22	12:30	COMPLIANCE WELL-FB	8	G

Instructions: FIELD FILTERED THE NITRIC PRESERVED BOTTLE FOR COMPLIANCE WELL, CROSS WELL, & CARIBOU WELL. ALL OTHER BOTTLES ARE UNFILTERED.

C/S Info:
Deliver Via: HD
C/S Charge ☐

Seals Present Yes ☐ No ☐
Temp. 3 °C/Ice yes Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/27/22 4:11 pm	KA	10-27-22				

11/17

CAL Task
221027123
JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

Prepared For: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood, CO 80228

Attn: Brooke Molson-Moran

Quote Date: Wednesday, May 4, 2022
Turn Around Time: 10 Working Days

Project:
Monthly Groundwater

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Langelier Index	N/A	5	$60.00	$300.00
Water - Ground	Alkalinity	SM 2320-B	5	Incl.	Incl.
Water - Ground	Ca as CaCO3	EPA 200.7	5	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	5	Incl.	Incl.
Water - Ground	Lang Index	SM 2330-B	5	Incl.	Incl.
Water - Ground	pH/ Temp	SM 4500-H-B	5	Incl.	Incl.
Water - Ground	TDS	SM 2540-C	5	Incl.	Incl.
Water - Ground	Nitrate/ Nitrite Nitrogen (Dis)	Calculation	5	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	5	$13.00	$65.00
~~Water - Ground~~	~~B - Total~~	EPA 200.7	5	$13.00	$65.00
Water - Ground	Ca - Dis	EPA 200.7	5	$13.00	$65.00
Water - Ground	Fe - Dis	EPA 200.7	5	$13.00	$65.00
Water - Ground	Ag - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Ag - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	Al - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Al - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	As - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Ba - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Be - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Cd - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Co - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Co - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	Cr - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	Cu - Dis yes test	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Cu - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	Mn - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Mo - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Ni - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Pb - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Sb - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Se - Dis	EPA 200.8	5	$16.00	$80.00

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

CAL Task
221027123
JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

~~Water - Ground~~	~~Se - Total~~	~~EPA 200.8~~	5	$16.00	$80.00
Water - Ground	Tl - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	V - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~V - Total~~	~~EPA 200.8~~	5	$16.00	$80.00
Water - Ground	Zn - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Zn - Total~~	~~EPA 200.8~~	5	$16.00	$80.00
Water - Ground	Chloride	EPA 300.0	5	$18.00	$90.00
Water - Ground	Fluoride	EPA 300.0	5	$18.00	$90.00
Water - Ground	Nitrate Nitrogen ADD	EPA 300.0	5	$18.00	$90.00
Water - Ground	Nitrite Nitrogen ADD	EPA 300.0	5	$18.00	$90.00
Water - Ground	Sulfate	EPA 300.0	5	$18.00	$90.00
Water - Ground	U - Dis	EPA 200.8	5	$23.00	$115.00
Water - Ground	Hg → Need Hg to 0.01mg (EPA 245.7 Hg to 0.002mg (Inorganic)	EPA 245.7	5	$27.00	$135.00
Water - Ground	Total Coliform	SM 9221-B	5	$27.00	$135.00
Water - Ground	Cyanide - Free	ASTM D4282-15	5	$40.00	$200.00
Water - Ground	Phenols	EPA 420.4	5	$55.00	$275.00
Water - Ground	Metals (Sub)	EPA 200.7/EPA 200.8	5	$67.20	$336.00
Water - Ground	Gross Alpha/Beta (Sub)	SM 7110-B	5	$68.40	$342.00
Water - Ground	Asbestos (Sub)	TEM	5	$120.00	$600.00
Water - Ground	625 SOCs	EPA 625	5	$225.00	$1,125.00
Shipping	Sample Shipment to Outside Lab	UPS	2	$30.00	$60.00
Shipping	Ext. Sample Shipment to Outside Lab	UPS or FedEx	1	$50.00	$50.00

Metals (sub) for dissolved lithium. Hg - dissolved. Quote revised 10/26 per customer's request.

$6,383.00

****Samples should be shipped or hand delivered the same day they are collected.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Contract analysis pricing subject to change. Sub-Contract radiological analysis turn-around time is 4 to 6 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts, all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

Jessi Lupfer

To: Jennifer Kanmore
Subject: RE: GIR Quote

From: Brooke Molson Moran <bmolsonm@g.emporia.edu>
Sent: Monday, October 31, 2022 1:41 PM
To: Jennifer Kanmore <jenniferkanmore@coloradolab.com>
Subject: Re: GIR Quote

Hello Jennifer,

One request for the quote- may we please keep TR for silver (in addition to dissolved) and include it for last week's samples? With respect to our required duplicate and matrix spikes, can we please have those included for the Compliance Well and the Caribou Portal samples?

Also, I will continue to be the contact for our Monthly Groundwater Project, can we please add myself (bmolsonm@g.emporia.edu) and Sergio Rivera (sergio.rivera@novametallix.com) as the recipients of the analytical report? We will need the pdf and excel files, if available.

Happy Halloween!

Brooke Moran
Grand Island Resources

On Fri, Oct 28, 2022 at 2:58 PM Jennifer Kanmore <jenniferkanmore@coloradolab.com> wrote:

> Sounds good! Have a great weekend as well!
>
> Thanks,
>
> **Jennifer Kanmore**
> Project Manager
> Colorado Analytical Laboratories
> 10411 Heinz Way
> Commerce City, CO 80640
> P: 303-659-2313 Ext. 607

ANALYTICAL SUMMARY REPORT

November 15, 2022

Colorado Analytical Laboratories Inc
PO Box 507
Brighton, CO 80601-0507

Work Order: C22110023 Quote ID: C15681

Project Name: 221027123 Monthly Groundwater

Energy Laboratories, Inc. Casper WY received the following 6 samples for Colorado Analytical Laboratories Inc on 11/1/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C22110023-001	221027123-01F - Cross Portal	10/27/22 11:30	11/01/22	Groundwater	Metals by ICP/ICPMS, Dissolved Sample Filtering, Metals
C22110023-002	221027123-02G - Compliance Well	10/27/22 12:30	11/01/22	Groundwater	Same As Above
C22110023-003	221027123-03G - Cross Well	10/27/22 12:00	11/01/22	Groundwater	Same As Above
C22110023-004	221027123-04F - Caribou Portal	10/27/22 13:00	11/01/22	Groundwater	Same As Above
C22110023-005	221027123-05G - Caribou Well	10/27/22 14:00	11/01/22	Groundwater	Same As Above
C22110023-006	221027123-06F - Compliance Well - FB	10/27/22 12:30	11/01/22	Groundwater	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager .

Report Approved By:

CLIENT: Colorado Analytical Laboratories Inc
Project: 221027123 Monthly Groundwater
Work Order: C22110023

Report Date: 11/15/22

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221027123 Monthly Groundwater
Lab ID: C22110023-001
Client Sample ID: 221027123-01F - Cross Portal

Report Date: 11/15/22
Collection Date: 10/27/22 11:30
DateReceived: 11/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	11/04/22 17:45 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221027123 Monthly Groundwater
Lab ID: C22110023-002
Client Sample ID: 221027123-02G - Compliance Well

Report Date: 11/15/22
Collection Date: 10/27/22 12:30
DateReceived: 11/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	11/04/22 17:58 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221027123 Monthly Groundwater
Lab ID: C22110023-003
Client Sample ID: 221027123-03G - Cross Well

Report Date: 11/15/22
Collection Date: 10/27/22 12:00
DateReceived: 11/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	11/04/22 18:11 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221027123 Monthly Groundwater
Lab ID: C22110023-004
Client Sample ID: 221027123-04F - Caribou Portal

Report Date: 11/15/22
Collection Date: 10/27/22 13:00
DateReceived: 11/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	11/04/22 18:15 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221027123 Monthly Groundwater
Lab ID: C22110023-005
Client Sample ID: 221027123-05G - Caribou Well

Report Date: 11/15/22
Collection Date: 10/27/22 14:00
DateReceived: 11/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	11/04/22 18:19 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221027123 Monthly Groundwater
Lab ID: C22110023-006
Client Sample ID: 221027123-06F - Compliance Well - FB

Report Date: 11/15/22
Collection Date: 10/27/22 12:30
DateReceived: 11/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	11/04/22 18:24 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc **Work Order:** C22110023 **Report Date:** 11/09/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.7**										Analytical Run: ICP203-B_221104A
Lab ID: **ICV**		Continuing Calibration Verification Standard								11/04/22 11:32
Lithium		1.25	mg/L	0.10	100	95	105			
Lab ID: **CCV**		Continuing Calibration Verification Standard								11/04/22 16:42
Lithium		1.29	mg/L	0.10	103	90	110			
Lab ID: **CCV**		Continuing Calibration Verification Standard								11/04/22 17:50
Lithium		1.30	mg/L	0.10	104	90	110			
Method: **E200.7**										Batch: R390833
Lab ID: **MB-6500DIS221104A**		Method Blank				Run: ICP203-B_221104A				11/04/22 11:56
Lithium		ND	mg/L	0.01						
Lab ID: **LFB-6500DIS221104A**		Laboratory Fortified Blank				Run: ICP203-B_221104A				11/04/22 12:00
Lithium		0.995	mg/L	0.10	99	85	115			
Lab ID: **MB-172196**		Method Blank				Run: ICP203-B_221104A				11/04/22 17:36
Lithium		ND	mg/L	0.01						
Lab ID: **C22110023-002AMS2**		Sample Matrix Spike				Run: ICP203-B_221104A				11/04/22 18:02
Lithium		1.02	mg/L	0.10	102	70	130			
Lab ID: **C22110023-002AMSD**		Sample Matrix Spike Duplicate				Run: ICP203-B_221104A				11/04/22 18:07
Lithium		1.04	mg/L	0.10	104	70	130	1.5	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Colorado Analytical Laboratories Inc C22110023

Login completed by: Kirsten L. Smith
Date Received: 11/1/2022
Reviewed by: cjohnson
Received by: cch
Reviewed Date: 11/2/2022
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	2.6°C On Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

Dissolved Metals/Hardness were filtered and preserved to pH <2 with 2 mL of nitric acid per 250 mL in the laboratory. According to 40CFR136, samples for Dissolved Metals should be filtered and preserved within 15 minutes of collection. 11/1/2022-KS

Colorado Analytical LABORATORIES, INC.

Ship To: Energy Labs

Sub-Lab Chain of Custody Form

C22110073

Report To Information	Bill To Information (If different from report to)	Project Name
Company Name: Colorado Analytical Laboratory Report To: Stuart Nielson E-Mail: stuartnielson@coloradolab.com		Monthly Groundwater
Address: 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	Address: CAL TASK 221027123 JML	Compliance Samples: Yes ☐ No ☑ Submit Data to CDPHE: Yes ☐ No ☑

Tests Requested

Sample Date/Time	Sample ID	Matrix	Metals (Sub)	Container Type
10/27/22 11:30 AM	221027123-01F - Cross Portal	Water - Ground	X	1-125ml-unpreserved
10/27/22 12:30 PM	221027123-02G - Complaince Well	Water - Ground	X	
10/27/22 12:00 PM	221027123-03G - Cross Well	Water - Ground	X	
10/27/22 1:00 PM	221027123-04F - Caribou Portal	Water - Ground	X	
10/27/22 2:00 PM	221027123-05G - Caribou Well	Water - Ground	X	
10/27/22 12:30 PM	221027123-06F - Complaince Well - FB	Water - Ground	X	

Comment: 221027123-01F - Please report Lithium as Dissolved.
221027123-02G - Please report Lithium as Dissolved.
221027123-03G - Please report Lithium as Dissolved.
221027123-04F - Please report Lithium as Dissolved.
221027123-05G - Please report Lithium as Dissolved.
221027123-06F - Please report Lithium as Dissolved.

Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:
[signature]	10/31/22 1500	[signature]	11/1 10:22a				

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03070
Received: Oct 31, 2022
Reported: Nov 23, 2022
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

Stuart Nielson
Colorado Analytical Laboratories, Inc.
10411 Heinz Way
Commerce City, CO 80640

ANALYTICAL REPORT

Report may only be copied in its entirety.
Results reported herein relate only to discrete samples submitted by the client. Hazen Research, Inc. does not warrant that the results are representative of anything other than the samples that were received in the laboratory

By: Roxanne Sullivan
Roxanne Sullivan
Analytical Laboratories Director

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03070
Received: Oct 31, 2022
Reported: Nov 23, 2022
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03070-001							
Customer Sample ID	**221027123-01E** - Monthly Ground Water - Cross Portal sampled on 10/27/22 @ 1130							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	1.6	1.3	0.1	SM 7110 B	11/18/22 @ 0833	RG
Gross Beta	**pCi/L**	**T**	<3.0	2.2	3.0	SM 7110 B	11/18/22 @ 0833	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
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Fax: (303) 278-1528

Lab Control ID: 22M03070
Received: Oct 31, 2022
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Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03070-002							
Customer Sample ID	**221027123-02F** - Monthly Ground Water - Compliance Well sampled on 10/27/22 @ 1230							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.2	0.7	0.1	SM 7110 B	11/18/22 @ 0835	RG
Gross Beta	**pCi/L**	**T**	<3.0	2.3	3.0	SM 7110 B	11/18/22 @ 0835	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03070
Received: Oct 31, 2022
Reported: Nov 23, 2022
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03070-003							
Customer Sample ID	**221027123-03F** - Monthly Ground Water - Cross Well sampled on 10/27/22 @ 1200							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	<0.1	0.8	0.1	SM 7110 B	11/18/22 @ 0837	RG
Gross Beta	**pCi/L**	**T**	<3.0	2.3	3.0	SM 7110 B	11/18/22 @ 0837	RG

Certification ID's: CO/EPA CO00008

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Hazen Research, Inc.
4601 Indiana Street
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Tel: (303) 279-4501
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Lab Control ID: 22M03070
Received: Oct 31, 2022
Reported: Nov 23, 2022
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03070-004							
Customer Sample ID	**221027123-04E** - Monthly Ground Water - Caribou Portal sampled on 10/27/22 @ 1300							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	4.0	1.9	0.1	SM 7110 B	11/18/22 @ 0839	RG
Gross Beta	**pCi/L**	**T**	<2.9	2.4	2.9	SM 7110 B	11/18/22 @ 0839	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
4601 Indiana Street
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Tel: (303) 279-4501
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Lab Control ID: 22M03070
Received: Oct 31, 2022
Reported: Nov 23, 2022
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03070-005							
Customer Sample ID	**221027123-05F** - Monthly Ground Water - Caribou Well sampled on 10/27/22 @ 1400							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.3	0.8	0.1	SM 7110 B	11/18/22 @ 0841	RG
Gross Beta	**pCi/L**	**T**	<2.8	2.1	2.8	SM 7110 B	11/18/22 @ 0841	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03070
Received: Oct 31, 2022
Reported: Nov 23, 2022
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03070-006							
Customer Sample ID	**221027123-06E** - Monthly Ground Water - Compliance Well - FB sampled on 10/27/22 @ 1230							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.4	0.8	0.1	SM 7110 B	11/18/22 @ 0843	RG
Gross Beta	**pCi/L**	**T**	<2.9	2.0	2.9	SM 7110 B	11/18/22 @ 0843	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 11/18/2022

Batch QC Summary Form

Analyte: Gross Alpha

Control Standard/LFB: ID: C-11a_002 pCi/mL: 57.4 (use 1 diluted)

Spike Solution: ID: C-11a_002 pCi/mL: 57.4 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(45.7)\ (1.000) - (0.2)\ (0.200)}{57.4} \times 100 = 80\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 30 %	x		
Spike Recovery	70 - 130 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M03067
22M03068
22M03072
22M03070
22M03080
22M03106
22M03107
22M03108

Evaluator: Michelle Stringer

11/22/2022
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 11/18/2022

Batch QC Summary Form

Analyte: Gross Beta

Control Standard/LFB: ID: C-11a_002 pCi/mL: 44 (use 1 diluted)

Spike Solution: ID: C-11a_002 pCi/mL: 44 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(38.7)\ (1.000) - (0.0)\ (0.200)}{44} \times 100 = 88\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M03067
22M03068
22M03072
22M03070
22M03080
22M03106
22M03107
22M03108

Evaluator: Michelle Stringer

11/22/2022
Date

Colorado Analytical LABORATORIES, INC.

22M03070

Ship To: Hazen Research
Preserved: Y / N
HNO3 Lot #: N/A
Date Preserved: N/A

Report To Information	Bill To Information (If different from report to)	Project Name
Company Name: Colorado Analytical Laboratory Report To: Stuart Nielson E-Mail: stuartnielson@coloradolab.com		Monthly Groundwater
Address: 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	Address: CAL TASK 221027123 JML	Compliance Samples: Yes ☐ No ☑ Submit Data to CDPHE: Yes ☐ No ☑

Tests Requested

Sample Date/Time		Sample ID	Matrix	Gross Alpha/Beta (Sub)	Container Type
10/27/22	11:30 AM	221027123-01E - Cross Portal	Water - Ground	X	1L - Unpreserved
10/27/22	12:30 PM	221027123-02F - Complaince Well	Water - Ground	X	1L - Unpreserved
10/27/22	12:00 PM	221027123-03F - Cross Well	Water - Ground	X	1L - Unpreserved
10/27/22	1:00 PM	221027123-04E - Caribou Portal	Water - Ground	X	1L - Unpreserved
10/27/22	2:00 PM	221027123-05F - Caribou Well	Water - Ground	X	1L - Unpreserved
10/27/22	12:30 PM	221027123-06E - Complaince Well - FB	Water - Ground	X	1L - Unpreserved

Comment:

Preservation AR 11/1/22 1515
Not Preserved AR 10/31/22 1205

Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:
CAdams	10/28/22 935					Joe Feddie	RECEIVED OCT 31 2022 1236

Page 1 of 1

FedEx 6117 5252 7423

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 10/27/22 11:30 AM
Lab Number: 221027123-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**0.41 mg/L**	EPA 300.0	0.01 mg/L	10/27/22	QC60646	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	10/28/22	QC60657	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	10/27/22	QC60647	MLT
Nitrate Nitrogen	**0.14 mg/L**	EPA 300.0	0.05 mg/L	10/27/22	QC60648	MLT
Nitrate/ Nitrite Nitrogen	**0.14 mg/L**	Calculation	0.05 mg/L	10/28/22	-	AMJ
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	10/27/22	QC60649	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	11/4/22	QC60817	DPL
Sulfate	**10.81 mg/L**	EPA 300.0	0.01 mg/L	10/27/22	QC60650	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	10/28/22	-	AKF
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	11/1/22	QC60689	MLT
Aluminum	**0.004 mg/L**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/1/22	QC60700	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/1/22	QC60700	MBN
Barium	**0.0702 mg/L**	EPA 200.8	0.0007 mg/L	11/1/22	QC60700	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Cadmium	**0.0011 mg/L**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/1/22	QC60700	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Copper	**0.0026 mg/L**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Lead	**0.0025 mg/L**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Manganese	**0.0149 mg/L**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Molybdenum	**0.0073 mg/L**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 10/27/22 11:30 AM
Lab Number: 221027123-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/1/22	QC60700	MBN
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Uranium	**0.0009 mg/L**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Zinc	**0.217 mg/L**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Boron	**0.02 mg/L**	EPA 200.7	0.01 mg/L	10/31/22	QC60678	MAT
Calcium	**24.2 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	QC60678	MAT
Iron	**0.028 mg/L**	EPA 200.7	0.005 mg/L	10/31/22	QC60678	MAT
Total Recoverable						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/2/22	QC60745	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 10/27/22 12:30 PM
Lab Number: 221027123-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**2.86 mg/L**	EPA 300.0	0.01 mg/L	10/27/22	QC60646	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	10/28/22	QC60657	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	10/27/22	QC60647	MLT
Nitrate Nitrogen	**0.30 mg/L**	EPA 300.0	0.05 mg/L	10/27/22	QC60648	MLT
Nitrate/ Nitrite Nitrogen	**0.30 mg/L**	Calculation	0.05 mg/L	10/28/22	-	AMJ
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	10/27/22	QC60649	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	11/4/22	QC60817	DPL
Sulfate	**9.27 mg/L**	EPA 300.0	0.01 mg/L	10/27/22	QC60650	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	10/28/22	-	AKF
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	11/1/22	QC60689	MLT
Aluminum	**ND**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/1/22	QC60700	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/1/22	QC60700	MBN
Barium	**0.0382 mg/L**	EPA 200.8	0.0007 mg/L	11/1/22	QC60700	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/1/22	QC60700	MBN
Cobalt	**0.0002 mg/L**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Copper	**ND**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Lead	**0.0002 mg/L**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Manganese	**0.0092 mg/L**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Molybdenum	**0.0042 mg/L**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN

Abbreviations/ References:

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mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 10/27/22 12:30 PM
Lab Number: 221027123-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/1/22	QC60700	MBN
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Zinc	**0.080 mg/L**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	10/31/22	QC60678	MAT
Calcium	**15.6 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	QC60678	MAT
Iron	**0.005 mg/L**	EPA 200.7	0.005 mg/L	10/31/22	QC60678	MAT
Total Recoverable						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/2/22	QC60745	MBN

Abbreviations/ References:

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mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 10/27/22 12:00 PM
Lab Number: 221027123-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**3.15 mg/L**	EPA 300.0	0.01 mg/L	10/27/22	QC60646	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	10/28/22	QC60657	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	10/27/22	QC60647	MLT
Nitrate Nitrogen	**0.25 mg/L**	EPA 300.0	0.05 mg/L	10/27/22	QC60648	MLT
Nitrate/ Nitrite Nitrogen	**0.25 mg/L**	Calculation	0.05 mg/L	10/28/22	-	AMJ
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	10/27/22	QC60649	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	11/4/22	QC60817	DPL
Sulfate	**9.29 mg/L**	EPA 300.0	0.01 mg/L	10/27/22	QC60650	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	10/28/22	-	AKF
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	11/1/22	QC60689	MLT
Aluminum	**ND**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/1/22	QC60700	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/1/22	QC60700	MBN
Barium	**0.0275 mg/L**	EPA 200.8	0.0007 mg/L	11/1/22	QC60700	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/1/22	QC60700	MBN
Cobalt	**0.0002 mg/L**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Copper	**0.0070 mg/L**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Lead	**0.0006 mg/L**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Manganese	**0.0010 mg/L**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Molybdenum	**0.0006 mg/L**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 10/27/22 12:00 PM
Lab Number: 221027123-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/1/22	QC60700	MBN
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Zinc	**1.25 mg/L**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	10/31/22	QC60678	MAT
Calcium	**16.2 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	QC60678	MAT
Iron	**ND**	EPA 200.7	0.005 mg/L	10/31/22	QC60678	MAT
Total Recoverable						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/2/22	QC60745	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 10/27/22 1:00 PM
Lab Number: 221027123-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**0.49 mg/L**	EPA 300.0	0.01 mg/L	10/27/22	QC60646	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	10/28/22	QC60657	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	10/27/22	QC60647	MLT
Nitrate Nitrogen	**0.20 mg/L**	EPA 300.0	0.05 mg/L	10/27/22	QC60648	MLT
Nitrate/ Nitrite Nitrogen	**0.20 mg/L**	Calculation	0.05 mg/L	10/28/22	-	AMJ
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	10/27/22	QC60649	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	11/4/22	QC60817	DPL
Sulfate	**10.58 mg/L**	EPA 300.0	0.01 mg/L	10/27/22	QC60650	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	10/28/22	-	AKF
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	11/1/22	QC60689	MLT
Aluminum	**0.004 mg/L**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/1/22	QC60700	MBN
Arsenic	**0.0007 mg/L**	EPA 200.8	0.0006 mg/L	11/1/22	QC60700	MBN
Barium	**0.0529 mg/L**	EPA 200.8	0.0007 mg/L	11/1/22	QC60700	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/1/22	QC60700	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Copper	**ND**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Lead	**0.0018 mg/L**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Manganese	**0.0020 mg/L**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Molybdenum	**0.0067 mg/L**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN

Abbreviations/ References:

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mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 10/27/22 1:00 PM
Lab Number: 221027123-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/1/22	QC60700	MBN
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Uranium	**0.0059 mg/L**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Zinc	**0.010 mg/L**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	10/31/22	QC60678	MAT
Calcium	**26.8 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	QC60678	MAT
Iron	**0.069 mg/L**	EPA 200.7	0.005 mg/L	10/31/22	QC60678	MAT
Total Recoverable						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/2/22	QC60745	MBN

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 10/27/22 2:00 PM
Lab Number: 221027123-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**0.41 mg/L**	EPA 300.0	0.01 mg/L	10/27/22	QC60646	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	10/28/22	QC60657	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	10/27/22	QC60647	MLT
Nitrate Nitrogen	**0.12 mg/L**	EPA 300.0	0.05 mg/L	10/27/22	QC60648	MLT
Nitrate/ Nitrite Nitrogen	**0.12 mg/L**	Calculation	0.05 mg/L	10/28/22	-	AMJ
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	10/27/22	QC60649	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	11/4/22	QC60817	DPL
Sulfate	**2.66 mg/L**	EPA 300.0	0.01 mg/L	10/27/22	QC60650	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	10/28/22	-	AKF
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	11/1/22	QC60689	MLT
Aluminum	**0.003 mg/L**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/1/22	QC60700	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/1/22	QC60700	MBN
Barium	**0.0057 mg/L**	EPA 200.8	0.0007 mg/L	11/1/22	QC60700	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/1/22	QC60700	MBN
Cobalt	**0.0003 mg/L**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Copper	**0.4407 mg/L**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Lead	**0.0004 mg/L**	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Manganese	**ND**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Molybdenum	**ND**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 10/27/22 2:00 PM
Lab Number: 221027123-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/1/22	QC60700	MBN
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Zinc	**0.005 mg/L**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	10/31/22	QC60678	MAT
Calcium	**3.9 mg/L**	EPA 200.7	0.1 mg/L	10/31/22	QC60678	MAT
Iron	**ND**	EPA 200.7	0.005 mg/L	10/31/22	QC60678	MAT
Total Recoverable						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/2/22	QC60745	MBN

Abbreviations/ References:

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 10/27/22 12:30 PM
Lab Number: 221027123-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	ND	EPA 300.0	0.01 mg/L	10/28/22	QC60646	MLT
Cyanide-Free	ND	ASTM D4282-15	0.005 mg/L	10/28/22	QC60657	DPL
Fluoride	ND	EPA 300.0	0.10 mg/L	10/28/22	QC60647	MLT
Nitrate Nitrogen	ND	EPA 300.0	0.05 mg/L	10/28/22	QC60648	MLT
Nitrate/ Nitrite Nitrogen	ND	Calculation	0.05 mg/L	10/28/22	-	AMJ
Nitrite Nitrogen	ND	EPA 300.0	0.03 mg/L	10/28/22	QC60649	MLT
Phenols - Total	ND	EPA 420.4	15.0 ug/L	11/4/22	QC60817	DPL
Sulfate	ND	EPA 300.0	0.01 mg/L	10/28/22	QC60650	MLT
Total Coliform	ND	SM 9221-B	1 mpn/100ml	10/28/22	-	AKF
Dissolved						
Mercury	ND	EPA 245.7	0.0002 mg/L	11/1/22	QC60689	MLT
Aluminum	ND	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Antimony	ND	EPA 200.8	0.0012 mg/L	11/1/22	QC60700	MBN
Arsenic	ND	EPA 200.8	0.0006 mg/L	11/1/22	QC60700	MBN
Barium	ND	EPA 200.8	0.0007 mg/L	11/1/22	QC60700	MBN
Beryllium	ND	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Cadmium	ND	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Chromium	ND	EPA 200.8	0.0015 mg/L	11/1/22	QC60700	MBN
Cobalt	ND	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Copper	ND	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Lead	ND	EPA 200.8	0.0001 mg/L	11/1/22	QC60700	MBN
Manganese	ND	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Molybdenum	ND	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN

Abbreviations/ References:

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Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 10/27/22 12:30 PM
Lab Number: 221027123-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/1/22	QC60700	MBN
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/1/22	QC60700	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/1/22	QC60700	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	11/1/22	QC60700	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Zinc	**ND**	EPA 200.8	0.001 mg/L	11/1/22	QC60700	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	10/31/22	QC60678	MAT
Calcium	**ND**	EPA 200.7	0.1 mg/L	10/31/22	QC60678	MAT
Iron	**ND**	EPA 200.7	0.005 mg/L	10/31/22	QC60678	MAT
Total Recoverable						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/2/22	QC60745	MBN

Abbreviations/ References:

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Date Analyzed = Date Test Completed

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(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC

Receive Date: 10/27/22
Project Name: Monthly Groundwater

Test	QC Batch ID	QC Type	Result	Method
Chloride	QC60646	Blank	ND	EPA 300.0
Cyanide-Free	QC60657	Blank	ND	ASTM D4282-15
Fluoride	QC60647	Blank	ND	EPA 300.0
Mercury	QC60689	Method Blank	ND	EPA 245.7
Aluminum	QC60700	Method Blank	ND	EPA 200.8
Antimony	QC60700	Method Blank	ND	EPA 200.8
Arsenic	QC60700	Method Blank	ND	EPA 200.8
Barium	QC60700	Method Blank	ND	EPA 200.8
Beryllium	QC60700	Method Blank	ND	EPA 200.8
Cadmium	QC60700	Method Blank	ND	EPA 200.8
Chromium	QC60700	Method Blank	ND	EPA 200.8
Cobalt	QC60700	Method Blank	ND	EPA 200.8
Copper	QC60700	Method Blank	ND	EPA 200.8
Lead	QC60700	Method Blank	ND	EPA 200.8
Manganese	QC60700	Method Blank	ND	EPA 200.8
Molybdenum	QC60700	Method Blank	ND	EPA 200.8
Nickel	QC60700	Method Blank	ND	EPA 200.8
Selenium	QC60700	Method Blank	ND	EPA 200.8
Silver	QC60700	Method Blank	ND	EPA 200.8
	QC60745	Method Blank	ND	EPA 200.8
Thallium	QC60700	Method Blank	ND	EPA 200.8
Uranium	QC60700	Method Blank	ND	EPA 200.8
Vanadium	QC60700	Method Blank	ND	EPA 200.8
Zinc	QC60700	Method Blank	ND	EPA 200.8
Boron	QC60678	Method Blank	ND	EPA 200.7
Calcium	QC60678	Method Blank	ND	EPA 200.7
Iron	QC60678	Method Blank	ND	EPA 200.7
Nitrate Nitrogen	QC60648	Blank	ND	EPA 300.0
Nitrite Nitrogen	QC60649	Blank	ND	EPA 300.0
Phenols - Total	QC60817	Blank	ND	EPA 420.4
Sulfate	QC60650	Blank	ND	EPA 300.0

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chloride	QC60646	Duplicate	0 - 20	-	8.6	EPA 300.0
		LCS	90 - 110	99.6	-	
		MS	75 - 125	93.7	-	
Cyanide-Free	QC60657	Duplicate	0 - 20	-	6.5	ASTM D4282-15
		LCS	90 - 110	96.6	-	
		MS	75 - 125	124.5	-	
		MSD	0 - 30	-	1.6	
Fluoride	QC60647	Duplicate	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	100.2	-	

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(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
		MS	75 - 125	91.0	-	
Mercury	QC60689	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	103.8	-	
		MS	80 - 120	98.0	-	
Aluminum	QC60700	LCS	90 - 110	95.0	-	EPA 200.8
		MS	70 - 130	112.8	-	
		MSD	0 - 10	-	7.2	
Antimony	QC60700	LCS	90 - 110	103.5	-	EPA 200.8
		MS	70 - 130	103.8	-	
		MSD	0 - 10	-	0.5	
Arsenic	QC60700	LCS	90 - 110	102.3	-	EPA 200.8
		MS	70 - 130	111.0	-	
		MSD	0 - 10	-	3.0	
Barium	QC60700	LCS	90 - 110	98.9	-	EPA 200.8
		MS	70 - 130	101.5	-	
		MSD	0 - 10	-	0.8	
Beryllium	QC60700	LCS	90 - 110	94.5	-	EPA 200.8
		MS	70 - 130	108.7	-	
		MSD	0 - 10	-	1.0	
Cadmium	QC60700	LCS	90 - 110	97.2	-	EPA 200.8
		MS	70 - 130	102.9	-	
		MSD	0 - 10	-	2.3	
Chromium	QC60700	LCS	90 - 110	102.2	-	EPA 200.8
		MS	70 - 130	103.5	-	
		MSD	0 - 10	-	2.2	
Cobalt	QC60700	LCS	90 - 110	104.8	-	EPA 200.8
		MS	70 - 130	101.6	-	
		MSD	0 - 10	-	2.4	
Copper	QC60700	LCS	90 - 110	104.6	-	EPA 200.8
		MS	70 - 130	101.2	-	
		MSD	0 - 10	-	0.9	
Lead	QC60700	LCS	90 - 110	91.6	-	EPA 200.8
		MS	70 - 130	90.3	-	
		MSD	0 - 10	-	2.0	
Manganese	QC60700	LCS	90 - 110	107.0	-	EPA 200.8
		MS	70 - 130	96.6	-	
		MSD	0 - 10	-	1.6	
Molybdenum	QC60700	LCS	90 - 110	98.9	-	EPA 200.8
		MS	70 - 130	97.1	-	
		MSD	0 - 10	-	1.3	
Nickel	QC60700	LCS	90 - 110	103.4	-	EPA 200.8
		MS	70 - 130	102.3	-	
		MSD	0 - 10	-	3.8	
Selenium	QC60700	LCS	90 - 110	102.1	-	EPA 200.8
		MS	70 - 130	116.8	-	
		MSD	0 - 10	-	1.2	
Silver	QC60745	LCS	90 - 110	90.2	-	EPA 200.8
	QC60700	LCS	90 - 110	93.8	-	
		MS	70 - 130	79.3	-	
	QC60745	MS	70 - 130	91.7	-	
		MSD	0 - 10	-	0.4	

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
	QC60700	MSD	0 - 10	-	2.8	
Thallium	QC60700	LCS	90 - 110	95.5	-	EPA 200.8
		MS	70 - 130	93.0	-	
		MSD	0 - 10	-	1.6	
Uranium	QC60700	LCS	90 - 110	95.8	-	EPA 200.8
		MS	70 - 130	93.3	-	
		MSD	0 - 10	-	1.8	
Vanadium	QC60700	LCS	90 - 110	102.8	-	EPA 200.8
		MS	70 - 130	107.9	-	
		MSD	0 - 10	-	1.6	
Zinc	QC60700	LCS	90 - 110	100.3	-	EPA 200.8
		MS	70 - 130	99.4	-	
		MSD	0 - 10	-	1.2	
Boron	QC60678	Duplicate	0 - 20	-	9.8	EPA 200.7
		LCS	90 - 110	102.5	-	
		MS	75 - 125	107.5	-	
Calcium	QC60678	Duplicate	0 - 20	-	3.6	EPA 200.7
		LCS	90 - 110	97.5	-	
		MS	75 - 125	100.6	-	
Iron	QC60678	Duplicate	0 - 20	-	0.6	EPA 200.7
		LCS	90 - 110	101.1	-	
		MS	75 - 125	104.2	-	
Nitrate Nitrogen	QC60648	Duplicate	0 - 20	-	1.6	EPA 300.0
		LCS	90 - 110	95.3	-	
		MS	75 - 125	86.4	-	
Nitrite Nitrogen	QC60649	Duplicate	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	90.1	-	
		MS	75 - 125	94.4	-	
Phenols - Total	QC60817	Duplicate	0 - 20	-	0.5	EPA 420.4
		LCS	90 - 110	109.0	-	
		MS	75 - 125	99.6	-	
Sulfate	QC60650	Duplicate	0 - 20	-	1.5	EPA 300.0
		LCS	90 - 110	98.5	-	
		MS	75 - 125	94.9	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Moran	Contact Name:	
Address: 12567 W. Cedar Dr	Address:	Task Number (Lab Use Only)
City Lakewood State CO Zip 80228	City State Zip	CAL Task 221027123 JML
Phone: 303-506-1618	Phone:	
Email: bmolsonm@g-emporia.edu	Email:	
Sample Collector: Brooke Moran		
Sample Collector Phone: 303-506-1618	PO No.:	

Please also email results to:
sergio.rivera@novametallix.com

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Tests Requested

QB022050014
TO BE UPDATED BASED ON EMAIL TO JENNIFER KANMORE ON 10/27/22

Date	Time	Sample ID	No. of Containers	Grab or Composite
10/27/22	11:30	CROSS PORTAL	8	G
10/27/22	12:30	COMPLIANCE WELL	8	G
10/27/22	12:00	CROSS WELL	8	G
10/27/22	13:00	CARIBOU PORTAL	8	G
10/27/22	14:00	CARIBOU WELL	8	G
10/27/22	12:30	COMPLIANCE WELL-FB	8	G

Instructions: FIELD FILTERED THE NITRIC PRESERVED BOTTLE FOR COMPLIANCE WELL, CROSS WELL, & CARIBOU WELL. ALL OTHER BOTTLES ARE UNFILTERED.

C/S Info:
Deliver Via: HD
C/S Charge ☐
Seals Present Yes ☐ No ☐
Temp. 3 °C/Ice yes Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/27/22 4:11 pm	KA	10-27-22				

11n'17

CAL Task
221027123
JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

Prepared For: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood, CO 80228

Attn: Brooke Molson-Moran

Quote Date: Wednesday, May 4, 2022
Turn Around Time: 10 Working Days

Project:
Monthly Groundwater

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Langelier Index	N/A	5	$60.00	$300.00
Water - Ground	Alkalinity	SM 2320-B	5	Incl.	Incl.
Water - Ground	Ca as CaCO3	EPA 200.7	5	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	5	Incl.	Incl.
Water - Ground	Lang Index	SM 2330-B	5	Incl.	Incl.
Water - Ground	pH/ Temp	SM 4500-H-B	5	Incl.	Incl.
Water - Ground	TDS	SM 2540-C	5	Incl.	Incl.
Water - Ground	Nitrate/ Nitrite Nitrogen (Total)	Calculation	5	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	5	$13.00	$65.00
~~Water - Ground~~	~~B - Total~~	EPA 200.7	5	$13.00	$65.00
Water - Ground	Ca - Dis	EPA 200.7	5	$13.00	$65.00
Water - Ground	Fe - Dis	EPA 200.7	5	$13.00	$65.00
Water - Ground	Ag - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Ag - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	Al - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Al - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	As - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Ba - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Be - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Cd - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Co - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Co - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	Cr - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	Cu - Dis yes test	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Cu - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	Mn - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Mo - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Ni - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Pb - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Sb - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Se - Dis	EPA 200.8	5	$16.00	$80.00

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

CAL Task
221027123
JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

~~Water - Ground~~	~~Se - Total~~	~~EPA 200.8~~	5	$16.00	$80.00
Water - Ground	Tl - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	V - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~V - Total~~	~~EPA 200.8~~	5	$16.00	$80.00
Water - Ground	Zn - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Zn - Total~~	~~EPA 200.8~~	5	$16.00	$80.00
Water - Ground	Chloride	EPA 300.0	5	$18.00	$90.00
Water - Ground	Fluoride	EPA 300.0	5	$18.00	$90.00
Water - Ground	Nitrate Nitrogen ~~ANS~~	EPA 300.0	5	$18.00	$90.00
Water - Ground	Nitrite Nitrogen ~~ANS~~	EPA 300.0	5	$18.00	$90.00
Water - Ground	Sulfate	EPA 300.0	5	$18.00	$90.00
Water - Ground	U - Dis	EPA 200.8	5	$23.00	$115.00
Water - Ground	Hg → Need Hg to 0.01mg (Inorganic)	EPA 245.7	5	$27.00	$135.00
Water - Ground	Total Coliform	SM 9221-B	5	$27.00	$135.00
Water - Ground	Cyanide - Free	ASTM D4282-15	5	$40.00	$200.00
Water - Ground	Phenols	EPA 420.4	5	$55.00	$275.00
Water - Ground	Metals (Sub)	EPA 200.7/EPA 200.8	5	$67.20	$336.00
Water - Ground	Gross Alpha/Beta (Sub)	SM 7110-B	5	$68.40	$342.00
Water - Ground	Asbestos (Sub)	TEM	5	$120.00	$600.00
Water - Ground	625 SOCs	EPA 625	5	$225.00	$1,125.00
Shipping	Sample Shipment to Outside Lab	UPS	2	$30.00	$60.00
Shipping	Ext. Sample Shipment to Outside Lab	UPS or FedEx	1	$50.00	$50.00

Metals (sub) for dissolved lithium. Hg - dissolved. Quote revised 10/26 per customer's request.

$6,383.00

****Samples should be shipped or hand delivered the same day they are collected.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Contract analysis pricing subject to change. Sub-Contract radiological analysis turn-around time is 4 to 6 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts, all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

Jessi Lupfer

To: Jennifer Kanmore
Subject: RE: GIR Quote

From: Brooke Molson Moran <bmolsonm@g.emporia.edu>
Sent: Monday, October 31, 2022 1:41 PM
To: Jennifer Kanmore <jenniferkanmore@coloradolab.com>
Subject: Re: GIR Quote

Hello Jennifer,

One request for the quote- may we please keep TR for silver (in addition to dissolved) and include it for last week's samples? With respect to our required duplicate and matrix spikes, can we please have those included for the Compliance Well and the Caribou Portal samples?

Also, I will continue to be the contact for our Monthly Groundwater Project, can we please add myself (bmolsonm@g.emporia.edu) and Sergio Rivera (sergio.rivera@novametallix.com) as the recipients of the analytical report? We will need the pdf and excel files, if available.

Happy Halloween!

Brooke Moran
Grand Island Resources

On Fri, Oct 28, 2022 at 2:58 PM Jennifer Kanmore <jenniferkanmore@coloradolab.com> wrote:

> Sounds good! Have a great weekend as well!
>
> Thanks,
>
> **Jennifer Kanmore**
> Project Manager
> Colorado Analytical Laboratories
> 10411 Heinz Way
> Commerce City, CO 80640
> P: 303-659-2313 Ext. 607

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 10/27/22 11:30 AM
Lab Number: 221027123-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	58.4	16 - 145
2-Fluorobiphenyl	85.9	60 - 140
2-Fluorophenol	83.4	60 - 140
Nitrobenzene-d5	92.2	15 - 314
Phenol-d5	86.6	8 - 424
p-Terphenyl-d14	254.3	44 - 135

Surrogate is above QC criteria; 5/6 surrogates meet QC criteria. MBS 11/4/2022

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 10/27/22 12:30 PM
Lab Number: 221027123-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	44.7	16 - 145
2-Fluorobiphenyl	84.2	60 - 140
2-Fluorophenol	79.4	60 - 140
Nitrobenzene-d5	92.7	15 - 314
Phenol-d5	81.1	8 - 424
p-Terphenyl-d14	280.5	44 - 135

Surrogate is above QC criteria; 5/6 surrogates meet QC criteria. MBS 11/4/2022

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 10/27/22 12:00 PM
Lab Number: 221027123-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	40.7	16 - 145
2-Fluorobiphenyl	89.0	60 - 140
2-Fluorophenol	84.1	60 - 140
Nitrobenzene-d5	96.4	15 - 314
Phenol-d5	84.4	8 - 424
p-Terphenyl-d14	299.6	44 - 135

Surrogate is above QC criteria; 5/6 surrogates meet QC criteria. MBS 11/4/2022

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 10/27/22 1:00 PM
Lab Number: 221027123-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	38.8	16 - 145
2-Fluorobiphenyl	93.5	60 - 140
2-Fluorophenol	85.1	60 - 140
Nitrobenzene-d5	99.7	15 - 314
Phenol-d5	81.7	8 - 424
p-Terphenyl-d14	340.5	44 - 135

Surrogate is above QC criteria; 5/6 surrogates meet QC criteria. MBS 11/4/2022

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 10/27/22 2:00 PM
Lab Number: 221027123-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	43.5	16 - 145
2-Fluorobiphenyl	88.7	60 - 140
2-Fluorophenol	77.2	60 - 140
Nitrobenzene-d5	96.4	15 - 314
Phenol-d5	81.1	8 - 424
p-Terphenyl-d14	348.6	44 - 135

Surrogate is above QC criteria; 5/6 surrogates meet QC criteria. MBS 11/4/2022

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221027123
Client PO:
Client Project: Monthly Groundwater

Date Received: 10/27/22
Date Reported: 11/28/22
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 10/27/22 12:30 PM
Lab Number: 221027123-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	11/2/22	QC60691	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	39.9	16 - 145
2-Fluorobiphenyl	91.1	60 - 140
2-Fluorophenol	76.6	60 - 140
Nitrobenzene-d5	99.8	15 - 314
Phenol-d5	82.1	8 - 424
p-Terphenyl-d14	380.0	44 - 135

Surrogate is above QC criteria; 5/6 surrogates meet QC criteria. MBS 11/4/2022

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 221027123

Report To: Patrick Delaney
Company: Grand Island Resources LLC

Receive Date: 10/27/22
Project Name: Monthly Groundwater

Test	QC Batch ID	QC Type	Result	Method
2-Chlorophenol	QC60691	Method Blank	ND	EPA 625
Phenol	QC60691	Method Blank	ND	EPA 625

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
2-Chlorophenol	QC60691	LCS	55 - 130	89.3	-	EPA 625
		LCS Dup	-	93.0	-	
		MS	23 - 134	91.3	-	
		MSD	0 - 61	-	3.2	
Phenol	QC60691	LCS	48 - 130	81.1	-	EPA 625
		LCS Dup	-	84.3	-	
		MS	5 - 120	83.6	-	
		MSD	0 - 64	-	4.0	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Moran	Contact Name:	
Address: 12567 W. Cedar Dr	Address:	Task Number (Lab Use Only) CAL Task 221027123 JML
City Lakewood State CO Zip 80228	City State Zip	
Phone: 303-506-1618	Phone:	
Email: bmolsonm@g-emporia.edu	Email:	
Sample Collector: Brooke Moran		
Sample Collector Phone: 303-506-1618	PO No.:	

Please also email results to:
sergio.rivera@novametallix.com

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Tests Requested

QB022050014
TO BE UPDATED BASED ON EMAIL TO JENNIFER KANMORE ON 10/27/22

Date	Time	Sample ID	No. of Containers	Grab or Composite
10/27/22	11:30	CROSS PORTAL	8	G
10/27/22	12:30	COMPLIANCE WELL	8	G
10/27/22	12:00	CROSS WELL	8	G
10/27/22	13:00	CARIBOU PORTAL	8	G
10/27/22	14:00	CARIBOU WELL	8	G
10/27/22	12:30	COMPLIANCE WELL-FB	8	G

Instructions: FIELD FILTERED THE NITRIC PRESERVED BOTTLE FOR COMPLIANCE WELL, CROSS WELL, & CARIBOU WELL. ALL OTHER BOTTLES ARE UNFILTERED.

C/S Info:
Deliver Via: HD
C/S Charge ☐

Seals Present Yes ☐ No ☐
Temp. 3 °C/Ice yes Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
	10/27/22 4:11 pm	KA	10-27-22				

11/17

CAL Task
221027123
JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

Prepared For: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood, CO 80228

Attn: Brooke Molson-Moran

Quote Date: Wednesday, May 4, 2022
Turn Around Time: 10 Working Days

Project:
Monthly Groundwater

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Langelier Index	N/A	5	$60.00	$300.00
Water - Ground	Alkalinity	SM 2320-B	5	Incl.	Incl.
Water - Ground	Ca as CaCO3	EPA 200.7	5	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	5	Incl.	Incl.
Water - Ground	Lang Index	SM 2330-B	5	Incl.	Incl.
Water - Ground	pH/ Temp	SM 4500-H-B	5	Incl.	Incl.
Water - Ground	TDS	SM 2540-C	5	Incl.	Incl.
Water - Ground	Nitrate/ Nitrite Nitrogen (Dis)	Calculation	5	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	5	$13.00	$65.00
~~Water - Ground~~	~~B - Total~~	EPA 200.7	5	$13.00	$65.00
Water - Ground	Ca - Dis	EPA 200.7	5	$13.00	$65.00
Water - Ground	Fe - Dis	EPA 200.7	5	$13.00	$65.00
Water - Ground	Ag - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Ag - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	Al - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Al - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	As - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Ba - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Be - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Cd - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Co - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Co - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	Cr - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	Cu - Dis yes test	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Cu - Total~~	EPA 200.8	5	$16.00	$80.00
Water - Ground	Mn - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Mo - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Ni - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Pb - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Sb - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	Se - Dis	EPA 200.8	5	$16.00	$80.00

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

CAL Task
221027123
JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

~~Water - Ground~~	~~Se - Total~~	~~EPA 200.8~~	5	$16.00	$80.00
Water - Ground	Tl - Dis	EPA 200.8	5	$16.00	$80.00
Water - Ground	V - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~V - Total~~	~~EPA 200.8~~	5	$16.00	$80.00
Water - Ground	Zn - Dis	EPA 200.8	5	$16.00	$80.00
~~Water - Ground~~	~~Zn - Total~~	~~EPA 200.8~~	5	$16.00	$80.00
Water - Ground	Chloride	EPA 300.0	5	$18.00	$90.00
Water - Ground	Fluoride	EPA 300.0	5	$18.00	$90.00
Water - Ground	Nitrate Nitrogen ADD	EPA 300.0	5	$18.00	$90.00
Water - Ground	Nitrite Nitrogen ADD	EPA 300.0	5	$18.00	$90.00
Water - Ground	Sulfate	EPA 300.0	5	$18.00	$90.00
Water - Ground	U - Dis	EPA 200.8	5	$23.00	$115.00
Water - Ground	Hg → Need Hg to 0.01mg (EPA 245.7 Hg to 0.002mg (Inorganic)	EPA 245.7	5	$27.00	$135.00
Water - Ground	Total Coliform	SM 9221-B	5	$27.00	$135.00
Water - Ground	Cyanide - Free	ASTM D4282-15	5	$40.00	$200.00
Water - Ground	Phenols	EPA 420.4	5	$55.00	$275.00
Water - Ground	Metals (Sub)	EPA 200.7/EPA 200.8	5	$67.20	$336.00
Water - Ground	Gross Alpha/Beta (Sub)	SM 7110-B	5	$68.40	$342.00
Water - Ground	Asbestos (Sub)	TEM	5	$120.00	$600.00
Water - Ground	625 SOCs	EPA 625	5	$225.00	$1,125.00
Shipping	Sample Shipment to Outside Lab	UPS	2	$30.00	$60.00
Shipping	Ext. Sample Shipment to Outside Lab	UPS or FedEx	1	$50.00	$50.00

Metals (sub) for dissolved lithium. Hg - dissolved. Quote revised 10/26 per customer's request.

$6,383.00

****Samples should be shipped or hand delivered the same day they are collected.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Contract analysis pricing subject to change. Sub-Contract radiological analysis turn-around time is 4 to 6 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts, all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

Jessi Lupfer

To: Jennifer Kanmore
Subject: RE: GIR Quote

From: Brooke Molson Moran <bmolsonm@g.emporia.edu>
Sent: Monday, October 31, 2022 1:41 PM
To: Jennifer Kanmore <jenniferkanmore@coloradolab.com>
Subject: Re: GIR Quote

Hello Jennifer,

One request for the quote- may we please keep TR for silver (in addition to dissolved) and include it for last week's samples? With respect to our required duplicate and matrix spikes, can we please have those included for the Compliance Well and the Caribou Portal samples?

Also, I will continue to be the contact for our Monthly Groundwater Project, can we please add myself (bmolsonm@g.emporia.edu) and Sergio Rivera (sergio.rivera@novametallix.com) as the recipients of the analytical report? We will need the pdf and excel files, if available.

Happy Halloween!

Brooke Moran
Grand Island Resources

On Fri, Oct 28, 2022 at 2:58 PM Jennifer Kanmore <jenniferkanmore@coloradolab.com> wrote:

> Sounds good! Have a great weekend as well!
>
> Thanks,
>
> **Jennifer Kanmore**
> Project Manager
> Colorado Analytical Laboratories
> 10411 Heinz Way
> Commerce City, CO 80640
> P: 303-659-2313 Ext. 607

Laboratory ID: 0055

National Testing Laboratories, Ltd

556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 438183

11/14/2022

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Cross Portal
Source City: Nederland
Source State: CO

Date/Time Received: 10/28/2022 08:58

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	10/27/2022 11:30		10/28/2022 14:50
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	10/27/2022 11:30		10/28/2022 15:15
			MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	1	10/27/2022 11:30		10/28/2022 11:05

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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National Testing Laboratories, Ltd

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ANALYTICAL REPORTS

SAMPLE CODE: 438184

11/14/2022

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Compliance Well
Source City: Nederland
Source State: CO

Date/Time Received: 10/28/2022 08:58

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

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"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	10/27/2022 12:30		10/28/2022 14:50
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	10/27/2022 12:30		10/28/2022 15:15
			MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	1	10/27/2022 12:30		10/28/2022 11:05

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 438185

11/14/2022

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Cross Well
Source City: Nederland
Source State: CO

Date/Time Received: 10/28/2022 08:58

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	10/27/2022 12:00		10/28/2022 14:50
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	10/27/2022 12:00		10/28/2022 15:15
			MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	1	10/27/2022 12:00		10/28/2022 11:05

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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National Testing Laboratories, Ltd

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ANALYTICAL REPORTS

SAMPLE CODE: 438186

11/14/2022

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Caribou Portal
Source City: Nederland
Source State: CO

Date/Time Received: 10/28/2022 08:58

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	10/27/2022 13:00		10/28/2022 14:50
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	10/27/2022 13:00		10/28/2022 15:15
			MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	1	10/27/2022 13:00		10/28/2022 11:05

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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National Testing Laboratories, Ltd

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ANALYTICAL REPORTS

SAMPLE CODE: 438187

11/14/2022

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Caribou Well
Source City: Nederland
Source State: CO

Date/Time Received: 10/28/2022 08:58

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	10/27/2022 14:00		10/28/2022 14:50
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	10/27/2022 14:00		10/28/2022 15:15
			MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	1	10/27/2022 14:00		10/28/2022 11:05

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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APPENDIX A.2 NOVEMBER 2022 GROUNDWATER AND EFFLUENT ANALYTICAL RESULTS

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 11/29/22 11:00 AM
Lab Number: 221129086-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**0.38 mg/L**	EPA 300.0	0.01 mg/L	11/30/22	QC61362	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	11/30/22	QC61325	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	11/30/22	QC61347	MLT
Nitrate Nitrogen	**0.07 mg/L**	EPA 300.0	0.05 mg/L	11/30/22	QC61348	MLT
Nitrate/ Nitrite Nitrogen	**0.07 mg/L**	Calculation	0.05 mg/L	12/1/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	11/30/22	QC61349	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/6/22	QC61429	DPL
Sulfate	**10.97 mg/L**	EPA 300.0	0.01 mg/L	11/30/22	QC61350	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	11/23/22	-	NH
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	12/6/22	QC61414	MLT
Aluminum	**0.002 mg/L**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/30/22	QC61328	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/30/22	QC61328	MBN
Barium	**0.0711 mg/L**	EPA 200.8	0.0007 mg/L	11/30/22	QC61328	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Cadmium	**0.0009 mg/L**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/30/22	QC61328	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Copper	**0.0019 mg/L**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Lead	**0.0009 mg/L**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Manganese	**0.0129 mg/L**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Molybdenum	**0.0073 mg/L**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/30/22	QC61328	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 11/29/22 11:00 AM
Lab Number: 221129086-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Uranium	**0.0009 mg/L**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Zinc	**0.206 mg/L**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/1/22	QC61359	MAT
Calcium	**26.7 mg/L**	EPA 200.7	0.1 mg/L	12/1/22	QC61359	MAT
Iron	**0.007 mg/L**	EPA 200.7	0.005 mg/L	12/1/22	QC61359	MAT
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 11/29/22 11:30 AM
Lab Number: 221129086-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**2.86 mg/L**	EPA 300.0	0.01 mg/L	11/30/22	QC61362	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	11/30/22	QC61325	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	11/30/22	QC61347	MLT
Nitrate Nitrogen	**0.19 mg/L**	EPA 300.0	0.05 mg/L	11/30/22	QC61348	MLT
Nitrate/ Nitrite Nitrogen	**0.19 mg/L**	Calculation	0.05 mg/L	12/1/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	11/30/22	QC61349	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/6/22	QC61429	DPL
Sulfate	**8.89 mg/L**	EPA 300.0	0.01 mg/L	11/30/22	QC61350	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	11/23/22	-	NH
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	12/6/22	QC61414	MLT
Aluminum	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/30/22	QC61328	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/30/22	QC61328	MBN
Barium	**0.0281 mg/L**	EPA 200.8	0.0007 mg/L	11/30/22	QC61328	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/30/22	QC61328	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Copper	**0.0038 mg/L**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Lead	**0.0005 mg/L**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Manganese	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Molybdenum	**0.0006 mg/L**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/30/22	QC61328	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 11/29/22 11:30 AM
Lab Number: 221129086-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Zinc	**0.859 mg/L**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/1/22	QC61359	MAT
Calcium	**16.9 mg/L**	EPA 200.7	0.1 mg/L	12/1/22	QC61359	MAT
Iron	**ND**	EPA 200.7	0.005 mg/L	12/1/22	QC61359	MAT
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 11/29/22 12:00 PM
Lab Number: 221129086-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**2.92 mg/L**	EPA 300.0	0.01 mg/L	11/30/22	QC61362	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	11/30/22	QC61325	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	11/30/22	QC61347	MLT
Nitrate Nitrogen	**0.27 mg/L**	EPA 300.0	0.05 mg/L	11/30/22	QC61348	MLT
Nitrate/ Nitrite Nitrogen	**0.27 mg/L**	Calculation	0.05 mg/L	12/1/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	11/30/22	QC61349	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/6/22	QC61429	DPL
Sulfate	**9.60 mg/L**	EPA 300.0	0.01 mg/L	11/30/22	QC61350	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	11/23/22	-	NH
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	12/6/22	QC61414	MLT
Aluminum	**0.001 mg/L**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/30/22	QC61328	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/30/22	QC61328	MBN
Barium	**0.0407 mg/L**	EPA 200.8	0.0007 mg/L	11/30/22	QC61328	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/30/22	QC61328	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Copper	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Lead	**0.0001 mg/L**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Manganese	**0.0091 mg/L**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Molybdenum	**0.0042 mg/L**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/30/22	QC61328	MBN

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 11/29/22 12:00 PM
Lab Number: 221129086-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Zinc	**0.084 mg/L**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/1/22	QC61359	MAT
Calcium	**16.7 mg/L**	EPA 200.7	0.1 mg/L	12/1/22	QC61359	MAT
Iron	**0.007 mg/L**	EPA 200.7	0.005 mg/L	12/1/22	QC61359	MAT
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

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Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 11/29/22 12:00 PM
Lab Number: 221129086-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**ND**	EPA 300.0	0.01 mg/L	11/30/22	QC61362	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	11/30/22	QC61325	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	11/30/22	QC61347	MLT
Nitrate Nitrogen	**ND**	EPA 300.0	0.05 mg/L	11/30/22	QC61348	MLT
Nitrate/ Nitrite Nitrogen	**ND**	Calculation	0.05 mg/L	12/1/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	11/30/22	QC61349	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/6/22	QC61429	DPL
Sulfate	**ND**	EPA 300.0	0.01 mg/L	11/30/22	QC61350	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	11/23/22	-	NH
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	12/6/22	QC61414	MLT
Aluminum	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/30/22	QC61328	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/30/22	QC61328	MBN
Barium	**ND**	EPA 200.8	0.0007 mg/L	11/30/22	QC61328	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/30/22	QC61328	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Copper	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Lead	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Manganese	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Molybdenum	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/30/22	QC61328	MBN

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 11/29/22 12:00 PM
Lab Number: 221129086-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Zinc	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/1/22	QC61359	MAT
Calcium	**ND**	EPA 200.7	0.1 mg/L	12/1/22	QC61359	MAT
Iron	**ND**	EPA 200.7	0.005 mg/L	12/1/22	QC61359	MAT
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 11/29/22 12:30 PM
Lab Number: 221129086-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**0.54 mg/L**	EPA 300.0	0.01 mg/L	11/30/22	QC61362	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	11/30/22	QC61325	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	11/30/22	QC61347	MLT
Nitrate Nitrogen	**0.12 mg/L**	EPA 300.0	0.05 mg/L	11/30/22	QC61348	MLT
Nitrate/ Nitrite Nitrogen	**0.12 mg/L**	Calculation	0.05 mg/L	12/1/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	11/30/22	QC61349	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/6/22	QC61429	DPL
Sulfate	**10.51 mg/L**	EPA 300.0	0.01 mg/L	11/30/22	QC61350	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	11/23/22	-	NH
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	12/6/22	QC61414	MLT
Aluminum	**0.002 mg/L**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/30/22	QC61328	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/30/22	QC61328	MBN
Barium	**0.0540 mg/L**	EPA 200.8	0.0007 mg/L	11/30/22	QC61328	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/30/22	QC61328	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Copper	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Lead	**0.0002 mg/L**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Manganese	**0.0031 mg/L**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Molybdenum	**0.0057 mg/L**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/30/22	QC61328	MBN

Abbreviations/ References:

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 11/29/22 12:30 PM
Lab Number: 221129086-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Uranium	**0.0059 mg/L**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Zinc	**0.008 mg/L**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/1/22	QC61359	MAT
Calcium	**27.8 mg/L**	EPA 200.7	0.1 mg/L	12/1/22	QC61359	MAT
Iron	**0.005 mg/L**	EPA 200.7	0.005 mg/L	12/1/22	QC61359	MAT
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN

Abbreviations/ References:

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Date Analyzed = Date Test Completed

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal - FB
Sample Date/Time: 11/29/22 12:30 PM
Lab Number: 221129086-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**ND**	EPA 300.0	0.01 mg/L	11/30/22	QC61362	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	11/30/22	QC61325	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	11/30/22	QC61347	MLT
Nitrate Nitrogen	**ND**	EPA 300.0	0.05 mg/L	11/30/22	QC61348	MLT
Nitrate/ Nitrite Nitrogen	**ND**	Calculation	0.05 mg/L	12/1/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	11/30/22	QC61349	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/6/22	QC61429	DPL
Sulfate	**ND**	EPA 300.0	0.01 mg/L	11/30/22	QC61350	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	11/23/22	-	NH
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	12/6/22	QC61414	MLT
Aluminum	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/30/22	QC61328	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/30/22	QC61328	MBN
Barium	**ND**	EPA 200.8	0.0007 mg/L	11/30/22	QC61328	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/30/22	QC61328	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Copper	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Lead	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Manganese	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Molybdenum	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/30/22	QC61328	MBN

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal - FB
Sample Date/Time: 11/29/22 12:30 PM
Lab Number: 221129086-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Zinc	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/1/22	QC61359	MAT
Calcium	**ND**	EPA 200.7	0.1 mg/L	12/1/22	QC61359	MAT
Iron	**ND**	EPA 200.7	0.005 mg/L	12/1/22	QC61359	MAT
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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Analytical Results

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Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 11/29/22 1:30 PM
Lab Number: 221129086-07

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**0.43 mg/L**	EPA 300.0	0.01 mg/L	11/30/22	QC61362	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	11/30/22	QC61325	DPL
Fluoride	**ND**	EPA 300.0	0.10 mg/L	11/30/22	QC61347	MLT
Nitrate Nitrogen	**0.08 mg/L**	EPA 300.0	0.05 mg/L	11/30/22	QC61348	MLT
Nitrate/ Nitrite Nitrogen	**0.08 mg/L**	Calculation	0.05 mg/L	12/1/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.03 mg/L	11/30/22	QC61349	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/6/22	QC61429	DPL
Sulfate	**2.59 mg/L**	EPA 300.0	0.01 mg/L	11/30/22	QC61350	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	11/23/22	-	NH
Dissolved						
Mercury	**ND**	EPA 245.7	0.0002 mg/L	12/6/22	QC61414	MLT
Aluminum	**0.002 mg/L**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	11/30/22	QC61328	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	11/30/22	QC61328	MBN
Barium	**0.0061 mg/L**	EPA 200.8	0.0007 mg/L	11/30/22	QC61328	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	11/30/22	QC61328	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Copper	**0.1797 mg/L**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Lead	**0.0002 mg/L**	EPA 200.8	0.0001 mg/L	11/30/22	QC61328	MBN
Manganese	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Molybdenum	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	11/30/22	QC61328	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 11/29/22 1:30 PM
Lab Number: 221129086-07

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	11/30/22	QC61328	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	11/30/22	QC61328	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Zinc	**0.002 mg/L**	EPA 200.8	0.001 mg/L	11/30/22	QC61328	MBN
Boron	**0.03 mg/L**	EPA 200.7	0.01 mg/L	12/1/22	QC61359	MAT
Calcium	**3.8 mg/L**	EPA 200.7	0.1 mg/L	12/1/22	QC61359	MAT
Iron	**ND**	EPA 200.7	0.005 mg/L	12/1/22	QC61359	MAT
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	11/30/22	QC61328	MBN

Abbreviations/ References:

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Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC

Receive Date: 11/29/22
Project Name: Monthly Groundwater

Test	QC Batch ID	QC Type	Result	Method
Chloride	QC61362	Blank	ND	EPA 300.0
Cyanide-Free	QC61325	Blank	ND	ASTM D4282-15
Fluoride	QC61347	Blank	ND	EPA 300.0
Mercury	QC61414	Method Blank	ND	EPA 245.7
Aluminum	QC61328	Method Blank	ND	EPA 200.8
Antimony	QC61328	Method Blank	ND	EPA 200.8
Arsenic	QC61328	Method Blank	ND	EPA 200.8
Barium	QC61328	Method Blank	ND	EPA 200.8
Beryllium	QC61328	Method Blank	ND	EPA 200.8
Cadmium	QC61328	Method Blank	ND	EPA 200.8
Chromium	QC61328	Method Blank	ND	EPA 200.8
Cobalt	QC61328	Method Blank	ND	EPA 200.8
Copper	QC61328	Method Blank	ND	EPA 200.8
Lead	QC61328	Method Blank	ND	EPA 200.8
Manganese	QC61328	Method Blank	ND	EPA 200.8
Molybdenum	QC61328	Method Blank	ND	EPA 200.8
Nickel	QC61328	Method Blank	ND	EPA 200.8
Selenium	QC61328	Method Blank	ND	EPA 200.8
Silver	QC61328	Method Blank	ND	EPA 200.8
Thallium	QC61328	Method Blank	ND	EPA 200.8
Uranium	QC61328	Method Blank	ND	EPA 200.8
Vanadium	QC61328	Method Blank	ND	EPA 200.8
Zinc	QC61328	Method Blank	ND	EPA 200.8
Boron	QC61359	Method Blank	ND	EPA 200.7
Calcium	QC61359	Method Blank	ND	EPA 200.7
Iron	QC61359	Method Blank	ND	EPA 200.7
Nitrate Nitrogen	QC61348	Blank	ND	EPA 300.0
Nitrite Nitrogen	QC61349	Blank	ND	EPA 300.0
Phenols - Total	QC61429	Blank	ND	EPA 420.4
Sulfate	QC61350	Blank	ND	EPA 300.0

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Chloride	QC61362	Duplicate	0 - 20	-	8.8	EPA 300.0
		LCS	90 - 110	101.9	-	
		MS	75 - 125	94.8	-	
Cyanide-Free	QC61325	Duplicate	0 - 20	-	0.0	ASTM D4282-15
		LCS	90 - 110	103.1	-	
		MS	75 - 125	105.5	-	
		MSD	0 - 30	-	0.0	
Fluoride	QC61347	Duplicate	0 - 20	-	1.8	EPA 300.0
		LCS	90 - 110	96.8	-	
		MS	75 - 125	89.6	-	

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Date Analyzed = Date Test Completed

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(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Mercury	QC61414	Duplicate	0 - 20	-	0.0	EPA 245.7
		LCS	90 - 110	106.4	-	
		MS	80 - 120	108.0	-	
Aluminum	QC61328	LCS	90 - 110	99.5	-	EPA 200.8
		MS	70 - 130	105.6	-	
		MSD	0 - 10	-	5.2	
Antimony	QC61328	LCS	90 - 110	100.5	-	EPA 200.8
		MS	70 - 130	109.0	-	
		MSD	0 - 10	-	0.6	
Arsenic	QC61328	LCS	90 - 110	100.3	-	EPA 200.8
		MS	70 - 130	120.0	-	
		MSD	0 - 10	-	2.8	
Barium	QC61328	LCS	90 - 110	97.3	-	EPA 200.8
		MS	70 - 130	103.0	-	
		MSD	0 - 10	-	1.5	
Beryllium	QC61328	LCS	90 - 110	97.1	-	EPA 200.8
		MS	70 - 130	115.3	-	
		MSD	0 - 10	-	7.5	
Cadmium	QC61328	LCS	90 - 110	99.0	-	EPA 200.8
		MS	70 - 130	107.8	-	
		MSD	0 - 10	-	0.5	
Chromium	QC61328	LCS	90 - 110	102.1	-	EPA 200.8
		MS	70 - 130	110.4	-	
		MSD	0 - 10	-	2.1	
Cobalt	QC61328	LCS	90 - 110	101.9	-	EPA 200.8
		MS	70 - 130	106.5	-	
		MSD	0 - 10	-	3.1	
Copper	QC61328	LCS	90 - 110	98.0	-	EPA 200.8
		MS	70 - 130	108.0	-	
		MSD	0 - 10	-	1.1	
Lead	QC61328	LCS	90 - 110	93.5	-	EPA 200.8
		MS	70 - 130	98.1	-	
		MSD	0 - 10	-	7.8	
Manganese	QC61328	LCS	90 - 110	101.2	-	EPA 200.8
		MS	70 - 130	86.4	-	
		MSD	0 - 10	-	0.1	
Molybdenum	QC61328	LCS	90 - 110	97.2	-	EPA 200.8
		MS	70 - 130	118.9	-	
		MSD	0 - 10	-	1.4	
Nickel	QC61328	LCS	90 - 110	103.3	-	EPA 200.8
		MS	70 - 130	103.9	-	
		MSD	0 - 10	-	2.6	
Selenium	QC61328	LCS	90 - 110	102.2	-	EPA 200.8
		MS	70 - 130	113.3	-	
		MSD	0 - 10	-	5.1	
Silver	QC61328	LCS	90 - 110	103.8	-	EPA 200.8
		MS	70 - 130	87.6	-	
		MSD	0 - 10	-	0.3	
Thallium	QC61328	LCS	90 - 110	97.9	-	EPA 200.8
		MS	70 - 130	98.5	-	
		MSD	0 - 10	-	7.9	

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Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
Uranium	QC61328	LCS	90 - 110	96.9	-	EPA 200.8
		MS	70 - 130	103.0	-	
		MSD	0 - 10	-	9.5	
Vanadium	QC61328	LCS	90 - 110	100.1	-	EPA 200.8
		MS	70 - 130	111.9	-	
		MSD	0 - 10	-	2.8	
Zinc	QC61328	LCS	90 - 110	98.8	-	EPA 200.8
		MS	70 - 130	105.9	-	
		MSD	0 - 10	-	2.5	
Boron	QC61359	Duplicate	0 - 20	-	15.8	EPA 200.7
	Boron Not requested. SN 12/5/22					
		LCS	90 - 110	100.5	-	
		MS	75 - 125	111.2	-	
Calcium	QC61359	Duplicate	0 - 20	-	6.1	EPA 200.7
		LCS	90 - 110	98.7	-	
		MS	75 - 125	98.9	-	
Iron	QC61359	Duplicate	0 - 20	-	6.2	EPA 200.7
		LCS	90 - 110	101.0	-	
		MS	75 - 125	100.0	-	
Nitrate Nitrogen	QC61348	Duplicate	0 - 20	-	5.5	EPA 300.0
		LCS	90 - 110	101.7	-	
		MS	75 - 125	89.8	-	
Nitrite Nitrogen	QC61349	Duplicate	0 - 20	-	0.0	EPA 300.0
		LCS	90 - 110	91.5	-	
		MS	75 - 125	93.3	-	
Phenols - Total	QC61429	Duplicate	0 - 20	-	9.4	EPA 420.4
		LCS	90 - 110	97.3	-	
		MS	75 - 125	93.4	-	
Sulfate	QC61350	Duplicate	0 - 20	-	3.1	EPA 300.0
		LCS	90 - 110	100.5	-	
		MS	75 - 125	95.6	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
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ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Moran	Contact Name:	
Address: 12567 W. Cedar Dr.	Address:	Task Number (Lab Use Only)
City Lakewood State CO Zip 80228	City State Zip	CAL Task 221129086 JML
Phone: 303-506-1618	Phone:	
Email: bmolsonm@g.emporia.edu	Email: sergio.rivera@novametallix.com	
Sample Collector: BM		
Sample Collector Phone: 303-506-1618	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite	Tests Requested
11/29/22	11:00	CROSS PORTAL	9	G	QBO220500014 UPDATED 10/27/22
11/29/22	11:30	CROSS WELL	9	G	
11/29/22	12:00	COMPLIANCE WELL	9	G	
11/29/22	12:00	COMPLIANCE WELL-FB	9	G	
11/29/22	12:30	CARIBOU PORTAL	9	G	
11/29/22	12:30	CARIBOU PORTAL-FB	9	G	
11/29/22	13:30	CARIBOU WELL	9	G	
		* Per Brooke FB samples not field filtered -JK			

Instructions: FIELD FILTERED FOR ① NITRIC & GROSS ALPHA. OTHER BOTTLES NOT FILTERED

C/S Info:
Deliver Via: HD C/S Charge ☐

Seals Present Yes ☐ No ☐
Temp. 1 °C/Ice Y Sample Pres. Yes ☒ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
	11/29/22 4:30pm	HA	11-29-22 16:50				

CAL Task
221129086

JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

Prepared For: **Grand Island Resources LLC**
12567 W Cedar Dr
Suite 250
Lakewood, CO 80228

Quote Date: **Wednesday, May 4, 2022**
Turn Around Time: **10 Working Days**

Attn: **Brooke Molson-Moran**

Project:
Monthly Groundwater

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Langelier Index	N/A	6	$60.00	$360.00
Water - Ground	Alkalinity	SM 2320-B	6	Incl.	Incl.
Water - Ground	Ca as CaCO3	EPA 200.7	6	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	6	Incl.	Incl.
Water - Ground	Lang Index	SM 2330-B	6	Incl.	Incl.
Water - Ground	pH/ Temp	SM 4500-H-B	6	Incl.	Incl.
Water - Ground	TDS	SM 2540-C	6	Incl.	Incl.
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	6	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ca - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Fe - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ag - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ag - Total	EPA 200.8	6	$16.00	$96.00
Water - Ground	Al - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	As - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ba - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Be - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cd - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Co - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cr - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cu - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mo - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ni - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Pb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Sb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Se - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Tl - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	V - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Zn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Chloride	EPA 300.0	6	$18.00	$108.00

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

CAL Task

221129086

JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO22050014

Water - Ground	Fluoride	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Sulfate	EPA 300.0	6	$18.00	$108.00
Water - Ground	U - Dis	EPA 200.8	6	$23.00	$138.00
Water - Ground	Hg	EPA 245.7	6	$27.00	$162.00
Water - Ground	Total Coliform	SM 9221-B	6	$27.00	$162.00
Water - Ground	Cyanide - Free	ASTM D4282-15	6	$40.00	$240.00
Water - Ground	Phenols	EPA 420.4	6	$55.00	$330.00
Water - Ground	Metals (Sub)	EPA 200.7/EPA 200.8	6	$67.20	$403.20
Water - Ground	Gross Alpha/Beta (Sub)	SM 7110-B	6	$68.40	$410.40
Water - Ground	Asbestos (Sub)	TEM	6	$120.00	$720.00
Water - Ground	625 SOCs	EPA 625	6	$225.00	$1,350.00
Shipping	Sample Shipment to Outside Lab	UPS	2	$30.00	$60.00
Shipping	Ext. Sample Shipment to Outside Lab	UPS or FedEx	1	$50.00	$50.00

Metals (sub) for dissolved lithium. Hg - dissolved. Only 2-Chlorophenol and Phenol needed for 625. Customer field filtering dissolved metals.

$6,983.60

****Samples should be shipped or hand delivered the same day they are collected. Orders that requrie sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts, all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

eurofins | Built Environment Testing
Reservoirs

December 04, 2022

Subcontractor Number:
Laboratory Report: **RES 543731-1**
Project #/P.O. #: **221129086**
Project Description: **Grand Island Resources**

Jessi Lupfer
Colorado Analytical Laboratories, Inc.
10411 Heinz Way
Commerce City CO 80640

Dear Jessi,

Eurofins Reservoirs is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA LAP, LLC), Lab ID 101533 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Eurofins Reservoirs has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 543731-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Eurofins Reservoirs will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed, as received by the customer. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Eurofins Reservoirs Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer
by Norberto Zimbelman

Jeanne Spencer
President

DATA QA
12/04/2022

EUROFINS RESERVOIRS ENVIRONMENTAL, INC

NVLAP Lab Code 101896-0
AIHA LAP, LLC. LAB ID 101533

TABLE: I ANALYSIS: TEM WATER SAMPLE ANALYTICAL RESULTS

RES Job Number: **RES 543731-1**
Client: **Colorado Analytical Laboratories, Inc.**
Client Project/P.O.: **221129086**
Client Project Description: **Grand Island Resources**
Date Samples Received: **November 30, 2022**
Analysis Type: **REI TEM SOP / USEPA 100.2-M**
Turnaround: **Standard 10**
Date Samples Analyzed: **December 01 - December 04, 2022**

NA = Not Analyzed
NR = Not Received
ND = None Detected
TR = Trace; <1 % Visual Estimate
Trem-Act = Tremolite-Actinolite

Laboratory Sample ID	Client ID Number	Aliquot Deposited on Filter (ml)	Dilution Factor	Total Number of Asbestos Structures Detected	Greater than 10 Micron Length Asbestos Structures Detected	Analytical Sensitivity (million struct/L)	Total Asbestos Concentration (million struct/L)	Greater than 10 Micron Length Asbestos Concentration (million struct/L)
543731 -	221129086-01H Cross Portal	20	1	**ND**	ND	0.17	BAS	BAS
543731 -	221129086-02H Cross Well	20	1	**ND**	ND	0.17	BAS	BAS
543731 -	221129086-03H Compliance Well	20	1	**ND**	ND	0.17	BAS	BAS
543731 -	221129086-04H Compliance Well - FB	20	1	**ND**	ND	0.17	BAS	BAS
543731 -	221129086-05H Caribou Portal	20	1	**ND**	ND	0.17	BAS	BAS
543731 -	221129086-06H Caribou Portal - FB	20	1	**ND**	ND	0.17	BAS	BAS
543731 -	221129086-07H Caribou Well	20	1	**ND**	ND	0.17	BAS	BAS

Filter Material = Mixed Cellulose Ester

Filter Diameter = 25mm

Effective Filter Area = 0mm²

Average Grid Opening = 0.010mm²

Norberto Zimbelman
Analyst

Alejandro Mejia
Analyst

eurofins | Built Environment Testing Reservoirs

RES Job #: 543731

SUBMITTED BY		INVOICE TO		CONTACT INFORMATION		SERIES
Company:	Colorado Analytical Laboratories, Inc.	Company:	Colorado Analytical Laboratories, Inc.	Contact:	Jessi Lupfer	-1 TEM Standard 10
Address:	10411 Heinz Way	Address:	10411 Heinz Way	Phone:	(303) 659-2313	
				Fax:		
	Commerce City, CO 80640		Commerce City, CO 80640	Cell:		
Project Number and/or P.O. #:	221129086			Final Data Deliverable Email Address:		
Project Description/Location:	Grand Island Resources			jessilupfer@coloradolab.com (+ 6 ADDNL. CONTACTS)		

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm

PLM / PCM / TEM DTL RUSH PRIORITY STANDARD

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm

Dust RUSH PRIORITY STANDARD

Metals RUSH PRIORITY STANDARD *PRIOR NOTICE REQUIRED FOR SAME DAY TAT

Organics* SAME DAY RUSH PRIORITY STANDARD

MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm

Viable Analysis** PRIORITY STANDARD

**TAT DEPENDENT ON SPEED OF MICROBIAL GROWTH

Medical Device Analysis RUSH STANDARD

Mold Analysis RUSH PRIORITY STANDARD

****Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.****

Special Instructions:

VALID MATRIX CODES

Air = A	Bulk = B
Dust = D	Food = F
Paint = P	Soil = S
Surface = SU	Swab = SW
Tape = T	Wipe = W
Drinking Water = DW	
Waste Water = WW	
ASTM E1792 approved wipe media only	

LAB NOTES

Client Sample ID Number (Sample ID's must be unique)	ASBESTOS: PLM - Short Report, Long Report, CARB 435	CHEMISTRY: TEM - Drinking Water (EPA 100.2)	CHEMISTRY: PCM - 7400A, 7400B, OSHA	CHEMISTRY: DUST - Total, Respirable	CHEMISTRY: METALS - Analyte(s) Lead Only (7082, 7420, Waste Water, Foodware), Multi Metals (7303,6020A, 200.8, Waste Water, Foodware, OSHA ID-125G), pH (Liquid or Non-Liquid), TCLP, RCRA 8 Scan, Welding Fume Scan, Full Metals Scan	CHEMISTRY: ORGANICS - Methamphetamine, TSS	MICROBIOLOGY: VIABLES - Campylobacter, Bacillus, Salmonella (Culturable or 1-2), Listeria, E. coli O157:H7, E.coli/Coliforms - Plated, S.aureus, Yeast & Mol, Aerobic Plate Count, Coliforms/E.coli - (State Water, Drinking Water, Non-Drinking Water, +/-, Quantification), Lactic Acid, Viable Microbial Count (wo/ID or w/ID), Enterococcus (+/- or Quantification), Legionella (P, NP, C)	MICROBIOLOGY: MEDICAL - Bioburden, LAL	MICROBIOLOGY: MOLD - Spore Trap, Bulk Mold, Particulate Identification	Sample Volume (L) / Area	Length(or Aliquots) x Width(or Area per Aliquot)	Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hh:mm	Laboratory Analysis Instructions
1 221129086-01H Cross Portal		X								1L		W	1	11/29/22	11:00	
2 221129086-02H Cross Well		X								1L		W	1	11/29/22	11:30	
3 221129086-03H Compliance Well		X								1L		W	1	11/29/22	12:00	
4 221129086-04H Compliance Well - FB		X								1L		W	1	11/29/22	12:00	
5 221129086-05H Caribou Portal		X								1L		W	1	11/29/22	12:30	
6 221129086-06H Caribou Portal - FB		X								1L		W	1	11/29/22	12:30	
7 221129086-07H Caribou Well		X								1L		W	1	11/29/22	13:30	

EREI establishes a unique Lab Sample ID, for each sample, by preceding each unique Client Sample ID with the laboratory RES Job Number.
EREI will analyze incoming samples based on information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing, client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall consitute an analytical services agreement with payment terms of NET 30 days. Failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By:		Jessi Lupfer	Date/Time: 11/30/2022 10:08:36	Sample Condition: Acceptable
Received By:		Jessica Parker	Date/Time: 11/30/2022 13:38:07	Carrier: Fed-Ex

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	AME
Primary Scope	JEM-100CX II	**Sample Type**	Water	**Analysis Date**	12/01/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	543731-1	**Date Received**	11/30/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221129086-01H Cross Portal	**Method**	EPA 100.2	**Scope Align**	12/01/2022
Suspension	1000	**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
B	C3-6	ND									
	E3-3	ND									
	F3-3	ND									
	E3-6	ND									
	F3-6	ND									
A	C4-4	ND									
	E4-1	ND									
	E4-4	ND									
	F4-1	ND									
	F4-4	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	NZ
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	12/04/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	543731-1	**Date Received**	11/30/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221129086-02H Cross Well	**Method**	EPA 100.2	**Scope Align**	12/04/2022
Suspension	1000	**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	G4-1	ND									
	F4-1	ND									
	E4-4	ND									
	C4-1	ND									
	C2-6	ND									
B	H3-6	ND									
	G3-6	ND									
	F3-6	ND									
	E3-6	ND									
	C3-6	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	NZ
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	12/04/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	543731-1	**Date Received**	11/30/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221129086-03H Compliance Well	**Method**	EPA 100.2	**Scope Align**	12/04/2022
Suspension	1000	**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	G4-4	ND								Yes	
	F4-4	ND									
	E4-4	ND									
	C4-4	ND									
	B4-4	ND									
B	G4-6	ND									
	F4-6	ND									
	E4-6	ND									
	E3-3	ND									
	C3-3	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	NZ
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	12/04/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	543731-1	**Date Received**	11/30/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221129086-04H Compliance Well - FB	**Method**	EPA 100.2	**Scope Align**	12/04/2022
Suspension	1000	**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
B	G4-6	ND									
	F4-6	ND									
	E4-6	ND									
	C4-6	ND									
	B4-6	ND									
A	L4-3	ND									
	K4-3	ND									
	H4-3	ND									
	G4-3	ND								Yes	
	F4-3	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	NZ
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	12/04/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	543731-1	**Date Received**	11/30/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221129086-05H Caribou Portal	**Method**	EPA 100.2	**Scope Align**	12/04/2022
Suspension	1000	**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
B	H5-1	ND								Yes	
	G5-1	ND								Yes	
	F5-1	ND									
	E5-1	ND									
	C5-1	ND									
	B5-1	ND								Yes	
A	H5-1	ND									
	G5-1	ND									
	F5-1	ND									
	C5-1	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	NZ
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	12/01/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	543731-1	**Date Received**	11/30/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221129086-06H Caribou Portal - FB	**Method**	EPA 100.2	**Scope Align**	12/01/2022
Suspension	1000	**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	G4-1	ND									
	F4-4	ND									
	F4-1	ND									
	E4-4	ND									
	E1-1	ND									
	C3-3	ND									
B	H4-4	ND									
	G4-4	ND									
	F4-4	ND									
	E4-4	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	NZ
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	12/04/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	543731-1	**Date Received**	11/30/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221129086-07H Caribou Well	**Method**	EPA 100.2	**Scope Align**	12/04/2022
Suspension	1000	**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	G3-6	ND								Yes	
	F3-6	ND									
	E5-4	ND									
	C5-4	ND									
	B5-4	ND									
B	E4-6	ND									
	C4-6	ND									
	B4-6	ND									
	A4-6	ND									
	F4-1	ND									

*NAM = Non Asbestos Material

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 11/29/22 11:00 AM
Lab Number: 221129086-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**95.9 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Calcium as CaCO3	**63.2 mg/L**	EPA 200.7	0.1 mg/L	12/1/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Langelier Index	**-1.11 units**	SM 2330-B	units	12/6/22	-	SAN
pH	**6.89 units**	SM 4500-H-B	0.01 units	11/29/22	-	DEK
Temperature	**20 °C**	SM 4500-H-B	1 °C	11/29/22	-	DEK
Total Alkalinity	**95.9 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	11/30/22	QC61333	DEK
Total Dissolved Solids	**143 mg/L**	SM 2540-C	5 mg/L	12/5/22	QC61357	DEK

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 11/29/22 11:30 AM
Lab Number: 221129086-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**61.0 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Calcium as CaCO3	**42.9 mg/L**	EPA 200.7	0.1 mg/L	12/1/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Langelier Index	**-2.10 units**	SM 2330-B	units	12/6/22	-	SAN
pH	**6.19 units**	SM 4500-H-B	0.01 units	11/29/22	-	DEK
Temperature	**20 °C**	SM 4500-H-B	1 °C	11/29/22	-	DEK
Total Alkalinity	**61.0 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	11/30/22	QC61333	DEK
Total Dissolved Solids	**80 mg/L**	SM 2540-C	5 mg/L	12/5/22	QC61357	DEK

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 11/29/22 12:00 PM
Lab Number: 221129086-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**56.9 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Calcium as CaCO3	**42.8 mg/L**	EPA 200.7	0.1 mg/L	12/1/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Langelier Index	**-2.02 units**	SM 2330-B	units	12/6/22	-	SAN
pH	**6.30 units**	SM 4500-H-B	0.01 units	11/29/22	-	DEK
Temperature	**20 °C**	SM 4500-H-B	1 °C	11/29/22	-	DEK
Total Alkalinity	**56.9 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	11/30/22	QC61333	DEK
Total Dissolved Solids	**87 mg/L**	SM 2540-C	5 mg/L	12/5/22	QC61357	DEK

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 11/29/22 12:00 PM
Lab Number: 221129086-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Calcium as CaCO3	**ND**	EPA 200.7	0.1 mg/L	12/1/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Langelier Index	**-7.64 units**	SM 2330-B	units	12/6/22	-	SAN
pH	**6.35 units**	SM 4500-H-B	0.01 units	11/29/22	-	DEK
Temperature	**20 °C**	SM 4500-H-B	1 °C	11/29/22	-	DEK
Total Alkalinity	**ND**	SM 2320-B	4.0 mg/L as CaCO3	11/30/22	QC61333	DEK
Total Dissolved Solids	**ND**	SM 2540-C	5 mg/L	12/5/22	QC61357	DEK

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 11/29/22 12:30 PM
Lab Number: 221129086-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**113.6 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Calcium as CaCO3	**68.0 mg/L**	EPA 200.7	0.1 mg/L	12/1/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Langelier Index	**-0.31 units**	SM 2330-B	units	12/6/22	-	SAN
pH	**7.58 units**	SM 4500-H-B	0.01 units	11/29/22	-	DEK
Temperature	**20 °C**	SM 4500-H-B	1 °C	11/29/22	-	DEK
Total Alkalinity	**113.6 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	11/30/22	QC61333	DEK
Total Dissolved Solids	**136 mg/L**	SM 2540-C	5 mg/L	12/5/22	QC61357	DEK

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal - FB
Sample Date/Time: 11/29/22 12:30 PM
Lab Number: 221129086-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Calcium as CaCO3	**ND**	EPA 200.7	0.1 mg/L	12/1/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Langelier Index	**-6.09 units**	SM 2330-B	units	12/6/22	-	SAN
pH	**6.10 units**	SM 4500-H-B	0.01 units	11/29/22	-	DEK
Temperature	**20 °C**	SM 4500-H-B	1 °C	11/29/22	-	DEK
Total Alkalinity	**ND**	SM 2320-B	4.0 mg/L as CaCO3	11/30/22	QC61333	DEK
Total Dissolved Solids	**ND**	SM 2540-C	5 mg/L	12/5/22	QC61357	DEK

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 11/29/22 1:30 PM
Lab Number: 221129086-07

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**17.9 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Calcium as CaCO3	**9.9 mg/L**	EPA 200.7	0.1 mg/L	12/1/22	-	MAT
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	11/30/22	-	DEK
Langelier Index	**-3.96 units**	SM 2330-B	units	12/6/22	-	SAN
pH	**5.50 units**	SM 4500-H-B	0.01 units	11/29/22	-	DEK
Temperature	**20 °C**	SM 4500-H-B	1 °C	11/29/22	-	DEK
Total Alkalinity	**17.9 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	11/30/22	QC61333	DEK
Total Dissolved Solids	**26 mg/L**	SM 2540-C	5 mg/L	12/5/22	QC61357	DEK

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC

Receive Date: 11/29/22
Project Name: Monthly Groundwater

Test	QC Batch ID	QC Type	Result	Method
Total Alkalinity	QC61333	Blank	ND	SM 2320-B
Total Dissolved Solids	QC61357	Blank	ND	SM 2540-C

Test	QC Batch ID	QC Type	Limits	%Rec	RPD	Method
Total Alkalinity	QC61333	Duplicate	0 - 20	-	2.1	SM 2320-B
		LCS	90 - 110	100.2	-	
		LCS-2	90 - 110	105.5	-	
Total Dissolved Solids	QC61357	Duplicate	0 - 20	-	0.5	SM 2540-C
		LCS	85 - 115	100.9	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Moran	Contact Name:	
Address: 12567 W. Cedar Dr.	Address:	Task Number (Lab Use Only)
City Lakewood State CO Zip 80228	City State Zip	CAL Task 221129086 JML
Phone: 303-506-1618	Phone:	
Email: bmolsonm@g.emporia.edu	Email: sergio.rivera@novametallix.com	
Sample Collector: BM		
Sample Collector Phone: 303-506-1618	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite	Tests Requested
11/29/22	11:00	CROSS PORTAL	9	G	QBO220500014 UPDATED 10/27/22
11/29/22	11:30	CROSS WELL	9	G	
11/29/22	12:00	COMPLIANCE WELL	9	G	
11/29/22	12:00	COMPLIANCE WELL-FB	9	G	
11/29/22	12:30	CARIBOU PORTAL	9	G	
11/29/22	12:30	CARIBOU PORTAL-FB	9	G	
11/29/22	13:30	CARIBOU WELL	9	G	
		* Per Brooke FB samples not field filtered -JK			

Instructions: FIELD FILTERED FOR ① NITRIC & GROSS ALPHA. OTHER BOTTLES NOT FILTERED

C/S Info:
Deliver Via: HD
C/S Charge ☐

Seals Present Yes ☐ No ☐
Temp. 1 °C/Ice Y Sample Pres. Yes ☐ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
	11/29/22 4:30pm	HA	11-29-22 16:50				

CAL Task
221129086

JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

Prepared For: **Grand Island Resources LLC**
12567 W Cedar Dr
Suite 250
Lakewood, CO 80228

Attn: **Brooke Molson-Moran**

Quote Date: **Wednesday, May 4, 2022**
Turn Around Time: **10 Working Days**

Project:
Monthly Groundwater

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Langelier Index	N/A	6	$60.00	$360.00
Water - Ground	Alkalinity	SM 2320-B	6	Incl.	Incl.
Water - Ground	Ca as CaCO3	EPA 200.7	6	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	6	Incl.	Incl.
Water - Ground	Lang Index	SM 2330-B	6	Incl.	Incl.
Water - Ground	pH/ Temp	SM 4500-H-B	6	Incl.	Incl.
Water - Ground	TDS	SM 2540-C	6	Incl.	Incl.
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	6	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ca - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Fe - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ag - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ag - Total	EPA 200.8	6	$16.00	$96.00
Water - Ground	Al - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	As - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ba - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Be - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cd - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Co - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cr - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cu - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mo - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ni - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Pb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Sb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Se - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Tl - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	V - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Zn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Chloride	EPA 300.0	6	$18.00	$108.00

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

CAL Task

221129086

JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO22050014

Water - Ground	Fluoride	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Sulfate	EPA 300.0	6	$18.00	$108.00
Water - Ground	U - Dis	EPA 200.8	6	$23.00	$138.00
Water - Ground	Hg	EPA 245.7	6	$27.00	$162.00
Water - Ground	Total Coliform	SM 9221-B	6	$27.00	$162.00
Water - Ground	Cyanide - Free	ASTM D4282-15	6	$40.00	$240.00
Water - Ground	Phenols	EPA 420.4	6	$55.00	$330.00
Water - Ground	Metals (Sub)	EPA 200.7/EPA 200.8	6	$67.20	$403.20
Water - Ground	Gross Alpha/Beta (Sub)	SM 7110-B	6	$68.40	$410.40
Water - Ground	Asbestos (Sub)	TEM	6	$120.00	$720.00
Water - Ground	625 SOCs	EPA 625	6	$225.00	$1,350.00
Shipping	Sample Shipment to Outside Lab	UPS	2	$30.00	$60.00
Shipping	Ext. Sample Shipment to Outside Lab	UPS or FedEx	1	$50.00	$50.00

Metals (sub) for dissolved lithium. Hg - dissolved. Only 2-Chlorophenol and Phenol needed for 625. Customer field filtering dissolved metals.

$6,983.60

****Samples should be shipped or hand delivered the same day they are collected. Orders that requrie sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts, all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

ANALYTICAL SUMMARY REPORT

December 14, 2022

Colorado Analytical Laboratories Inc
PO Box 507
Brighton, CO 80601-0507

Work Order: C22120028 Quote ID: C15681

Project Name: 221129086; Monthly Groundwater

Energy Laboratories, Inc. Casper WY received the following 7 samples for Colorado Analytical Laboratories Inc on 12/1/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C22120028-001	221129086-01G - Cross Portal	11/29/22 11:00	12/01/22	Groundwater	Metals by ICP/ICPMS, Dissolved
C22120028-002	221129086-02G - Cross Well	11/29/22 11:30	12/01/22	Groundwater	Same As Above
C22120028-003	221129086-03G - Compliance Well	11/29/22 12:00	12/01/22	Groundwater	Same As Above
C22120028-004	221129086-04G - Compliance Well - FB	11/29/22 12:00	12/01/22	Groundwater	Metals by ICP/ICPMS, Dissolved Sample Filtering, Metals
C22120028-005	221129086-05G - Caribou Portal	11/29/22 12:30	12/01/22	Groundwater	Metals by ICP/ICPMS, Dissolved
C22120028-006	221129086-06G - Caribou Portal - FB	11/29/22 12:30	12/01/22	Groundwater	Metals by ICP/ICPMS, Dissolved Sample Filtering, Metals
C22120028-007	221129086-07G - Caribou Well	11/29/22 13:30	12/01/22	Groundwater	Metals by ICP/ICPMS, Dissolved

The analyses presented in this report were performed by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager .

Report Approved By:

CLIENT: Colorado Analytical Laboratories Inc
Project: 221129086; Monthly Groundwater
Work Order: C22120028

Report Date: 12/14/22

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221129086; Monthly Groundwater
Lab ID: C22120028-001
Client Sample ID: 221129086-01G - Cross Portal

Report Date: 12/14/22
Collection Date: 11/29/22 11:00
DateReceived: 12/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/08/22 16:22 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221129086; Monthly Groundwater
Lab ID: C22120028-002
Client Sample ID: 221129086-02G - Cross Well

Report Date: 12/14/22
Collection Date: 11/29/22 11:30
DateReceived: 12/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/08/22 16:35 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221129086; Monthly Groundwater
Lab ID: C22120028-003
Client Sample ID: 221129086-03G - Compliance Well

Report Date: 12/14/22
Collection Date: 11/29/22 12:00
DateReceived: 12/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/08/22 16:39 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221129086; Monthly Groundwater
Lab ID: C22120028-004
Client Sample ID: 221129086-04G - Compliance Well - FB

Report Date: 12/14/22
Collection Date: 11/29/22 12:00
DateReceived: 12/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/08/22 20:55 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221129086; Monthly Groundwater
Lab ID: C22120028-005
Client Sample ID: 221129086-05G - Caribou Portal

Report Date: 12/14/22
Collection Date: 11/29/22 12:30
DateReceived: 12/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/08/22 16:44 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221129086; Monthly Groundwater
Lab ID: C22120028-006
Client Sample ID: 221129086-06G - Caribou Portal - FB

Report Date: 12/14/22
Collection Date: 11/29/22 12:30
DateReceived: 12/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/08/22 20:59 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221129086; Monthly Groundwater
Lab ID: C22120028-007
Client Sample ID: 221129086-07G - Caribou Well

Report Date: 12/14/22
Collection Date: 11/29/22 13:30
DateReceived: 12/01/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/08/22 16:48 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc **Work Order:** C22120028 **Report Date:** 12/09/22

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.7**									Analytical Run: ICP203-B_221208B	
Lab ID: **ICV**	Continuing Calibration Verification Standard								12/08/22 12:40	
Lithium		1.28	mg/L	0.10	103	95	105			
Lab ID: **CCV**	Continuing Calibration Verification Standard								12/08/22 15:36	
Lithium		1.32	mg/L	0.10	106	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard								12/08/22 16:26	
Lithium		1.30	mg/L	0.10	104	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard								12/08/22 20:31	
Lithium		1.25	mg/L	0.10	100	90	110			
Method: **E200.7**										Batch: R392459
Lab ID: **MB-6500DIS221208B**	Method Blank					Run: ICP203-B_221208B			12/08/22 13:04	
Lithium		ND	mg/L	0.01						
Lab ID: **LFB-6500DIS221208B**	Laboratory Fortified Blank					Run: ICP203-B_221208B			12/08/22 13:09	
Lithium		1.07	mg/L	0.10	107	85	115			
Lab ID: **B22120324-001BMS2**	Sample Matrix Spike					Run: ICP203-B_221208B			12/08/22 16:09	
Lithium		2.16	mg/L	0.10	104	70	130			
Lab ID: **B22120324-001BMSD**	Sample Matrix Spike Duplicate					Run: ICP203-B_221208B			12/08/22 16:13	
Lithium		2.14	mg/L	0.10	103	70	130	0.8	20	
Lab ID: **B22120395-002AMS2**	Sample Matrix Spike					Run: ICP203-B_221208B			12/08/22 17:10	
Lithium		1.09	mg/L	0.10	108	70	130			
Lab ID: **B22120395-002AMSD**	Sample Matrix Spike Duplicate					Run: ICP203-B_221208B			12/08/22 17:14	
Lithium		1.09	mg/L	0.10	108	70	130	0.1	20	
Lab ID: **B22120471-002CMS2**	Sample Matrix Spike					Run: ICP203-B_221208B			12/08/22 18:24	
Lithium		2.17	mg/L	0.10	106	70	130			
Lab ID: **B22120471-002CMSD**	Sample Matrix Spike Duplicate					Run: ICP203-B_221208B			12/08/22 18:29	
Lithium		2.15	mg/L	0.10	105	70	130	1.4	20	
Lab ID: **MB-173154**	Method Blank					Run: ICP203-B_221208B			12/08/22 19:52	
Lithium		ND	mg/L	0.01						

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Colorado Analytical Laboratories Inc C22120028

Login completed by: Kirsten L. Smith
Date Received: 12/1/2022
Reviewed by: cjohnson
Received by: cch
Reviewed Date: 12/2/2022
Carrier name: FedEx

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	1.8°C On Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

Dissolved Metals/Hardness were filtered and preserved to pH <2 with 2 mL of nitric acid per 250 mL in the laboratory. According to 40CFR136, samples for Dissolved Metals should be filtered and preserved within 15 minutes of collection. 12/1/2022-KS

Colorado Analytical LABORATORIES, INC.

Ship To: Energy Labs

Sub-Lab Chain of Custody Form

CM120028

Report To Information	Bill To Information (If different from report to)	Project Name
Company Name: Colorado Analytical Laboratory Report To: Stuart Nielson E-Mail: stuartnielson@coloradolab.com		Monthly Groundwater
Address: 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	Address: CAL TASK 221129086 JML	Compliance Samples: Yes ☐ No ☑ Submit Data to CDPHE: Yes ☐ No ☑

Tests Requested

Sample Date/Time	Sample ID	Matrix	Metals (Sub)	Container Type
11/29/22 11:00 AM	221129086-01G - Cross Portal	Water - Ground	✓	250 ~~500~~ ml Cylinder HNO3
11/29/22 11:30 AM	221129086-02G - Cross Well	Water - Ground	✓	250 ~~500~~ ml Cylinder - HNO3
11/29/22 12:00 PM	221129086-03G Compliance Well	Water - Ground	✓	250 ~~500~~ ml Cylinder - HNO3
11/29/22 12:00 PM	221129086-04G Compliance Well FB	Water - Ground	✓	250 ~~500~~ ml Cylinder ~~HNO3~~ unpreserved
11/29/22 12:30 PM	221129086-05G Caribou Portal	Water - Ground	✓	250 ~~500~~ ml Cylinder HNO3
11/29/22 12:30 PM	221129086-06G - Caribou Portal - FB	Water - Ground	✓	250 ~~500~~ ml Cylinder - ~~HNO3~~ unpreserved
11/29/22 1:30 PM	221129086-07G - Caribou Well	Water - Ground	✓	250 ~~500~~ ml Cylinder - HNO3

See page 2 for notes. JL

3.0°

Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:
qAdams	11/30/22 1500		12-1 10:55a				

Colorado Analytical LABORATORIES, INC.

Ship To: Energy Labs

Sub-Lab Chain of Custody Form

C221200028

Report To Information	Bill To Information (if different from report to)	Project Name
Company Name: Colorado Analytical Laboratory Report To: Stuart Nielson E-Mail: stuartnielson@coloradolab.com		Monthly Groundwater
Address: 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	**Address:** CAL TASK 221129086 JML	Compliance Samples: Yes ☐ No ☑ Submit Data to CDPHE: Yes ☐ No ☑

Tests Requested

Sample Date/Time	Sample ID	Matrix	Metals (Sub)	Container Type

Comment:
221129086-01G - Please report Dissolved Lithium.
221129086-02G - Please report Dissolved Lithium.
221129086-03G - Please report Dissolved Lithium.
221129086-04G - Please report Dissolved Lithium. Sample has not been filtered or preserved.
221129086-05G - Please report Dissolved Lithium.
221129086-06G - Please report Dissolved Lithium. Sample has not been filtered or preserved.
221129086-07G - Please report Dissolved Lithium.

Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date Time:	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:
Adams	11/30/22 1500		12-1 10:53a				

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03281
Received: Nov 30, 2022
Reported: Jan 03, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

Stuart Nielson
Colorado Analytical Laboratories, Inc.
10411 Heinz Way
Commerce City, CO 80640

ANALYTICAL REPORT

Report may only be copied in its entirety.
Results reported herein relate only to discrete samples submitted by the client. Hazen Research, Inc. does not warrant that the results are representative of anything other than the samples that were received in the laboratory

By: Roxanne Sullivan
Roxanne Sullivan
Analytical Laboratories Director

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03281
Received: Nov 30, 2022
Reported: Jan 03, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03281-001							
Customer Sample ID	**221129086-01F** - Monthly Ground Water - Cross Portal sampled on 11/29/22 @ 1100							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	1.6	1.3	0.1	SM 7110 B	12/21/22 @ 0915	RG
Gross Beta	**pCi/L**	**T**	<2.9	2.3	2.9	SM 7110 B	12/21/22 @ 0915	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03281
Received: Nov 30, 2022
Reported: Jan 03, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03281-002							
Customer Sample ID	**221129086-02F** - Monthly Ground Water - Cross Well sampled on 11/29/22 @ 1130							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.8	1.1	0.1	SM 7110 B	12/21/22 @ 0917	RG
Gross Beta	**pCi/L**	**T**	<2.9	2.3	2.9	SM 7110 B	12/21/22 @ 0917	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03281
Received: Nov 30, 2022
Reported: Jan 03, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03281-003							
Customer Sample ID	**221129086-03F** - Monthly Ground Water - Compliance Well sampled on 11/29/22 @ 1200							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.8	1.0	0.1	SM 7110 B	12/21/22 @ 0918	RG
Gross Beta	**pCi/L**	**T**	<2.7	2.1	2.7	SM 7110 B	12/21/22 @ 0918	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03281
Received: Nov 30, 2022
Reported: Jan 03, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03281-004							
Customer Sample ID	**221129086-04F** - Monthly Ground Water - Compliance Well - FB sampled on 11/29/22 @ 1200							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.3	0.8	0.1	SM 7110 B	12/21/22 @ 0920	RG
Gross Beta	**pCi/L**	**T**	<2.8	2.0	2.8	SM 7110 B	12/21/22 @ 0920	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03281
Received: Nov 30, 2022
Reported: Jan 03, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03281-005							
Customer Sample ID	**221129086-05F** - Monthly Ground Water - Caribou Portal sampled on 11/29/22 @ 1230							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	4.0	2.0	0.1	SM 7110 B	12/21/22 @ 0922	RG
Gross Beta	**pCi/L**	**T**	<2.7	2.2	2.7	SM 7110 B	12/21/22 @ 0922	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03281
Received: Nov 30, 2022
Reported: Jan 03, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03281-006							
Customer Sample ID	**221129086-06F** - Monthly Ground Water - Caribou Portal - FB sampled on 11/29/22 @ 1230							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.6	0.8	0.1	SM 7110 B	12/29/22 @ 0958	RG
Gross Beta	**pCi/L**	**T**	<3.0	2.1	3.0	SM 7110 B	12/29/22 @ 0958	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03281
Received: Nov 30, 2022
Reported: Jan 03, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03281-007							
Customer Sample ID	**221129086-07F** - Monthly Ground Water - Caribou Well sampled on 11/29/22 @ 1330							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.7	1.0	0.1	SM 7110 B	12/29/22 @ 1002	RG
Gross Beta	**pCi/L**	**T**	<3.0	2.1	3.0	SM 7110 B	12/29/22 @ 1002	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 12/21/2022

Batch QC Summary Form

Analyte: Gross Alpha

Control Standard/LFB: ID: C-11a_002 pCi/mL: 57.4 (use 1 diluted)

Spike Solution: ID: C-11a_002 pCi/mL: 57.4 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(47.7)\ (1.000) - (0.1)\ (0.200)}{57.4} \times 100 = 83\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 30 %	x		
Spike Recovery	70 - 130 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M03280	
22M03278	
22M03281	
22M03294	
22M03295	
22M03297	
22M03248	

Evaluator:

Michelle Stringer

12/22/2022
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 12/29/2022

Batch QC Summary Form

Analyte: Gross Alpha

Control Standard/LFB: ID: C-11a_002 pCi/mL: 57.4 (use 1 diluted)

Spike Solution: ID: C-11a_002 pCi/mL: 57.4 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(40.8)\ (1.000) - (1.4)\ (0.200)}{57.4} \times 100 = 71\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 30 %	x		
Spike Recovery	70 - 130 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M03281	22M03320
22M03290	22M03330
22M03310	22M03345
22M03309	
22M03313	
22M03319	

Evaluator:

Michelle Stringer

12/30/2022
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 12/21/2022

Batch QC Summary Form

Analyte: Gross Beta

Control Standard/LFB: ID: C-11a_002 pCi/mL: 44 (use 1 diluted)

Spike Solution: ID: C-11a_002 pCi/mL: 44 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(37.7)\ (1.000) - (0.0)\ (0.200)}{44} \times 100 = 86\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M03280	
22M03278	
22M03281	
22M03294	
22M03295	
22M03297	
22M03248	

Evaluator:

Michelle Stringer

12/22/2022
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 12/29/2022

Batch QC Summary Form

Analyte: Gross Beta

Control Standard/LFB: ID: C-11a_002 pCi/mL: 44 (use 1 diluted)

Spike Solution: ID: C-11a_002 pCi/mL: 44 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(39.4)\ (1.000) - (1.1)\ (0.200)}{44} \times 100 = 89\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M03281	22M03320
22M03290	22M03330
22M03310	22M03345
22M03309	
22M03313	
22M03319	

Evaluator:

Michelle Stringer

12/30/2022
Date

22403281

Colorado Analytical LABORATORIES, INC.

Ship To: Hazen Research
Preserved: Y (N)
HNO3 Lot #: N/A
Date Preserved: N/A

Report To Information	Bill To Information (If different from report to)	Project Name
Company Name: Colorado Analytical Laboratory Report To: Stuart Nielson E-Mail: stuartnielson@coloradolab.com		Monthly Groundwater
Address: 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	Address: CAL TASK 221129086 JML	Compliance Samples: Yes ☐ No ☑ Submit Data to CDPHE: Yes ☐ No ☑

Tests Requested

Sample Date/Time		Sample ID	Matrix	Gross Alpha/Beta (Sub)	Container Type
11/29/22	11:00 AM	221129086-01F - Cross Portal	Water - Ground	✓	1L - Unpreserved
11/29/22	11:30 AM	221129086-02F - Cross Well	Water - Ground	✓	1L - Unpreserved
11/29/22	12:00 PM	221129086-03F - Compliance Well	Water - Ground	✓	1L - Unpreserved
11/29/22	12:00 PM	221129086-04F - Compliance Well - FB	Water - Ground	✓	1L - Unpreserved
11/29/22	12:30 PM	221129086-05F - Caribou Portal	Water - Ground	✓	1L - Unpreserved
11/29/22	12:30 PM	221129086-06F - Caribou Portal - FB	Water - Ground	✓	1L - Unpreserved
11/29/22	1:30 PM	221129086-07F - Caribou Well	Water - Ground	✓	1L - Unpreserved

Comment:

Preservation ✓ 12/2/22 AR 0915
ADB Preserved 1530 AR 11/30/22

Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:
Adam A	11/30/22 1030						1500

RECEIVED NOV 30 2022

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 11/29/22 11:00 AM
Lab Number: 221129086-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	78.9	16 - 145
2-Fluorobiphenyl	103.1	60 - 140
2-Fluorophenol	73.8	60 - 140
Nitrobenzene-d5	101.4	15 - 314
Phenol-d5	87.8	8 - 424
p-Terphenyl-d14	115.9	44 - 135

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 11/29/22 11:30 AM
Lab Number: 221129086-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	75.0	16 - 145
2-Fluorobiphenyl	110.0	60 - 140
2-Fluorophenol	76.5	60 - 140
Nitrobenzene-d5	108.3	15 - 314
Phenol-d5	91.7	8 - 424
p-Terphenyl-d14	120.8	44 - 135

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 11/29/22 12:00 PM
Lab Number: 221129086-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	72.8	16 - 145
2-Fluorobiphenyl	109.8	60 - 140
2-Fluorophenol	75.7	60 - 140
Nitrobenzene-d5	105.7	15 - 314
Phenol-d5	91.2	8 - 424
p-Terphenyl-d14	121.3	44 - 135

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 11/29/22 12:00 PM
Lab Number: 221129086-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	69.4	16 - 145
2-Fluorobiphenyl	109.9	60 - 140
2-Fluorophenol	76.1	60 - 140
Nitrobenzene-d5	106.7	15 - 314
Phenol-d5	89.6	8 - 424
p-Terphenyl-d14	139.1	44 - 135

Surrogate above QC criteria; 5/6 surrogates meet QC criteria. MBS 12/2/2022

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 11/29/22 12:30 PM
Lab Number: 221129086-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	58.8	16 - 145
2-Fluorobiphenyl	114.2	60 - 140
2-Fluorophenol	73.9	60 - 140
Nitrobenzene-d5	106.8	15 - 314
Phenol-d5	89.3	8 - 424
p-Terphenyl-d14	143.7	44 - 135

Surrogate above QC criteria; 5/6 surrogates meet QC criteria. MBS 12/2/2022

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal - FB
Sample Date/Time: 11/29/22 12:30 PM
Lab Number: 221129086-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	63.5	16 - 145
2-Fluorobiphenyl	107.2	60 - 140
2-Fluorophenol	70.0	60 - 140
Nitrobenzene-d5	103.3	15 - 314
Phenol-d5	86.5	8 - 424
p-Terphenyl-d14	139.4	44 - 135

Surrogate above QC criteria; 5/6 surrogates meet QC criteria. MBS 12/2/2022

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221129086
Client PO:
Client Project: Monthly Groundwater

Date Received: 11/29/22
Date Reported: 1/4/23
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 11/29/22 1:30 PM
Lab Number: 221129086-07

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/2/22	QC61322	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	50.9	16 - 145
2-Fluorobiphenyl	106.1	60 - 140
2-Fluorophenol	76.1	60 - 140
Nitrobenzene-d5	105.1	15 - 314
Phenol-d5	87.9	8 - 424
p-Terphenyl-d14	141.8	44 - 135

Surrogate above QC criteria; 5/6 surrogates meet QC criteria. MBS 12/2/2022

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 221129086

Report To: Patrick Delaney
Company: Grand Island Resources LLC

Receive Date: 11/29/22
Project Name: Monthly Groundwater

Test	QC Batch ID	QC Type	Result	Method
2-Chlorophenol	QC61322	Method Blank	ND	EPA 625
Phenol	QC61322	Method Blank	ND	EPA 625

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
2-Chlorophenol	QC61322	LCS	55 - 130	82.5	-	EPA 625
		LCS Dup	-	76.3	-	
		MS	23 - 134	77.3	-	
		MSD	0 - 61	-	4.0	
Phenol	QC61322	LCS	48 - 130	73.9	-	EPA 625
		LCS Dup	-	66.2	-	
		MS	5 - 120	70.8	-	
		MSD	0 - 64	-	1.8	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Moran	Contact Name:	
Address: 12567 W. Cedar Dr.	Address:	Task Number (Lab Use Only)
City Lakewood State CO Zip 80228	City State Zip	CAL Task 221129086 JML
Phone: 303-506-1618	Phone:	
Email: bmolsonm@g.emporia.edu	Email: sergio.rivera@novametallix.com	
Sample Collector: BM		
Sample Collector Phone: 303-506-1618	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Date	Time	Sample ID	No. of Containers	Grab or Composite	Tests Requested
11/29/22	11:00	CROSS PORTAL	9	G	QBO220500014 UPDATED 10/27/22
11/29/22	11:30	CROSS WELL	9	G	
11/29/22	12:00	COMPLIANCE WELL	9	G	
11/29/22	12:00	COMPLIANCE WELL-FB	9	G	
11/29/22	12:30	CARIBOU PORTAL	9	G	
11/29/22	12:30	CARIBOU PORTAL-FB	9	G	
11/29/22	13:30	CARIBOU WELL	9	G	
		* Per Brooke FB samples not field filtered -JK			

Instructions: FIELD FILTERED FOR ① NITRIC & GROSS ALPHA. OTHER BOTTLES NOT FILTERED

C/S Info:
Deliver Via: HD
C/S Charge ☐

Seals Present Yes ☐ No ☐
Temp. 1 °C/Ice Y Sample Pres. Yes ☐ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
	11/29/22 4:30pm	HA	11-29-22 16:50				

CAL Task
221129086

JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

Prepared For: **Grand Island Resources LLC**
12567 W Cedar Dr
Suite 250
Lakewood, CO 80228

Attn: **Brooke Molson-Moran**

Quote Date: **Wednesday, May 4, 2022**
Turn Around Time: **10 Working Days**

Project:
Monthly Groundwater

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Langelier Index	N/A	6	$60.00	$360.00
Water - Ground	Alkalinity	SM 2320-B	6	Incl.	Incl.
Water - Ground	Ca as CaCO3	EPA 200.7	6	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	6	Incl.	Incl.
Water - Ground	Lang Index	SM 2330-B	6	Incl.	Incl.
Water - Ground	pH/ Temp	SM 4500-H-B	6	Incl.	Incl.
Water - Ground	TDS	SM 2540-C	6	Incl.	Incl.
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	6	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ca - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Fe - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ag - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ag - Total	EPA 200.8	6	$16.00	$96.00
Water - Ground	Al - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	As - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ba - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Be - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cd - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Co - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cr - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cu - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mo - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ni - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Pb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Sb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Se - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Tl - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	V - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Zn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Chloride	EPA 300.0	6	$18.00	$108.00

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

CAL Task

221129086

JML

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services

Quote ID: QBO22050014

Water - Ground	Fluoride	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Sulfate	EPA 300.0	6	$18.00	$108.00
Water - Ground	U - Dis	EPA 200.8	6	$23.00	$138.00
Water - Ground	Hg	EPA 245.7	6	$27.00	$162.00
Water - Ground	Total Coliform	SM 9221-B	6	$27.00	$162.00
Water - Ground	Cyanide - Free	ASTM D4282-15	6	$40.00	$240.00
Water - Ground	Phenols	EPA 420.4	6	$55.00	$330.00
Water - Ground	Metals (Sub)	EPA 200.7/EPA 200.8	6	$67.20	$403.20
Water - Ground	Gross Alpha/Beta (Sub)	SM 7110-B	6	$68.40	$410.40
Water - Ground	Asbestos (Sub)	TEM	6	$120.00	$720.00
Water - Ground	625 SOCs	EPA 625	6	$225.00	$1,350.00
Shipping	Sample Shipment to Outside Lab	UPS	2	$30.00	$60.00
Shipping	Ext. Sample Shipment to Outside Lab	UPS or FedEx	1	$50.00	$50.00

Metals (sub) for dissolved lithium. Hg - dissolved. Only 2-Chlorophenol and Phenol needed for 625. Customer field filtering dissolved metals.

$6,983.60

****Samples should be shipped or hand delivered the same day they are collected. Orders that requrie sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts, all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

Laboratory ID: 0055

National Testing Laboratories, Ltd

556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 439400

1/6/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Cross Portal
Source City: Nederland
Source State: CO

Date/Time Received: 11/30/2022 09:50

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	11/29/2022 13:00		11/30/2022 14:20
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	11/29/2022 13:00		11/30/2022 15:00
				MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole						
1920	Odor Threshold	2150B	3	ton	1	ND	1	11/29/2022 13:00		11/30/2022 12:25

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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Laboratory ID: 0055

National Testing Laboratories, Ltd

556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 439401

1/6/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Cross Well
Source City: Nederland
Source State: CO

Date/Time Received: 11/30/2022 09:50

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Odor was analyzed from a bottle held at room temperature. This does not meet the method requirement for acceptable thermal preservation.

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected		DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
					Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND		1	11/29/2022 13:30		11/30/2022 14:20
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND		1	11/29/2022 13:30		11/30/2022 15:00
	MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole										
1920	Odor Threshold	2150B	3	ton	1	ND	Q,RN	1	11/29/2022 13:30		12/2/2022 10:05

Qualifiers:

Q: Sample analyzed beyond the accepted holding time.
RN: Please see Report Notes for qualifier detail.

Analyst	Tests
SP	2120B,5540C,2150B

Christine MacMillan, Technical Director

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Laboratory ID: 0055

National Testing Laboratories, Ltd

556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 439402

1/6/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Compliance Well
Source City: Nederland
Source State: CO

Date/Time Received: 11/30/2022 09:50

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	11/29/2022 14:00		11/30/2022 14:20
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	11/29/2022 14:00		11/30/2022 15:00
				MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole						
1920	Odor Threshold	2150B	3	ton	1	ND	1	11/29/2022 14:00		11/30/2022 12:25

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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Laboratory ID: 0055

National Testing Laboratories, Ltd

556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 439403

1/6/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Compliance Well - FB
Source City: Nederland
Source State: CO

Date/Time Received: 11/30/2022 09:50

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	11/29/2022 14:00		11/30/2022 14:20
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	11/29/2022 14:00		11/30/2022 15:00
			MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	1	11/29/2022 14:00		11/30/2022 12:25

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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Laboratory ID: 0055

National Testing Laboratories, Ltd

556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 439404

1/6/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Caribou Portal
Source City: Nederland
Source State: CO

Date/Time Received: 11/30/2022 09:50

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	11/29/2022 14:30		11/30/2022 14:20
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	11/29/2022 14:30		11/30/2022 15:00
			MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	1	11/29/2022 14:30		11/30/2022 12:25

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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Laboratory ID: 0055

National Testing Laboratories, Ltd

556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 439405

1/6/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Caribou Portal - FB
Source City: Nederland
Source State: CO

Date/Time Received: 11/30/2022 09:50

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	11/29/2022 14:30		11/30/2022 14:20
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	11/29/2022 14:30		11/30/2022 15:00
			MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	1	11/29/2022 14:30		11/30/2022 12:25

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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Laboratory ID: 0055

National Testing Laboratories, Ltd

556 South Mansfield, Ypsilanti, MI, 48197-5166
(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 439406

1/6/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Caribou Well
Source City: Nederland
Source State: CO

Date/Time Received: 11/30/2022 09:50

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected	DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
				Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	1	11/29/2022 15:30		11/30/2022 14:20
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	1	11/29/2022 15:30		11/30/2022 15:00
			MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	1	11/29/2022 15:30		11/30/2022 12:25

Analyst	Tests
SP	2120B,5540C,2150B

Sarah Buchanan, Project Manager

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APPENDIX A.3 DECEMBER 2022 GROUNDWATER AND EFFLUENT ANALYTICAL RESULTS

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 12/20/22 1:00 PM
Lab Number: 221220142-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**2.81 mg/L**	EPA 300.0	0.10 mg/L	12/21/22	QC61816	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	12/22/22	QC61835	DPL
Fluoride	**ND**	EPA 300.0	1.00 mg/L	12/21/22	QC61817	MLT
Nitrate Nitrogen	**ND**	EPA 300.0	0.50 mg/L	12/21/22	QC61818	MLT
Nitrate/ Nitrite Nitrogen	**0.23 mg/L**	Calculation	0.05 mg/L	12/22/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.30 mg/L	12/21/22	QC61819	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/27/22	QC61927	DPL
Sulfate	**8.88 mg/L**	EPA 300.0	0.10 mg/L	12/21/22	QC61820	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	12/21/22	-	NAB
Dissolved						
Aluminum	**ND**	EPA 200.8	0.001 mg/L	12/22/22	QC61842	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	12/22/22	QC61842	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	12/22/22	QC61842	MBN
Barium	**0.0313 mg/L**	EPA 200.8	0.0007 mg/L	12/22/22	QC61842	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	12/22/22	QC61842	MBN
Cadmium	**0.0002 mg/L**	EPA 200.8	0.0001 mg/L	12/22/22	QC61842	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	12/22/22	QC61842	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	12/22/22	QC61842	MBN
Copper	**0.0045 mg/L**	EPA 200.8	0.0008 mg/L	12/22/22	QC61842	MBN
Lead	**0.0005 mg/L**	EPA 200.8	0.0001 mg/L	12/22/22	QC61842	MBN
Manganese	**ND**	EPA 200.8	0.0008 mg/L	12/22/22	QC61842	MBN
Molybdenum	**0.0005 mg/L**	EPA 200.8	0.0005 mg/L	12/22/22	QC61842	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	12/22/22	QC61842	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 12/20/22 1:00 PM
Lab Number: 221220142-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	12/22/22	QC61842	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/22/22	QC61842	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	12/22/22	QC61842	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	12/22/22	QC61842	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	12/22/22	QC61842	MBN
Zinc	**0.590 mg/L**	EPA 200.8	0.001 mg/L	12/22/22	QC61842	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/22/22	QC61824	MBN
Calcium	**16.2 mg/L**	EPA 200.7	0.1 mg/L	12/22/22	QC61824	MBN
Iron	**ND**	EPA 200.7	0.005 mg/L	12/22/22	QC61824	MBN
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/22/22	QC61842	MBN

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 12/20/22 1:30 PM
Lab Number: 221220142-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**3.18 mg/L**	EPA 300.0	0.10 mg/L	12/21/22	QC61816	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	12/22/22	QC61835	DPL
Fluoride	**ND**	EPA 300.0	1.00 mg/L	12/21/22	QC61817	MLT
Nitrate Nitrogen	**ND**	EPA 300.0	0.50 mg/L	12/21/22	QC61818	MLT
Nitrate/ Nitrite Nitrogen	**0.31 mg/L**	Calculation	0.05 mg/L	12/22/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.30 mg/L	12/21/22	QC61819	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/27/22	QC61927	DPL
Sulfate	**9.85 mg/L**	EPA 300.0	0.10 mg/L	12/21/22	QC61820	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	12/21/22	-	NAB
Dissolved						
Aluminum	**0.001 mg/L**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	12/23/22	QC61842	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	12/23/22	QC61842	MBN
Barium	**0.0421 mg/L**	EPA 200.8	0.0007 mg/L	12/23/22	QC61842	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	12/23/22	QC61842	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Copper	**ND**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Lead	**0.0001 mg/L**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Manganese	**0.0086 mg/L**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Molybdenum	**0.0045 mg/L**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	12/23/22	QC61842	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 12/20/22 1:30 PM
Lab Number: 221220142-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Zinc	**0.087 mg/L**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/22/22	QC61824	MBN
Calcium	**16.2 mg/L**	EPA 200.7	0.1 mg/L	12/22/22	QC61824	MBN
Iron	**0.005 mg/L**	EPA 200.7	0.005 mg/L	12/22/22	QC61824	MBN
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 12/20/22 1:30 PM
Lab Number: 221220142-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	ND	EPA 300.0	0.10 mg/L	12/21/22	QC61816	MLT
Cyanide-Free	ND	ASTM D4282-15	0.005 mg/L	12/22/22	QC61835	DPL
Fluoride	ND	EPA 300.0	1.00 mg/L	12/21/22	QC61817	MLT
Nitrate Nitrogen	ND	EPA 300.0	0.50 mg/L	12/21/22	QC61818	MLT
Nitrate/ Nitrite Nitrogen	ND	Calculation	0.05 mg/L	12/22/22	-	MLT
Nitrite Nitrogen	ND	EPA 300.0	0.30 mg/L	12/21/22	QC61819	MLT
Phenols - Total	ND	EPA 420.4	15.0 ug/L	12/27/22	QC61927	DPL
Sulfate	ND	EPA 300.0	0.10 mg/L	12/21/22	QC61820	MLT
Total Coliform	ND	SM 9221-B	1 mpn/100ml	12/21/22	-	NAB
Dissolved						
Aluminum	ND	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Antimony	ND	EPA 200.8	0.0012 mg/L	12/23/22	QC61842	MBN
Arsenic	ND	EPA 200.8	0.0006 mg/L	12/23/22	QC61842	MBN
Barium	ND	EPA 200.8	0.0007 mg/L	12/23/22	QC61842	MBN
Beryllium	ND	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Cadmium	ND	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Chromium	ND	EPA 200.8	0.0015 mg/L	12/23/22	QC61842	MBN
Cobalt	ND	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Copper	ND	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Lead	ND	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Manganese	ND	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Molybdenum	ND	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Nickel	ND	EPA 200.8	0.0009 mg/L	12/23/22	QC61842	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 12/20/22 1:30 PM
Lab Number: 221220142-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Zinc	**ND**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/22/22	QC61824	MBN
Calcium	**ND**	EPA 200.7	0.1 mg/L	12/22/22	QC61824	MBN
Iron	**ND**	EPA 200.7	0.005 mg/L	12/22/22	QC61824	MBN
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 12/20/22 11:30 AM
Lab Number: 221220142-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**0.41 mg/L**	EPA 300.0	0.10 mg/L	12/21/22	QC61816	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	12/22/22	QC61835	DPL
Fluoride	**ND**	EPA 300.0	1.00 mg/L	12/21/22	QC61817	MLT
Nitrate Nitrogen	**ND**	EPA 300.0	0.50 mg/L	12/21/22	QC61818	MLT
Nitrate/ Nitrite Nitrogen	**0.11 mg/L**	Calculation	0.05 mg/L	12/22/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.30 mg/L	12/21/22	QC61819	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/27/22	QC61927	DPL
Sulfate	**2.63 mg/L**	EPA 300.0	0.10 mg/L	12/21/22	QC61820	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	12/21/22	-	NAB
Dissolved						
Aluminum	**0.011 mg/L**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	12/23/22	QC61842	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	12/23/22	QC61842	MBN
Barium	**0.0059 mg/L**	EPA 200.8	0.0007 mg/L	12/23/22	QC61842	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	12/23/22	QC61842	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Copper	**0.0841 mg/L**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Lead	**0.0002 mg/L**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Manganese	**ND**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Molybdenum	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	12/23/22	QC61842	MBN

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 12/20/22 11:30 AM
Lab Number: 221220142-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Zinc	**0.004 mg/L**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/22/22	QC61824	MBN
Calcium	**3.9 mg/L**	EPA 200.7	0.1 mg/L	12/22/22	QC61824	MBN
Iron	**0.007 mg/L**	EPA 200.7	0.005 mg/L	12/22/22	QC61824	MBN
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 12/20/22 12:15 PM
Lab Number: 221220142-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**0.33 mg/L**	EPA 300.0	0.10 mg/L	12/21/22	QC61816	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	12/22/22	QC61835	DPL
Fluoride	**ND**	EPA 300.0	1.00 mg/L	12/21/22	QC61817	MLT
Nitrate Nitrogen	**ND**	EPA 300.0	0.50 mg/L	12/21/22	QC61818	MLT
Nitrate/ Nitrite Nitrogen	**0.08 mg/L**	Calculation	0.05 mg/L	12/22/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.30 mg/L	12/21/22	QC61819	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/27/22	QC61927	DPL
Sulfate	**10.99 mg/L**	EPA 300.0	0.10 mg/L	12/21/22	QC61820	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	12/21/22	-	NAB
Dissolved						
Aluminum	**0.001 mg/L**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	12/23/22	QC61842	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	12/23/22	QC61842	MBN
Barium	**0.0730 mg/L**	EPA 200.8	0.0007 mg/L	12/23/22	QC61842	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Cadmium	**0.0010 mg/L**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	12/23/22	QC61842	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Copper	**0.0017 mg/L**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Lead	**0.0006 mg/L**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Manganese	**0.0115 mg/L**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Molybdenum	**0.0082 mg/L**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	12/23/22	QC61842	MBN

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 12/20/22 12:15 PM
Lab Number: 221220142-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Uranium	**0.0010 mg/L**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Zinc	**0.202 mg/L**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/22/22	QC61824	MBN
Calcium	**25.2 mg/L**	EPA 200.7	0.1 mg/L	12/22/22	QC61824	MBN
Iron	**0.005 mg/L**	EPA 200.7	0.005 mg/L	12/22/22	QC61824	MBN
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
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(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 12/20/22 11:15 AM
Lab Number: 221220142-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	**0.49 mg/L**	EPA 300.0	0.10 mg/L	12/21/22	QC61816	MLT
Cyanide-Free	**ND**	ASTM D4282-15	0.005 mg/L	12/22/22	QC61835	DPL
Fluoride	**ND**	EPA 300.0	1.00 mg/L	12/21/22	QC61817	MLT
Nitrate Nitrogen	**ND**	EPA 300.0	0.50 mg/L	12/21/22	QC61818	MLT
Nitrate/ Nitrite Nitrogen	**0.14 mg/L**	Calculation	0.05 mg/L	12/22/22	-	MLT
Nitrite Nitrogen	**ND**	EPA 300.0	0.30 mg/L	12/21/22	QC61819	MLT
Phenols - Total	**ND**	EPA 420.4	15.0 ug/L	12/27/22	QC61927	DPL
Sulfate	**10.38 mg/L**	EPA 300.0	0.10 mg/L	12/21/22	QC61820	MLT
Total Coliform	**ND**	SM 9221-B	1 mpn/100ml	12/21/22	-	NAB
Dissolved						
Aluminum	**ND**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Antimony	**ND**	EPA 200.8	0.0012 mg/L	12/23/22	QC61842	MBN
Arsenic	**ND**	EPA 200.8	0.0006 mg/L	12/23/22	QC61842	MBN
Barium	**0.0600 mg/L**	EPA 200.8	0.0007 mg/L	12/23/22	QC61842	MBN
Beryllium	**ND**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Cadmium	**ND**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Chromium	**ND**	EPA 200.8	0.0015 mg/L	12/23/22	QC61842	MBN
Cobalt	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Copper	**ND**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Lead	**0.0004 mg/L**	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Manganese	**0.0014 mg/L**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Molybdenum	**0.0067 mg/L**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Nickel	**ND**	EPA 200.8	0.0009 mg/L	12/23/22	QC61842	MBN

Abbreviations/ References:

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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 12/20/22 11:15 AM
Lab Number: 221220142-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Uranium	**0.0072 mg/L**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Zinc	**0.034 mg/L**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/22/22	QC61824	MBN
Calcium	**27.5 mg/L**	EPA 200.7	0.1 mg/L	12/22/22	QC61824	MBN
Iron	**0.006 mg/L**	EPA 200.7	0.005 mg/L	12/22/22	QC61824	MBN
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
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Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal - FB
Sample Date/Time: 12/20/22 11:15 AM
Lab Number: 221220142-07

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Chloride	ND	EPA 300.0	0.10 mg/L	12/21/22	QC61816	MLT
Cyanide-Free	ND	ASTM D4282-15	0.005 mg/L	12/22/22	QC61835	DPL
Fluoride	ND	EPA 300.0	1.00 mg/L	12/21/22	QC61817	MLT
Nitrate Nitrogen	ND	EPA 300.0	0.50 mg/L	12/21/22	QC61818	MLT
Nitrate/ Nitrite Nitrogen	ND	Calculation	0.05 mg/L	12/22/22	-	MLT
Nitrite Nitrogen	ND	EPA 300.0	0.30 mg/L	12/21/22	QC61819	MLT
Phenols - Total	ND	EPA 420.4	15.0 ug/L	12/27/22	QC61927	DPL
Sulfate	ND	EPA 300.0	0.10 mg/L	12/21/22	QC61820	MLT
Total Coliform	ND	SM 9221-B	1 mpn/100ml	12/21/22	-	NAB
Dissolved						
Aluminum	ND	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Antimony	ND	EPA 200.8	0.0012 mg/L	12/23/22	QC61842	MBN
Arsenic	ND	EPA 200.8	0.0006 mg/L	12/23/22	QC61842	MBN
Barium	ND	EPA 200.8	0.0007 mg/L	12/23/22	QC61842	MBN
Beryllium	ND	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Cadmium	ND	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Chromium	ND	EPA 200.8	0.0015 mg/L	12/23/22	QC61842	MBN
Cobalt	ND	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Copper	ND	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Lead	ND	EPA 200.8	0.0001 mg/L	12/23/22	QC61842	MBN
Manganese	ND	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Molybdenum	ND	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Nickel	ND	EPA 200.8	0.0009 mg/L	12/23/22	QC61842	MBN

Abbreviations/ References:

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Date Analyzed = Date Test Completed

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(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal - FB
Sample Date/Time: 12/20/22 11:15 AM
Lab Number: 221220142-07

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Dissolved						
Selenium	**ND**	EPA 200.8	0.0008 mg/L	12/23/22	QC61842	MBN
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN
Thallium	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Uranium	**ND**	EPA 200.8	0.0002 mg/L	12/23/22	QC61842	MBN
Vanadium	**ND**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Zinc	**ND**	EPA 200.8	0.001 mg/L	12/23/22	QC61842	MBN
Boron	**ND**	EPA 200.7	0.01 mg/L	12/22/22	QC61824	MBN
Calcium	**ND**	EPA 200.7	0.1 mg/L	12/22/22	QC61824	MBN
Iron	**ND**	EPA 200.7	0.005 mg/L	12/22/22	QC61824	MBN
Total						
Silver	**ND**	EPA 200.8	0.0005 mg/L	12/23/22	QC61842	MBN

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
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Date Analyzed = Date Test Completed

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ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC

Receive Date: 12/20/22
Project Name: Monthly Groundwater

Test	QC Batch ID	QC Type	Result	Method
Chloride	QC61816	Blank	ND	EPA 300.0
Cyanide-Free	QC61835	Blank	ND	ASTM D4282-15
Fluoride	QC61817	Blank	ND	EPA 300.0
Aluminum	QC61842	Method Blank	ND	EPA 200.8
Antimony	QC61842	Method Blank	ND	EPA 200.8
Arsenic	QC61842	Method Blank	ND	EPA 200.8
Barium	QC61842	Method Blank	ND	EPA 200.8
Beryllium	QC61842	Method Blank	ND	EPA 200.8
Cadmium	QC61842	Method Blank	ND	EPA 200.8
Chromium	QC61842	Method Blank	ND	EPA 200.8
Cobalt	QC61842	Method Blank	ND	EPA 200.8
Copper	QC61842	Method Blank	ND	EPA 200.8
Lead	QC61842	Method Blank	ND	EPA 200.8
Manganese	QC61842	Method Blank	ND	EPA 200.8
Molybdenum	QC61842	Method Blank	ND	EPA 200.8
Nickel	QC61842	Method Blank	ND	EPA 200.8
Selenium	QC61842	Method Blank	ND	EPA 200.8
Silver	QC61842	Method Blank	ND	EPA 200.8
Thallium	QC61842	Method Blank	ND	EPA 200.8
Uranium	QC61842	Method Blank	ND	EPA 200.8
Vanadium	QC61842	Method Blank	ND	EPA 200.8
Zinc	QC61842	Method Blank	ND	EPA 200.8
Boron	QC61824	Method Blank	0.02 mg/L B	EPA 200.7
Calcium	QC61824	Method Blank	ND	EPA 200.7
Iron	QC61824	Method Blank	ND	EPA 200.7
Nitrate Nitrogen	QC61818	Blank	ND	EPA 300.0
Nitrite Nitrogen	QC61819	Blank	ND	EPA 300.0
Phenols - Total	QC61927	Blank	ND	EPA 420.4
Sulfate	QC61820	Blank	ND	EPA 300.0

B - The analyte was found in the associated blank. Batch accepted due to all samples being non-detect or having results ≥ 5 times the background concentration found in the blank.

Test	QC Batch ID	QC Type	Limits	Spike Amt	% Rec	RPD	Method
Chloride	QC61816	Duplicate -221220142-01	0 - 20	-	-	2.5	EPA 300.0
		LCS	90 - 110	20 mg/L	101.5	-	
		MS -221220142-01	75 - 125	50 mg/L	95.6	-	
Cyanide-Free	QC61835	Duplicate -221220142-01B	0 - 20	-	-	0.0	ASTM D4282-15
		LCS	90 - 110	0.08 mg/L	98.6	-	
		MS -221220142-01B	75 - 125	0.02 mg/L	108.0	-	
		MSD -221220142-01B	0 - 30	0.02 mg/L	-	0.0	

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Date Analyzed = Date Test Completed

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(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Test	QC Batch ID	QC Type	Limits	Spike Amt	% Rec	RPD	Method
Fluoride	QC61817	Duplicate -221220142-01	0 - 20	-	-	0.0	EPA 300.0
		LCS	90 - 110	2 mg/L	97.1	-	
		MS -221220142-01	75 - 125	10 mg/L	91.1	-	
Aluminum	QC61842	LCS	90 - 110	50 ug/L	97.0	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	99.9	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	0.3	
Antimony	QC61842	LCS	90 - 110	50 ug/L	106.9	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	108.8	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	0.7	
Arsenic	QC61842	LCS	90 - 110	50 ug/L	99.1	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	117.2	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	0.1	
Barium	QC61842	LCS	90 - 110	50 ug/L	102.7	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	106.5	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	2.4	
Beryllium	QC61842	LCS	90 - 110	50 ug/L	98.2	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	76.0	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	9.3	
Cadmium	QC61842	LCS	90 - 110	50 ug/L	99.9	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	102.8	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	2.6	
Chromium	QC61842	LCS	90 - 110	50 ug/L	105.0	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	106.8	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	2.3	
Cobalt	QC61842	LCS	90 - 110	50 ug/L	105.9	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	105.7	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	0.1	
Copper	QC61842	LCS	90 - 110	50 ug/L	102.5	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	100.3	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	2.4	
Lead	QC61842	LCS	90 - 110	50 ug/L	93.8	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	87.3	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	1.7	
Manganese	QC61842	LCS	90 - 110	50 ug/L	103.8	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	100.2	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	1.5	
Molybdenum	QC61842	LCS	90 - 110	50 ug/L	103.5	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	106.5	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	2.8	
Nickel	QC61842	LCS	90 - 110	50 ug/L	104.6	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	102.9	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	2.5	
Selenium	QC61842	LCS	90 - 110	50 ug/L	103.3	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	116.2	-	

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Test	QC Batch ID	QC Type	Limits	Spike Amt	% Rec	RPD	Method
		MSD -221220017-01	0 - 10	20 ug/L	-	0.4	
Silver	QC61842	LCS	90 - 110	50 ug/L	102.0	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	100.6	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	1.2	
Thallium	QC61842	LCS	90 - 110	50 ug/L	93.4	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	85.1	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	1.6	
Uranium	QC61842	LCS	90 - 110	50 ug/L	93.6	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	87.5	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	2.8	
Vanadium	QC61842	LCS	90 - 110	50 ug/L	102.9	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	110.0	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	0.7	
Zinc	QC61842	LCS	90 - 110	50 ug/L	103.3	-	EPA 200.8
		MS -221220017-01	70 - 130	20 ug/L	97.9	-	
		MSD -221220017-01	0 - 10	20 ug/L	-	0.6	
Boron	QC61824	Duplicate -221220019-01B	0 - 20	-	-	0.0	EPA 200.7
		LCS	90 - 110	1 mg/L	107.2	-	
		MS -221220067-14	75 - 125	1 mg/L	118.8	-	
Calcium	QC61824	Duplicate -221220019-01B	0 - 20	-	-	3.6	EPA 200.7
		LCS	90 - 110	20 mg/L	103.7	-	
		MS -221220067-14	75 - 125	40 mg/L	119.8	-	
Iron	QC61824	Duplicate -221220019-01B	0 - 20	-	-	5.5	EPA 200.7
		LCS	90 - 110	1 mg/L	100.7	-	
		MS -221220067-14	75 - 125	2 mg/L	100.0	-	
Nitrate Nitrogen	QC61818	Duplicate -221220142-01	0 - 20	-	-	12.7	EPA 300.0
		LCS	90 - 110	4.515 mg/L	97.7	-	
		MS -221220142-01	75 - 125	2.257 mg/L	86.9	-	
Nitrite Nitrogen	QC61819	Duplicate -221220142-01	0 - 20	-	-	0.0	EPA 300.0
		LCS	90 - 110	0.6079 mg/L	92.3	-	
		MS -221220142-01	75 - 125	3.04 mg/L	93.0	-	
Phenols - Total	QC61927	Duplicate -221220142-02C	0 - 20	-	-	0.0	EPA 420.4
		LCS	90 - 110	100 ug/L	95.5	-	
		MS -221220142-02C	75 - 125	100 ug/L	104.0	-	
Sulfate	QC61820	Duplicate -221220142-01	0 - 20	-	-	2.0	EPA 300.0
		LCS	90 - 110	20 mg/L	100.0	-	
		MS -221220142-01	75 - 125	50 mg/L	96.3	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
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(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Moran	Contact Name:	
Address: 12567 W. Cedar Dr Ste. 250	Address:	Task Number (Lab Use Only)
City Lakewood State CO Zip 80228	City State Zip	CAL Task 221220142 ARF
Phone: 303-506-1618	Phone:	
Email: sergio.rivera@novametal.com brooke.mo@colorado.edu	Email: lix.com	
Sample Collector: BM		
Sample Collector Phone: 303-506-1618	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Tests Requested

QB022050014 (updated 10/27/22)

Date	Time	Sample ID	FIELD pH	No. of Containers	Grab or Composite (Check One Only)
12/20/22	13:00	CROSS WELL		9	G
12/20/22	13:30	COMPLIANCE WELL		9	G
12/20/22	13:30	COMPLIANCE WELL-FB		9	G
12/20/22	11:30	CARIBOU WELL		9	G
12/20/22	12:15	CROSS PORTAL		9	G
12/20/22	11:15	CARIBOU PORTAL		9	G
12/20/22	11:15	CARIBOU PORTAL-FB		9	G

Instructions: FIELD FILTERED FOR 1 NITRIC & GROSS ALPHA

C/S Info: HD

Deliver Via: C/S Charge ☐

Seals Present Yes ☐ No ☐

Temp. 4 °C/Ice Y Sample Pres. Yes ☑ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
BMoran	12/20/22 17:14	DN	12-20-22 17:17				

Colorado Analytical LABORATORIES, INC.

CAL Task
221220142

ARF

Quotation for Analytical Services
Quote ID: QBO22050014

Prepared For: **Grand Island Resources LLC**
12567 W Cedar Dr
Suite 250
Lakewood, CO 80228

Quote Date: **Wednesday, May 4, 2022**
Turn Around Time: **10 Working Days**

Attn: **Brooke Molson-Moran**

Project:
Monthly Groundwater

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Langelier Index	N/A	6	$60.00	$360.00
Water - Ground	Alkalinity	SM 2320-B	6	Incl.	Incl.
Water - Ground	Ca as CaCO3	EPA 200.7	6	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	6	Incl.	Incl.
Water - Ground	Lang Index	SM 2330-B	6	Incl.	Incl.
Water - Ground	pH/ Temp	SM 4500-H-B	6	Incl.	Incl.
Water - Ground	TDS	SM 2540-C	6	Incl.	Incl.
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	6	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ca - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Fe - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ag - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ag - Total	EPA 200.8	6	$16.00	$96.00
Water - Ground	Al - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	As - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ba - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Be - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cd - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Co - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cr - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cu - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mo - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ni - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Pb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Sb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Se - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Tl - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	V - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Zn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Chloride	EPA 300.0	6	$18.00	$108.00

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

Water - Ground	Fluoride	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Sulfate	EPA 300.0	6	$18.00	$108.00
Water - Ground	U - Dis	EPA 200.8	6	$23.00	$138.00
Water - Ground	Hg	EPA 245.7	6	$27.00	$162.00
Water - Ground	Total Coliform	SM 9221-B	6	$27.00	$162.00
Water - Ground	Cyanide - Free	ASTM D4282-15	6	$40.00	$240.00
Water - Ground	Phenols	EPA 420.4	6	$55.00	$330.00
Water - Ground	Metals (Sub)	EPA 200.7/EPA 200.8	6	$67.20	$403.20
Water - Ground	Gross Alpha/Beta (Sub)	SM 7110-B	6	$68.40	$410.40
Water - Ground	Asbestos (Sub)	TEM	6	$120.00	$720.00
Water - Ground	625 SOCs	EPA 625	6	$225.00	$1,350.00
Shipping	Sample Shipment to Outside Lab	UPS	2	$30.00	$60.00
Shipping	Ext. Sample Shipment to Outside Lab	UPS or FedEx	1	$50.00	$50.00

Metals (sub) for dissolved lithium. Hg - dissolved. Only 2-Chlorophenol and Phenol needed for 625. Customer field filtering dissolved metals.

$6,983.60

****Samples should be shipped or hand delivered the same day they are collected. Orders that requrie sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts, all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

ANALYTICAL SUMMARY REPORT

January 09, 2023

Colorado Analytical Laboratories Inc
PO Box 507
Brighton, CO 80601-0507

Work Order: C22120818 Quote ID: C15681

Project Name: 221220142; Monthly Groundwater

Energy Laboratories, Inc. Casper WY received the following 7 samples for Colorado Analytical Laboratories Inc on 12/23/2022 for analysis.

Lab ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
C22120818-001	221220142-01G - Cross Well	12/20/22 13:00	12/23/22	Groundwater	Metals by ICP/ICPMS, Dissolved Sample Filtering, Metals
C22120818-002	221220142-02G - Compliance Well	12/20/22 13:30	12/23/22	Groundwater	Same As Above
C22120818-003	221220142-03G - Compliance Well - FB	12/20/22 13:30	12/23/22	Groundwater	Same As Above
C22120818-004	221220142-04G - Caribou Well	12/20/22 11:30	12/23/22	Groundwater	Same As Above
C22120818-005	221220142-05G - Cross Portal	12/20/22 12:15	12/23/22	Groundwater	Same As Above
C22120818-006	221220142-06G - Caribou Portal	12/20/22 11:15	12/23/22	Groundwater	Same As Above
C22120818-007	221220142-07G - Caribou Portal - FB	12/20/22 11:15	12/23/22	Groundwater	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 2393 Salt Creek Hwy., Casper, WY 82601, unless otherwise noted. Any exceptions or problems with the analyses are noted in the report package. Any issues encountered during sample receipt are documented in the Work Order Receipt Checklist.

The results as reported relate only to the item(s) submitted for testing. This report shall be used or copied only in its entirety. Energy Laboratories, Inc. is not responsible for the consequences arising from the use of a partial report.

If you have any questions regarding these test results, please contact your Project Manager .

Report Approved By:

CLIENT: Colorado Analytical Laboratories Inc
Project: 221220142; Monthly Groundwater
Work Order: C22120818

Report Date: 01/09/23

CASE NARRATIVE

Tests associated with analyst identified as ELI-B were subcontracted to Energy Laboratories, 1120 S. 27th St., Billings, MT, EPA Number MT00005.

Work Order Sample Summary

CLIENT: Colorado Analytical Laboratories Inc
Project: 221220142; Monthly Groundwater
Work Order: C22120818 **Report Date:** 01/09/23

Lab ID	Client Sample ID	Collection Date	Date Received
C22120818-001	221220142-01G - Cross Well	12/20/2022 1:00:00 PM	12/23/2022
C22120818-002	221220142-02G - Compliance Well	12/20/2022 1:30:00 PM	12/23/2022
C22120818-003	221220142-03G - Compliance Well - FB	12/20/2022 1:30:00 PM	12/23/2022
C22120818-004	221220142-04G - Caribou Well	12/20/2022 11:30:00 AM	12/23/2022
C22120818-005	221220142-05G - Cross Portal	12/20/2022 12:15:00 PM	12/23/2022
C22120818-006	221220142-06G - Caribou Portal	12/20/2022 11:15:00 AM	12/23/2022
C22120818-007	221220142-07G - Caribou Portal - FB	12/20/2022 11:15:00 AM	12/23/2022

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221220142; Monthly Groundwater
Lab ID: C22120818-001
Client Sample ID: 221220142-01G - Cross Well

Report Date: 01/09/23
Collection Date: 12/20/22 13:00
DateReceived: 12/23/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/30/22 15:35 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221220142; Monthly Groundwater
Lab ID: C22120818-002
Client Sample ID: 221220142-02G - Compliance Well

Report Date: 01/09/23
Collection Date: 12/20/22 13:30
DateReceived: 12/23/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/30/22 15:39 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221220142; Monthly Groundwater
Lab ID: C22120818-003
Client Sample ID: 221220142-03G - Compliance Well - FB

Report Date: 01/09/23
Collection Date: 12/20/22 13:30
DateReceived: 12/23/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/30/22 15:43 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221220142; Monthly Groundwater
Lab ID: C22120818-004
Client Sample ID: 221220142-04G - Caribou Well

Report Date: 01/09/23
Collection Date: 12/20/22 11:30
DateReceived: 12/23/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/30/22 15:47 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221220142; Monthly Groundwater
Lab ID: C22120818-005
Client Sample ID: 221220142-05G - Cross Portal

Report Date: 01/09/23
Collection Date: 12/20/22 12:15
DateReceived: 12/23/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/30/22 16:46 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221220142; Monthly Groundwater
Lab ID: C22120818-006
Client Sample ID: 221220142-06G - Caribou Portal

Report Date: 01/09/23
Collection Date: 12/20/22 11:15
DateReceived: 12/23/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/30/22 16:50 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

LABORATORY ANALYTICAL REPORT

Prepared by Casper, WY Branch

Client: Colorado Analytical Laboratories Inc
Project: 221220142; Monthly Groundwater
Lab ID: C22120818-007
Client Sample ID: 221220142-07G - Caribou Portal - FB

Report Date: 01/09/23
Collection Date: 12/20/22 11:15
DateReceived: 12/23/22
Matrix: Groundwater

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, DISSOLVED							
Lithium	ND	mg/L	L	0.05		E200.7	12/30/22 16:54 / eli-b

Report Definitions:
RL - Analyte Reporting Limit
QCL - Quality Control Limit
L - Lowest available reporting limit for the analytical method used
MCL - Maximum Contaminant Level
ND - Not detected at the Reporting Limit (RL)

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Colorado Analytical Laboratories Inc **Work Order:** C22120818 **Report Date:** 01/03/23

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: **E200.7**									Analytical Run: ICP204-B_221230A	
Lab ID: **ICV**	Continuing Calibration Verification Standard								12/30/22 11:24	
Lithium		1.25	mg/L	0.10	100	95	105			
Lab ID: **CCV**	Continuing Calibration Verification Standard								12/30/22 15:01	
Lithium		1.26	mg/L	0.10	101	90	110			
Lab ID: **CCV**	Continuing Calibration Verification Standard								12/30/22 16:24	
Lithium		1.26	mg/L	0.10	101	90	110			
Method: **E200.7**									Batch: R395552	
Lab ID: **MB-7400DIS221230A**	Method Blank					Run: ICP204-B_221230A			12/30/22 11:46	
Lithium		ND	mg/L	0.01						
Lab ID: **LFB-7400DIS221230A**	Laboratory Fortified Blank					Run: ICP204-B_221230A			12/30/22 11:50	
Lithium		1.01	mg/L	0.10	101	85	115			
Lab ID: **B22121746-001BMS2**	Sample Matrix Spike					Run: ICP204-B_221230A			12/30/22 14:57	
Lithium		107	mg/L	5.2	100	70	130			
Lab ID: **B22121746-001BMSD**	Sample Matrix Spike Duplicate					Run: ICP204-B_221230A			12/30/22 15:09	
Lithium		109	mg/L	5.2	102	70	130	2.1	20	
Lab ID: **MB-174764**	Method Blank					Run: ICP204-B_221230A			12/30/22 15:31	
Lithium		ND	mg/L	0.01						
Lab ID: **C22120818-007AMS2**	Sample Matrix Spike					Run: ICP204-B_221230A			12/30/22 16:59	
Lithium		1.02	mg/L	0.10	102	70	130			
Lab ID: **C22120818-007AMSD**	Sample Matrix Spike Duplicate					Run: ICP204-B_221230A			12/30/22 17:02	
Lithium		0.974	mg/L	0.10	97	70	130	5.0	20	

Qualifiers:

RL - Analyte Reporting Limit

ND - Not detected at the Reporting Limit (RL)

Work Order Receipt Checklist

Colorado Analytical Laboratories Inc C22120818

Login completed by: Kirsten L. Smith
Date Received: 12/23/2022
Reviewed by: cjohnson
Received by: cch
Reviewed Date: 12/28/2022
Carrier name: UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐
Custody seals intact on all shipping container(s)/cooler(s)?	Yes ☐	No ☐	Not Present ☑
Custody seals intact on all sample bottles?	Yes ☐	No ☐	Not Present ☑
Chain of custody present?	Yes ☑	No ☐	
Chain of custody signed when relinquished and received?	Yes ☑	No ☐	
Chain of custody agrees with sample labels?	Yes ☑	No ☐	
Samples in proper container/bottle?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	
All samples received within holding time? (Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.)	Yes ☑	No ☐	
Temp Blank received in all shipping container(s)/cooler(s)?	Yes ☐	No ☑	Not Applicable ☐
Container/Temp Blank temperature:	0.3°C Blue Ice		
Containers requiring zero headspace have no headspace or bubble that is <6mm (1/4").	Yes ☐	No ☐	No VOA vials submitted ☑
Water - pH acceptable upon receipt?	Yes ☐	No ☑	Not Applicable ☐

Standard Reporting Procedures:

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

The reference date for Radon analysis is the sample collection date. The reference date for all other Radiochemical analyses is the analysis date. Radiochemical precision results represent a 2-sigma Total Measurement Uncertainty.

Contact and Corrective Action Comments:

All samples were received frozen, per the email from Jessi Lupfer on 12/23/2022 they would like to proceed with analysis.
Dissolved Metals/Hardness were filtered and preserved to pH <2 with 2 mL of nitric acid per 250 mL in the laboratory. According to 40CFR136, samples for Dissolved Metals should be filtered and preserved within 15 minutes of collection.
12/27/2022-KS

Colorado Analytical LABORATORIES, INC.

Ship To: Energy Labs

Sub-Lab Chain of Custody Form

C22120818

Report To Information	Bill To Information (If different from report to)	Project Name
Company Name: Colorado Analytical Laboratory Report To: Stuart Nielson E-Mail: stuartnielson@coloradolab.com		Monthly Groundwater
Address: 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	Address: CAL TASK 221220142 ARF	Compliance Samples: Yes ☐ No ☑ Submit Data to CDPHE: Yes ☐ No ☑

Tests Requested

Sample Date/Time		Sample ID	Matrix	Metals (Sub)	Container Type
12/20/22	1:00 PM	221220142-01G - Cross Well	Water - Ground	X	250 ml Cylinder - Unpreserved
12/20/22	1:30 PM	221220142-02G - Compliance Well	Water - Ground	X	250 ml Cylinder - Unpreserved
12/20/22	1:30 PM	221220142-03G - Compliance Well - FB	Water - Ground	X	250 ml Cylinder - Unpreserved
12/20/22	11:30 AM	221220142-04G - Caribou Well	Water - Ground	X	250 ml Cylinder - Unpreserved
12/20/22	12:15 PM	221220142-05G - Cross Portal	Water - Ground	X	250 ml Cylinder - Unpreserved
12/20/22	11:15 AM	221220142-06G - Caribou Portal	Water - Ground	X	250 ml Cylinder - Unpreserved
12/20/22	11:15 AM	221220142-07G - Caribou Portal - FB	Water - Ground	X	250 ml Cylinder - Unpreserved

1.6° upon dept.

Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:
A. Fohr	12/21/22 1500		12-23 11:56				

Ship To: Energy Labs

Colorado Analytical LABORATORIES, INC.

Sub-Lab Chain of Custody Form

CA12088

Report To Information	Bill To Information (if different from report to)	Project Name
Company Name: Colorado Analytical Laboratory Report To: Stuart Nielson E-Mail: stuartnielson@coloradolab.com		Monthly Groundwater
Address: 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	**Address:** CAL TASK 221220142 ARF	Compliance Samples: Yes ☐ No ☑ Submit Data to CDPHE: Yes ☐ No ☑

Tests Requested

Sample Date/Time	Sample ID	Matrix	Metals (Sub)	Container Type

Comment:
221220142-01G - Please report Dissolved Lithium.
221220142-02G - Please report Dissolved Lithium.
221220142-03G - Please report Dissolved Lithium.
221220142-04G - Please report Dissolved Lithium.
221220142-05G - Please report Dissolved Lithium.
221220142-06G - Please report Dissolved Lithium.
221220142-07G - Please report Dissolved Lithium.

Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:
A. Forth	12/21/22 1500		12/23 11:55a				

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 12/20/22 1:00 PM
Lab Number: 221220142-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/27/22	QC61862	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/27/22	QC61862	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	53.1	16 - 145
2-Fluorobiphenyl	101.3	60 - 140
2-Fluorophenol	78.8	60 - 140
Nitrobenzene-d5	99.0	15 - 314
Phenol-d5	86.3	8 - 424
p-Terphenyl-d14	153.2	44 - 135

Surrogate above QC criteria; most likely due to matrix interference. MBS 1/4/2023

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 12/20/22 1:30 PM
Lab Number: 221220142-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	29.2	16 - 145
2-Fluorobiphenyl	98.8	60 - 140
2-Fluorophenol	73.7	60 - 140
Nitrobenzene-d5	93.2	15 - 314
Phenol-d5	81.1	8 - 424
p-Terphenyl-d14	154.6	44 - 135

Surrogate above QC criteria; most likely due to matrix interference. MBS 1/4/2023

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 12/20/22 1:30 PM
Lab Number: 221220142-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	27.8	16 - 145
2-Fluorobiphenyl	98.9	60 - 140
2-Fluorophenol	72.6	60 - 140
Nitrobenzene-d5	93.1	15 - 314
Phenol-d5	80.9	8 - 424
p-Terphenyl-d14	157.2	44 - 135

Surrogate above QC criteria; most likely due to matrix interference. MBS 1/4/2023

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 12/20/22 11:30 AM
Lab Number: 221220142-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	37.6	16 - 145
2-Fluorobiphenyl	98.5	60 - 140
2-Fluorophenol	76.8	60 - 140
Nitrobenzene-d5	93.8	15 - 314
Phenol-d5	81.6	8 - 424
p-Terphenyl-d14	162.2	44 - 135

Surrogate above QC criteria; most likely due to matrix interference. MBS 1/4/2023

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 12/20/22 12:15 PM
Lab Number: 221220142-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	17.8	16 - 145
2-Fluorobiphenyl	100.5	60 - 140
2-Fluorophenol	70.3	60 - 140
Nitrobenzene-d5	96.1	15 - 314
Phenol-d5	79.9	8 - 424
p-Terphenyl-d14	169.8	44 - 135

Surrogate above QC criteria; most likely due to matrix interference. MBS 1/4/2023

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 12/20/22 11:15 AM
Lab Number: 221220142-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	58.4	16 - 145
2-Fluorobiphenyl	90.2	60 - 140
2-Fluorophenol	68.6	60 - 140
Nitrobenzene-d5	89.4	15 - 314
Phenol-d5	79.2	8 - 424
p-Terphenyl-d14	158.4	44 - 135

Surrogate above QC criteria; most likely due to matrix interference. MBS 1/4/2023

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/12/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal - FB
Sample Date/Time: 12/20/22 11:15 AM
Lab Number: 221220142-07

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
2-Chlorophenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS
Phenol	**ND**	EPA 625	10.0 ug/L	12/28/22	QC61862	MBS

Surrogate	PercentRecovery	Acceptance Limits
2,4,6-Tribromophenol	25.4	16 - 145
2-Fluorobiphenyl	100.6	60 - 140
2-Fluorophenol	70.0	60 - 140
Nitrobenzene-d5	98.0	15 - 314
Phenol-d5	82.9	8 - 424
p-Terphenyl-d14	156.0	44 - 135

Surrogate above QC criteria; most likely due to matrix interference. MBS 1/4/2023

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC

Receive Date: 12/20/22
Project Name: Monthly Groundwater

Test	QC Batch ID	QC Type	Result	Method
2-Chlorophenol	QC61862	Method Blank	ND	EPA 625
Phenol	QC61862	Method Blank	ND	EPA 625

Test	QC Batch ID	QC Type	Limits	% Rec	RPD	Method
2-Chlorophenol	QC61862	LCS	55 - 130	75.1	-	EPA 625
		LCS Dup	-	82.8	-	
		MS	23 - 134	70.6	-	
		MSD	0 - 61	-	4.6	
Phenol	QC61862	LCS	48 - 130	65.9	-	EPA 625
		LCS Dup	-	82.7	-	
		MS	5 - 120	65.6	-	
		MSD	0 - 64	-	1.6	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) The accuracy of the spike recovery value is reduced due to the analyte concentration in the sample being disproportionate to the spike level. The laboratory control sample recovery was acceptable

ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Moran	Contact Name:	
Address: 12567 W. Cedar Dr Ste. 250	Address:	Task Number (Lab Use Only)
City Lakewood State CO Zip 80228	City State Zip	CAL Task 221220142 ARF
Phone: 303-506-1618	Phone:	
Email: sergio.rivera@novametal.com brooke.mo@colorado.edu	Email: lix.com	
Sample Collector: BM		
Sample Collector Phone: 303-506-1618	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Tests Requested

QB022050014 (updated 10/27/22)

Date	Time	Sample ID	FIELD pH	No. of Containers	Grab or Composite (Check One Only)
12/20/22	13:00	CROSS WELL		9	G
12/20/22	13:30	COMPLIANCE WELL		9	G
12/20/22	13:30	COMPLIANCE WELL-FB		9	G
12/20/22	11:30	CARIBOU WELL		9	G
12/20/22	12:15	CROSS PORTAL		9	G
12/20/22	11:15	CARIBOU PORTAL		9	G
12/20/22	11:15	CARIBOU PORTAL-FB		9	G

Instructions: FIELD FILTERED FOR 1 NITRIC & GROSS ALPHA

C/S Info: HD

Deliver Via: C/S Charge ☐

Seals Present Yes ☐ No ☐

Temp. 4 °C/Ice Y Sample Pres. Yes ☑ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
BMoran	12/20/22 17:14	DN	12-20-22 17:15				

Colorado Analytical LABORATORIES, INC.

CAL Task
221220142

ARF

Quotation for Analytical Services
Quote ID: QBO22050014

Prepared For: **Grand Island Resources LLC**
12567 W Cedar Dr
Suite 250
Lakewood, CO 80228

Quote Date: **Wednesday, May 4, 2022**
Turn Around Time: **10 Working Days**

Attn: **Brooke Molson-Moran**

Project:
Monthly Groundwater

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Langelier Index	N/A	6	$60.00	$360.00
Water - Ground	Alkalinity	SM 2320-B	6	Incl.	Incl.
Water - Ground	Ca as CaCO3	EPA 200.7	6	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	6	Incl.	Incl.
Water - Ground	Lang Index	SM 2330-B	6	Incl.	Incl.
Water - Ground	pH/ Temp	SM 4500-H-B	6	Incl.	Incl.
Water - Ground	TDS	SM 2540-C	6	Incl.	Incl.
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	6	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ca - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Fe - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ag - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ag - Total	EPA 200.8	6	$16.00	$96.00
Water - Ground	Al - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	As - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ba - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Be - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cd - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Co - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cr - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cu - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mo - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ni - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Pb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Sb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Se - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Tl - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	V - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Zn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Chloride	EPA 300.0	6	$18.00	$108.00

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

Water - Ground	Fluoride	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Sulfate	EPA 300.0	6	$18.00	$108.00
Water - Ground	U - Dis	EPA 200.8	6	$23.00	$138.00
Water - Ground	Hg	EPA 245.7	6	$27.00	$162.00
Water - Ground	Total Coliform	SM 9221-B	6	$27.00	$162.00
Water - Ground	Cyanide - Free	ASTM D4282-15	6	$40.00	$240.00
Water - Ground	Phenols	EPA 420.4	6	$55.00	$330.00
Water - Ground	Metals (Sub)	EPA 200.7/EPA 200.8	6	$67.20	$403.20
Water - Ground	Gross Alpha/Beta (Sub)	SM 7110-B	6	$68.40	$410.40
Water - Ground	Asbestos (Sub)	TEM	6	$120.00	$720.00
Water - Ground	625 SOCs	EPA 625	6	$225.00	$1,350.00
Shipping	Sample Shipment to Outside Lab	UPS	2	$30.00	$60.00
Shipping	Ext. Sample Shipment to Outside Lab	UPS or FedEx	1	$50.00	$50.00

Metals (sub) for dissolved lithium. Hg - dissolved. Only 2-Chlorophenol and Phenol needed for 625. Customer field filtering dissolved metals.

$6,983.60

****Samples should be shipped or hand delivered the same day they are collected. Orders that requrie sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

Sub-Lab analysis pricing subject to change. Sub-Lab radiological analysis turn-around time is 4 to 8 weeks depending on sample matrix. Due to time, distance and other constraints outside of the control of CAL shipments to sub labs are not guranteed. All shipment charges will be billed to the client regardless of shipment outcome.

Billing terms are Net 30 on approved accounts, all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/19/23
Matrix: Water - Ground

Customer Sample ID Cross Well
Sample Date/Time: 12/20/22 1:00 PM
Lab Number: 221220142-01

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**63.2 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Calcium as CaCO3	**40.5 mg/L**	EPA 200.7	0.1 mg/L	12/22/22	-	MBN
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Langelier Index	**-1.90 units**	SM 2330-B	units	12/29/22	-	SAN
pH	**6.70 units**	SM 4500-H-B	0.01 units	12/20/22	-	Sampler
Temperature	**6 °C**	SM 4500-H-B	1 °C	12/20/22	-	Sampler
Total Alkalinity	**63.2 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	12/21/22	QC61788	TAB
Total Dissolved Solids	**109 mg/L**	SM 2540-C	5 mg/L	12/23/22	QC61827	MLT

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/19/23
Matrix: Water - Ground

Customer Sample ID Compliance Well
Sample Date/Time: 12/20/22 1:30 PM
Lab Number: 221220142-02

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**62.2 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Calcium as CaCO3	**41.1 mg/L**	EPA 200.7	0.1 mg/L	12/22/22	-	MBN
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Langelier Index	**-1.93 units**	SM 2330-B	units	12/29/22	-	SAN
pH	**6.60 units**	SM 4500-H-B	0.01 units	12/20/22	-	Sampler
Temperature	**6 °C**	SM 4500-H-B	1 °C	12/20/22	-	Sampler
Total Alkalinity	**62.2 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	12/21/22	QC61788	TAB
Total Dissolved Solids	**96 mg/L**	SM 2540-C	5 mg/L	12/23/22	QC61827	MLT

Dissolved Metals filtered in the field by the customer

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mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/19/23
Matrix: Water - Ground

Customer Sample ID Compliance Well - FB
Sample Date/Time: 12/20/22 1:30 PM
Lab Number: 221220142-03

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Calcium as CaCO3	**ND**	EPA 200.7	0.1 mg/L	12/22/22	-	MBN
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Langelier Index	**-7.22 units**	SM 2330-B	units	12/29/22	-	SAN
pH	**5.60 units**	SM 4500-H-B	0.01 units	12/20/22	-	DAT
Temperature	**20 °C**	SM 4500-H-B	1 °C	12/20/22	-	DAT
Total Alkalinity	**ND**	SM 2320-B	4.0 mg/L as CaCO3	12/21/22	QC61788	TAB
Total Dissolved Solids	**ND**	SM 2540-C	5 mg/L	12/23/22	QC61827	MLT

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/19/23
Matrix: Water - Ground

Customer Sample ID Caribou Well
Sample Date/Time: 12/20/22 11:30 AM
Lab Number: 221220142-04

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**19.0 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Calcium as CaCO3	**9.5 mg/L**	EPA 200.7	0.1 mg/L	12/22/22	-	MBN
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Langelier Index	**-3.38 units**	SM 2330-B	units	12/29/22	-	SAN
pH	**6.30 units**	SM 4500-H-B	0.01 units	12/20/22	-	Sampler
Temperature	**6 °C**	SM 4500-H-B	1 °C	12/20/22	-	Sampler
Total Alkalinity	**19.0 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	12/21/22	QC61788	TAB
Total Dissolved Solids	**34 mg/L**	SM 2540-C	5 mg/L	12/23/22	QC61827	MLT

Dissolved Metals filtered in the field by the customer

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/19/23
Matrix: Water - Ground

Customer Sample ID Cross Portal
Sample Date/Time: 12/20/22 12:15 PM
Lab Number: 221220142-05

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**105.2 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Calcium as CaCO3	**62.3 mg/L**	EPA 200.7	0.1 mg/L	12/22/22	-	MBN
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Langelier Index	**-0.12 units**	SM 2330-B	units	12/29/22	-	SAN
pH	**8.00 units**	SM 4500-H-B	0.01 units	12/20/22	-	Sampler
Temperature	**5 °C**	SM 4500-H-B	1 °C	12/20/22	-	Sampler
Total Alkalinity	**105.2 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	12/21/22	QC61788	TAB
Total Dissolved Solids	**80 mg/L**	SM 2540-C	5 mg/L	12/23/22	QC61827	MLT

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

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mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/19/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal
Sample Date/Time: 12/20/22 11:15 AM
Lab Number: 221220142-06

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**129.6 mg/L as CaCO3**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Calcium as CaCO3	**66.8 mg/L**	EPA 200.7	0.1 mg/L	12/22/22	-	MBN
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Langelier Index	**0.47 units**	SM 2330-B	units	12/29/22	-	SAN
pH	**8.60 units**	SM 4500-H-B	0.01 units	12/20/22	-	Sampler
Temperature	**2 °C**	SM 4500-H-B	1 °C	12/20/22	-	Sampler
Total Alkalinity	**129.6 mg/L as CaCO3**	SM 2320-B	4.0 mg/L as CaCO3	12/21/22	QC61788	TAB
Total Dissolved Solids	**141 mg/L**	SM 2540-C	5 mg/L	12/23/22	QC61827	MLT

Dissolved Metals filtered in the field by the customer

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(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical Results

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Bill To: Accounts Payable
Company: Grand Island Resources LLC
12567 W Cedar Dr
Suite 250
Lakewood CO 80228

Task No.: 221220142
Client PO:
Client Project: Monthly Groundwater

Date Received: 12/20/22
Date Reported: 1/19/23
Matrix: Water - Ground

Customer Sample ID Caribou Portal - FB
Sample Date/Time: 12/20/22 11:15 AM
Lab Number: 221220142-07

Test	Result	Method	RL	Date Analyzed	QC Batch ID	Analyzed By
Bicarbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Calcium as CaCO3	**ND**	EPA 200.7	0.1 mg/L	12/22/22	-	MBN
Carbonate	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Hydroxide	**ND**	SM 2320-B	0.2 mg/L as CaCO3	12/21/22	-	TAB
Langelier Index	**-5.26 units**	SM 2330-B	units	12/29/22	-	SAN
pH	**5.26 units**	SM 4500-H-B	0.01 units	12/20/22	-	DAT
Temperature	**20 °C**	SM 4500-H-B	1 °C	12/20/22	-	DAT
Total Alkalinity	**ND**	SM 2320-B	4.0 mg/L as CaCO3	12/21/22	QC61788	TAB
Total Dissolved Solids	**ND**	SM 2540-C	5 mg/L	12/23/22	QC61827	MLT

Dissolved Metals filtered in the field by the customer

Abbreviations/ References:

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ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

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(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Colorado Analytical LABORATORIES, INC.

Analytical QC Summary

TASK NO: 221220142

Report To: Patrick Delaney
Company: Grand Island Resources LLC

Receive Date: 12/20/22
Project Name: Monthly Groundwater

Test	QC Batch ID	QC Type	Result	Method
Total Alkalinity	QC61788	Blank	ND	SM 2320-B
Total Dissolved Solids	QC61827	Blank	ND	SM 2540-C

Test	QC Batch ID	QC Type	Spike Amt	Limits %	% Rec	RPD	Method
Total Alkalinity	QC61788	Duplicate -221220007-01	-	0 - 20	-	0.2	SM 2320-B
		LCS	1000 mg/L as	90 - 110	105.1	-	
		LCS-2	40000 mg/L as	90 - 110	102.7	-	
Total Dissolved Solids	QC61827	Duplicate -221220099-01	-	0 - 20	-	1.1	SM 2540-C
		LCS	745 mg/L	85 - 115	0.2	-	

All analyses were performed in accordance with approved methods under the latest revision to 40 CFR Part 136 unless otherwise identified. Based on my inquiry of the person or persons directly responsible for analyzing the wastewater samples and generating the report (s), the analyses, report, and information submitted are, to the best of my knowledge and belief, true, accurate, and complete.

DATA APPROVED FOR RELEASE BY

Abbreviations/ References:

RL = Reporting Limit = Minimum Level
mg/L = Milligrams Per Liter or PPM
ug/L = Micrograms Per Liter or PPB
mpn/100 mls = Most Probable Number Index/ 100 mls
Date Analyzed = Date Test Completed

(d) RPD acceptable due to low duplicate and sample concentrations.
(s) Spike amount low relative to the sample amount.
ND = Not Detected at Reporting Limit.

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Moran	Contact Name:	
Address: 12567 W. Cedar Dr Ste. 250	Address:	Task Number (Lab Use Only)
City Lakewood State CO Zip 80228	City State Zip	CAL Task 221220142 ARF
Phone: 303-506-1618	Phone:	
Email: sergio.rivera@novametal.com brooke.mo@colorado.edu	Email: lix.com	
Sample Collector: BM		
Sample Collector Phone: 303-506-1618	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Tests Requested

QB022050014 (updated 10/27/22)

Date	Time	Sample ID	FIELD pH	No. of Containers	Grab or Composite (Check One Only)
12/20/22	13:00	CROSS WELL		9	G
12/20/22	13:30	COMPLIANCE WELL		9	G
12/20/22	13:30	COMPLIANCE WELL-FB		9	G
12/20/22	11:30	CARIBOU WELL		9	G
12/20/22	12:15	CROSS PORTAL		9	G
12/20/22	11:15	CARIBOU PORTAL		9	G
12/20/22	11:15	CARIBOU PORTAL-FB		9	G

Instructions: FIELD FILTERED FOR 1 NITRIC & GROSS ALPHA

C/S Info: HD

Deliver Via: C/S Charge ☐

Seals Present Yes ☐ No ☐

Temp. 4 °C/Ice Y Sample Pres. Yes ☑ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
BMoran	12/20/22 17:14	DN	12-20-22 17:15				

Colorado Analytical LABORATORIES, INC.

CAL Task
221220142

ARF

Quotation for Analytical Services
Quote ID: QBO22050014

Prepared For: **Grand Island Resources LLC**
12567 W Cedar Dr
Suite 250
Lakewood, CO 80228

Quote Date: **Wednesday, May 4, 2022**
Turn Around Time: **10 Working Days**

Attn: **Brooke Molson-Moran**

Project:
Monthly Groundwater

Matrix	Description	Method	Qty.	Price - each	Total
Water - Ground	Langelier Index	N/A	6	$60.00	$360.00
Water - Ground	Alkalinity	SM 2320-B	6	Incl.	Incl.
Water - Ground	Ca as CaCO3	EPA 200.7	6	Incl.	Incl.
Water - Ground	Carb/ Bicarb	SM 2320-B	6	Incl.	Incl.
Water - Ground	Lang Index	SM 2330-B	6	Incl.	Incl.
Water - Ground	pH/ Temp	SM 4500-H-B	6	Incl.	Incl.
Water - Ground	TDS	SM 2540-C	6	Incl.	Incl.
Water - Ground	Nitrate/ Nitrite Nitrogen	Calculation	6	$0.00	$0.00
Water - Ground	B - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ca - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Fe - Dis	EPA 200.7	6	$13.00	$78.00
Water - Ground	Ag - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ag - Total	EPA 200.8	6	$16.00	$96.00
Water - Ground	Al - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	As - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ba - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Be - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cd - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Co - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cr - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Cu - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Mo - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Ni - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Pb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Sb - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Se - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Tl - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	V - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Zn - Dis	EPA 200.8	6	$16.00	$96.00
Water - Ground	Chloride	EPA 300.0	6	$18.00	$108.00

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

Colorado Analytical LABORATORIES, INC.

Quotation for Analytical Services
Quote ID: QBO22050014

Water - Ground	Fluoride	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrate Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Nitrite Nitrogen	EPA 300.0	6	$18.00	$108.00
Water - Ground	Sulfate	EPA 300.0	6	$18.00	$108.00
Water - Ground	U - Dis	EPA 200.8	6	$23.00	$138.00
Water - Ground	Hg	EPA 245.7	6	$27.00	$162.00
Water - Ground	Total Coliform	SM 9221-B	6	$27.00	$162.00
Water - Ground	Cyanide - Free	ASTM D4282-15	6	$40.00	$240.00
Water - Ground	Phenols	EPA 420.4	6	$55.00	$330.00
Water - Ground	Metals (Sub)	EPA 200.7/EPA 200.8	6	$67.20	$403.20
Water - Ground	Gross Alpha/Beta (Sub)	SM 7110-B	6	$68.40	$410.40
Water - Ground	Asbestos (Sub)	TEM	6	$120.00	$720.00
Water - Ground	625 SOCs	EPA 625	6	$225.00	$1,350.00
Shipping	Sample Shipment to Outside Lab	UPS	2	$30.00	$60.00
Shipping	Ext. Sample Shipment to Outside Lab	UPS or FedEx	1	$50.00	$50.00

Metals (sub) for dissolved lithium. Hg - dissolved. Only 2-Chlorophenol and Phenol needed for 625. Customer field filtering dissolved metals.

$6,983.60

****Samples should be shipped or hand delivered the same day they are collected. Orders that requrie sub-lab analysis should be delivered to the lab Monday thru Wednesday only.****

Colorado Analytical Laboratory maintains certification by the Colorado Department of Health (CDPHE) and EPA Region 8 for Wyoming and Tribal Public Water Systems to analyze drinking water for organic contaminants (SOC's VOC's), inorganic contaminants (metals), nitrate nitrite, cyanide, fluoride and coliform bacteria.

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Billing terms are Net 30 on approved accounts, all other accounts are COD. Additional charges may apply for accelerated turn around.

We appreciate the opportunity to be of service to you. If you have questions please call us at 303-659-2313 or visit us at www.coloradolab.com

10411 Heinz Way / Commerce City, CO 80640 / 303-659-2313
Mailing Address: P.O. Box 507 / Brighton, CO 80601-0507

JAK

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03374
Received: Dec 21, 2022
Reported: Jan 11, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

Stuart Nielson
Colorado Analytical Laboratories, Inc.
10411 Heinz Way
Commerce City, CO 80640

ANALYTICAL REPORT

Report may only be copied in its entirety.
Results reported herein relate only to discrete samples submitted by the client. Hazen Research, Inc. does not warrant that the results are representative of anything other than the samples that were received in the laboratory

By: Roxanne Sullivan
Roxanne Sullivan
Analytical Laboratories Director

Hazen Research, Inc.
4601 Indiana Street
Golden, CO 80403 USA
Tel: (303) 279-4501
Fax: (303) 278-1528

Lab Control ID: 22M03374
Received: Dec 21, 2022
Reported: Jan 11, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03374-001							
Customer Sample ID	**221220142-01F** - Monthly Groundwater - Cross Well sampled on 12/20/22 @ 1300							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	<0.1	0.8	0.1	SM 7110 B	1/9/23 @ 0919	RG
Gross Beta	**pCi/L**	**T**	<2.9	2.2	2.9	SM 7110 B	1/9/23 @ 0919	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

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ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03374-002							
Customer Sample ID	**221220142-02F** - Monthly Groundwater - Compliance Well sampled on 12/20/22 @ 1330							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.9	1.0	0.1	SM 7110 B	1/9/23 @ 0921	RG
Gross Beta	**pCi/L**	**T**	<2.8	2.2	2.8	SM 7110 B	1/9/23 @ 0921	RG

Certification ID's: CO/EPA CO00008

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Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03374-003							
Customer Sample ID	**221220142-03F** - Monthly Groundwater - Compliance Well - FB sampled on 12/20/22 @ 1330							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.2	0.8	0.1	SM 7110 B	1/9/23 @ 0923	RG
Gross Beta	**pCi/L**	**T**	<2.9	2.0	2.9	SM 7110 B	1/9/23 @ 0923	RG

Certification ID's: CO/EPA CO00008

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Received: Dec 21, 2022
Reported: Jan 11, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03374-004							
Customer Sample ID	**221220142-04F** - Monthly Groundwater - Caribou Well sampled on 12/20/22 @ 1130							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.5	0.9	0.1	SM 7110 B	1/9/23 @ 0925	RG
Gross Beta	**pCi/L**	**T**	<2.8	2.1	2.8	SM 7110 B	1/9/23 @ 0925	RG

Certification ID's: CO/EPA CO00008

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Lab Control ID: 22M03374
Received: Dec 21, 2022
Reported: Jan 11, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03374-005							
Customer Sample ID	**221220142-05F** - Monthly Groundwater - Cross Portal sampled on 12/20/22 @ 1215							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	1.0	1.2	0.1	SM 7110 B	1/9/23 @ 0927	RG
Gross Beta	**pCi/L**	**T**	<2.8	2.1	2.8	SM 7110 B	1/9/23 @ 0927	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

Hazen Research, Inc.
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Fax: (303) 278-1528

Lab Control ID: 22M03374
Received: Dec 21, 2022
Reported: Jan 11, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03374-006							
Customer Sample ID	**221220142-06F** - Monthly Groundwater - Caribou Portal sampled on 12/20/22 @ 1115							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	3.7	1.9	0.1	SM 7110 B	1/9/23 @ 0929	RG
Gross Beta	**pCi/L**	**T**	2.8	2.3	2.7	SM 7110 B	1/9/23 @ 0929	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

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Lab Control ID: 22M03374
Received: Dec 21, 2022
Reported: Jan 11, 2023
Purchase Order No.
None Received

Customer ID: 20040H
Account ID: Z01034

ANALYTICAL REPORT

Stuart Nielson
Colorado Analytical Laboratories, Inc.

Lab Sample ID	22M03374-007							
Customer Sample ID	**221220142-07F** - Monthly Groundwater - Caribou Portal - FB sampled on 12/20/22 @ 1115							
Parameter	**Units**	**Code**	Result	Precision* +/-	Detection Limit	Method	Analysis Date / Time	Analyst
Gross Alpha	**pCi/L**	**T**	0.2	0.8	0.1	SM 7110 B	1/9/23 @ 0931	RG
Gross Beta	**pCi/L**	**T**	<3.0	2.0	3.0	SM 7110 B	1/9/23 @ 0931	RG

Certification ID's: CO/EPA CO00008

*Variability of the radioactive decay process (counting error) at the 95% confidence level, 1.96 sigma.

Codes: (T) = Total (D) = Dissolved (S) = Suspended (R) = Total Residual (AR) = As Received < = Less Than

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 01/09/2023

Batch QC Summary Form

Analyte: Gross Alpha

Control Standard/LFB: ID: C-11a_002 pCi/mL: 57.4 (use 1 diluted)

Spike Solution: ID: C-11a_002 pCi/mL: 57.4 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(50.2)\ (1.000) - (0.0)\ (0.200)}{57.4} \times 100 = 87\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 30 %	x		
Spike Recovery	70 - 130 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M03289	22M03385
22M03286	
22M03312	
22M03314	
22M03332	
22M03374	
22M03379	
22M03381	
22M03382	
22M03384	

Evaluator:

Michelle Stringer

01/10/2023
Date

HAZEN RESEARCH, INC.
RADIOCHEMISTRY LABORATORY Date: 01/09/2023

Batch QC Summary Form

Analyte: Gross Beta

Control Standard/LFB: ID: C-11a_002 pCi/mL: 44 (use 1 diluted)

Spike Solution: ID: C-11a_002 pCi/mL: 44 (use 1 mL)

Spike Recovery Calculation: Sample: Tap*

$$\text{Calculation: } \frac{(39.7)\ (1.000) - (0.0)\ (0.200)}{44} \times 100 = 90\%$$

Batch QC Evaluation:

Parameter	Criteria	Pass	Fail	N/A
Control Std./LFB	+/- 20 %	x		
Spike Recovery	80 - 120 %	x		
Blank	< or = 3 x Uncertainty	x		
Duplicate 1	95% confidence interval overlap	x		
Duplicate 2 *	95% confidence interval overlap	x		

* Required for batch size greater than 10 samples.

Conclusions:

x Batch QC Passes**
_____ Batch QC Fails
_____ Batch QC Passes, with exceptions**:

Reruns Required: _____

Narrative:

**All QC data provided in this section of the report met the acceptance criteria specified in the analytical methods and procedures. State Maximum Contamination Levels (MCLs) are not evaluted in this report.

Batch Listing by Lab Control Number:

22M03289	22M03385
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22M03312	
22M03314	
22M03332	
22M03374	
22M03379	
22M03381	
22M03382	
22M03384	

Evaluator:

Michelle Stringer

01/10/2023
Date

Colorado Analytical LABORATORIES, INC.

22403374

Ship To: Hazen Research
Preserved: Y / N
HNO3 Lot #: N/A
Date Preserved: N/A

Report To Information	Bill To Information (If different from report to)	Project Name
Company Name: Colorado Analytical Laboratory Report To: Stuart Nielson E-Mail: stuartnielson@coloradolab.com		Monthly Groundwater
Address: 10411 Heinz Way Commerce City, CO 80640 Phone: 303-659-2313	Address: CAL TASK 221220142 ARF	Compliance Samples: Yes ☐ No ☑ Submit Data to CDPHE: Yes ☐ No ☑

Tests Requested

Sample Date/Time		Sample ID	Matrix	Gross Alpha/Beta (Sub)	Container Type
12/20/22	1:00 PM	221220142-01F - Cross Well	Water - Ground	X	1L - Unpreserved
12/20/22	1:30 PM	221220142-02F - Compliance Well	Water - Ground	X	1L - Unpreserved
12/20/22	1:30 PM	221220142-03F - Compliance Well - FB	Water - Ground	X	1L - Unpreserved
12/20/22	11:30 AM	221220142-04F - Caribou Well	Water - Ground	X	1L - Unpreserved
12/20/22	12:15 PM	221220142-05F - Cross Portal	Water - Ground	X	1L - Unpreserved
12/20/22	11:15 AM	221220142-06F - Caribou Portal	Water - Ground	X	1L - Unpreserved
12/20/22	11:15 AM	221220142-07F - Caribou Portal - FB	Water - Ground	X	1L - Unpreserved

Comment:

Preservation ✓ DN 12/22/22 1330
AOB Preserved 1445 DN 12/24/22

Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:
A. Foth	12/21/22 12pm					Lee Riddle	RECEIVED DEC 21 2022 1430

Page 1 of 1

eurofins | Built Environment Testing Reservoirs

January 04, 2023

Subcontractor Number:
Laboratory Report: **RES 545614-1**
Project #/P.O. #: **221220142**
Project Description: **Grand Island Resources**

Angela Forte
Colorado Analytical Laboratories, Inc.
10411 Heinz Way
Commerce City CO 80640

Dear Angela,

Eurofins Reservoirs is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA LAP, LLC), Lab ID 101533 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Eurofins Reservoirs has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 545614-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Eurofins Reservoirs will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed, as received by the customer. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Eurofins Reservoirs Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer
by Norberto Zimbelman

Jeanne Spencer
President

DATA QA
01/04/2023

EUROFINS RESERVOIRS ENVIRONMENTAL, INC

NVLAP Lab Code 101896-0
AIHA LAP, LLC. LAB ID 101533

TABLE: I ANALYSIS: TEM WATER SAMPLE ANALYTICAL RESULTS

RES Job Number: **RES 545614-1**
Client: **Colorado Analytical Laboratories, Inc.**
Client Project/P.O.: **221220142**
Client Project Description: **Grand Island Resources**
Date Samples Received: **December 21, 2022**
Analysis Type: **REI TEM SOP / USEPA 100.2-M**
Turnaround: **Standard 10**
Date Samples Analyzed: **December 29 - January 04, 2023**

NA = Not Analyzed
NR = Not Received
ND = None Detected
TR = Trace; <1 % Visual Estimate
Trem-Act = Tremolite-Actinolite

Laboratory Sample ID	Client ID Number	Aliquot Deposited on Filter (ml)	Dilution Factor	Total Number of Asbestos Structures Detected	Greater than 10 Micron Length Asbestos Structures Detected	Analytical Sensitivity (million struct/L)	Total Asbestos Concentration (million struct/L)	Greater than 10 Micron Length Asbestos Concentration (million struct/L)
545614 -	221220142-01H Cross Well	30	1	**ND**	ND	0.12	BAS	BAS
545614 -	221220142-02H Compliance Well	30	1	**ND**	ND	0.12	BAS	BAS
545614 -	221220142-03H Compliance Well - FB	30	1	**ND**	ND	0.12	BAS	BAS
545614 -	221220142-04H Caribou Well	20	1	**ND**	ND	0.17	BAS	BAS
545614 -	221220142-05H Cross Portal	20	1	**ND**	ND	0.17	BAS	BAS
545614 -	221220142-06H Caribou Portal	20	1	**ND**	ND	0.17	BAS	BAS
545614 -	221220142-07H Caribou Portal - FB	25	1	**ND**	ND	0.14	BAS	BAS

Filter Material = Mixed Cellulose Ester

Filter Diameter = 25mm

Effective Filter Area = 0mm²

Average Grid Opening = 0.010mm²

Norberto Zimbelman
Analyst

Alejandro Mejia
Analyst

Camryn Baumgartner
Analyst

eurofins | Built Environment Testing Reservoirs

RES Job #: 545614

SUBMITTED BY		INVOICE TO		CONTACT INFORMATION		SERIES
Company:	Colorado Analytical Laboratories, Inc.	Company:	Colorado Analytical Laboratories, Inc.	Contact:	Angela Forte	-1 TEM Standard 10
Address:	10411 Heinz Way	Address:	10411 Heinz Way	Phone:	(303) 659-2313	
				Fax:		
	Commerce City, CO 80640		Commerce City, CO 80640	Cell:		
Project Number and/or P.O. #:	221220142			Final Data Deliverable Email Address:		
Project Description/Location:	Grand Island Resources			aforte@coloradolab.com (+ 6 ADDNL. CONTACTS)		

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm & Sat. 8am - 5pm

PLM / PCM / TEM DTL RUSH PRIORITY STANDARD

CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm

Dust RUSH PRIORITY STANDARD

Metals RUSH PRIORITY STANDARD *PRIOR NOTICE REQUIRED FOR SAME DAY TAT

Organics* SAME DAY RUSH PRIORITY STANDARD

MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm

Viable Analysis** PRIORITY STANDARD

**TAT DEPENDENT ON SPEED OF MICROBIAL GROWTH

Medical Device Analysis RUSH STANDARD

Mold Analysis RUSH PRIORITY STANDARD

****Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.****

Special Instructions:

REQUESTED ANALYSIS

PLM - Short Report, Long Report, CARB 435

TEM - Drinking Water (EPA 100.2)

PCM - 7400A, 7400B, OSHA

DUST - Total, Respirable

METALS - Analyte(s) Lead Only (7082, 7420, Waste Water, Foodware), Multi Metals (7303,6020A, 200.8, Waste Water, Foodware, OSHA ID-125G), pH (Liquid or Non-Liquid), TCLP, RCRA 8 Scan, Welding Fume Scan, Full Metals Scan

ORGANICS - Methamphetamine, TSS

VIABLES - Campylobacter, Bacillus, Salmonella (Culturable or 1-2), Listeria, E. coli O157:H7, E. coli/Coliforms - Plated, S.aureus, Yeast & Mol, Aerobic Plate Count, Coliforms/E. coli - (State Water, Drinking Water, Non-Drinking Water, +/-, Quantification), Lactic Acid, Viable Microbial Count (w/o ID or w/ ID), Enterococcus (+/- or Quantification), Legionella (P, NP, C)

MEDICAL - Bioburden, LAL

MOLD - Spore Trap, Bulk Mold, Particulate Identification

VALID MATRIX CODES

Air = A	Bulk = B
Dust = D	Food = F
Paint = P	Soil = S
Surface = SU	Swab = SW
Tape = T	Wipe = W
Drinking Water = DW	
Waste Water = WW	
ASTM E1792 approved wipe media only	

LAB NOTES

Client Sample ID Number (Sample ID's must be unique)	ASBESTOS	CHEMISTRY				MICROBIOLOGY			Sample Volume (L) / Area	Length(or Aliquots) x Width(or Area per Aliquot)	Matrix Code	# of Containers	Date Collected mm/dd/yy	Time Collected hh:mm	Laboratory Analysis Instructions
1 221220142-01H Cross Well		X							1L		W	1	12/20/22	13:00	
2 221220142-02H Compliance Well		X							1L		W	1	12/20/22	13:30	
3 221220142-03H Compliance Well - FB		X							1L		W	1	12/20/22	13:30	
4 221220142-04H Caribou Well		X							1L		W	1	12/20/22	11:30	
5 221220142-05H Cross Portal		X							1L		W	1	12/20/22	12:15	
6 221220142-06H Caribou Portal		X							1L		W	1	12/20/22	11:15	
7 221220142-07H Caribou Portal - FB		X							1L		W	1	12/20/22	11:15	

EREI establishes a unique Lab Sample ID, for each sample, by preceding each unique Client Sample ID with the laboratory RES Job Number.
EREI will analyze incoming samples based on information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing, client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall consitute an analytical services agreement with payment terms of NET 30 days. Failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By:		Angela Forte	Date/Time: 12/21/2022 9:01:00	Sample Condition: Acceptable - On Ice
Received By:		Jessica Parker	Date/Time: 12/21/2022 13:52:40	Carrier: Fed-Ex

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	CAB
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	12/29/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	545614-1	**Date Received**	12/21/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221220142-01H Cross Well	**Method**	EPA 100.2	**Scope Align**	12/29/2022
Suspension		**Aliquot**	30	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	E3-1	ND									
	B4-6	ND									
	C6-3	ND									
	G5-1	ND									
	H5-4	ND									
B	H4-4	ND									
	G5-1	ND									
	A4-6	ND									
	B2-6	ND									
	C4-3	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	CAB
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	12/29/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	545614-1	**Date Received**	12/21/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221220142-02H Compliance Well	**Method**	EPA 100.2	**Scope Align**	12/29/2022
Suspension		**Aliquot**	30	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	E5-1	ND									
	B5-3	ND									
	C6-6	ND									
	F6-1	ND									
	G4-4	ND									
B	F3-3	ND									
	G4-1	ND									
	K3-3	ND									
	A4-4	ND									
	C2-4	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	AME
Primary Scope	JEM-100CX II	**Sample Type**	Water	**Analysis Date**	12/29/2022
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	545614-1	**Date Received**	12/21/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221220142-03H Compliance Well - FB	**Method**	EPA 100.2	**Scope Align**	12/29/2022
Suspension		**Aliquot**	30	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	F5-1	ND									
	F5-4	ND									
	G5-1	ND									
	G5-4	ND									
	F5-3	ND									
B	F4-1	ND									
	F4-4	ND									
	G4-1	ND									
	G4-4	ND									
	H4-1	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	NZ
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	01/04/2023
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	545614-1	**Date Received**	12/21/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221220142-04H Caribou Well	**Method**	EPA 100.2	**Scope Align**	01/04/2023
Suspension		**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
B	C5-4	ND									
	F2-6	ND									
	E2-6	ND									
A	G6-1	ND									
	F6-4	ND									
	E6-4	ND									
	G5-1	ND									
	F5-1	ND									
	G2-3	ND									
	F2-3	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	NZ
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	01/04/2023
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	545614-1	**Date Received**	12/21/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221220142-05H Cross Portal	**Method**	EPA 100.2	**Scope Align**	01/04/2023
Suspension		**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
B	E4-6	ND									
	E4-3	ND									
	C4-6	ND									
	H5-3	ND									
	G5-3	ND									
	F5-3	ND									
	E5-3	ND									
A	F5-3	ND									
	G5-3	ND									
	H5-3	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	NZ
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	01/04/2023
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	545614-1	**Date Received**	12/21/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221220142-06H Caribou Portal	**Method**	EPA 100.2	**Scope Align**	01/04/2023
Suspension		**Aliquot**	20	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
B	G3-4	ND									
	E3-4	ND									
	E3-1	ND									
	F4-4	ND									
	F4-1	ND									
	E4-4	ND									
	E4-1	ND									
A	F4-1	ND									
	E4-1	ND									
	C4-1	ND									

*NAM = Non Asbestos Material

Lab Name	Eurofins Reservoirs	**Client**	Colorado Analytical Laboratories, Inc.	**Analyzed By**	NZ
Primary Scope	JEM-1200EX	**Sample Type**	Water	**Analysis Date**	01/04/2023
Voltage	100KV	**Vol/Area**	1L	**Prep Method**	Indirect
Magnification	20000	**Res Number**	545614-1	**Date Received**	12/21/2022
Primary Filter Area (mm²)		**Sec. Filter Area (mm²)**	346	**Grid Opening Area (mm²)**	0.01
Sample ID	221220142-07H Caribou Portal - FB	**Method**	EPA 100.2	**Scope Align**	01/04/2023
Suspension		**Aliquot**	25	**Grid Openings**	10

Grid	GO	Type	Count	Total	Length	Width	ID	Mineral Class	Comments	Photo	EDS
A	E4-4	ND									
	C4-4	ND									
	B4-4	ND									
	F5-1	ND									
	E5-1	ND									
	C5-1	ND									
B	H3-3	ND									
	K4-3	ND									
	H4-3	ND									
	G4-3	ND									

*NAM = Non Asbestos Material

Laboratory ID: 0055

National Testing Laboratories, Ltd

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(440) 449-2525, Fax: (440) 449-8585

ANALYTICAL REPORTS

SAMPLE CODE: 440703

2/8/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Cross Portal
Source City: Nederland
Source State: CO

Date/Time Received: 12/27/2022 08:03

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected		DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
					Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	Q,Y5	1	12/20/2022 14:15		12/27/2022 11:30
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	Q,Y5	1	12/20/2022 14:15		12/28/2022 10:30
					MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole						
1920	Odor Threshold	2150B	3	ton	1	ND	Q,Y5	1	12/20/2022 14:15		12/27/2022 11:15

Qualifiers:

Q: Sample analyzed beyond the accepted holding time.
Y5: Sample received above the recommended temperature. Sample does not meet method requirements for acceptable thermal preservation.

Analyst	Tests
SP	2120B,5540C,2150B

Christine MacMillan, Technical Director

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ANALYTICAL REPORTS

SAMPLE CODE: 440704

2/8/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Cross Well
Source City: Nederland
Source State: CO

Date/Time Received: 12/27/2022 08:03

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

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"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected		DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
					Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	Q,Y5	1	12/20/2022 15:00		12/27/2022 11:30
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	Q,Y5	1	12/20/2022 15:00		12/28/2022 10:30
				MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	Q,Y5	1	12/20/2022 15:00		12/27/2022 11:15

Qualifiers:

Q: Sample analyzed beyond the accepted holding time.
Y5: Sample received above the recommended temperature. Sample does not meet method requirements for acceptable thermal preservation.

Analyst	Tests
SP	2120B,5540C,2150B

Christine MacMillan, Technical Director

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ANALYTICAL REPORTS

SAMPLE CODE: 440705

2/8/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Compliance Well
Source City: Nederland
Source State: CO

Date/Time Received: 12/27/2022 08:03

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

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"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected		DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
					Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	Q,Y5	1	12/20/2022 15:30		12/27/2022 11:30
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	Q,Y5	1	12/20/2022 15:30		12/28/2022 10:30
				MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	Q,Y5	1	12/20/2022 15:30		12/27/2022 11:15

Qualifiers:

Q: Sample analyzed beyond the accepted holding time.
Y5: Sample received above the recommended temperature. Sample does not meet method requirements for acceptable thermal preservation.

Analyst	Tests
SP	2120B,5540C,2150B

Christine MacMillan, Technical Director

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ANALYTICAL REPORTS

SAMPLE CODE: 440706

2/8/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Compliance Well - FB
Source City: Nederland
Source State: CO

Date/Time Received: 12/27/2022 08:03

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

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"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected		DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
					Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	Q,Y5	1	12/20/2022 15:30		12/27/2022 11:30
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	Q,Y5	1	12/20/2022 15:30		12/28/2022 10:30
					MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole						
1920	Odor Threshold	2150B	3	ton	1	ND	Q,Y5	1	12/20/2022 15:30		12/27/2022 11:15

Qualifiers:

Q: Sample analyzed beyond the accepted holding time.
Y5: Sample received above the recommended temperature. Sample does not meet method requirements for acceptable thermal preservation.

Analyst	Tests
SP	2120B,5540C,2150B

Christine MacMillan, Technical Director

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ANALYTICAL REPORTS

SAMPLE CODE: 440707

2/8/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Caribou Portal
Source City: Nederland
Source State: CO

Date/Time Received: 12/27/2022 08:03

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

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"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected		DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
					Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	Q,Y5	1	12/20/2022 13:15		12/27/2022 11:30
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	Q,Y5	1	12/20/2022 13:15		12/28/2022 10:30
				MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	Q,Y5	1	12/20/2022 13:15		12/27/2022 11:15

Qualifiers:

Q: Sample analyzed beyond the accepted holding time.
Y5: Sample received above the recommended temperature. Sample does not meet method requirements for acceptable thermal preservation.

Analyst	Tests
SP	2120B,5540C,2150B

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ANALYTICAL REPORTS

SAMPLE CODE: 440708

2/8/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Caribou Portal - FB
Source City: Nederland
Source State: CO

Date/Time Received: 12/27/2022 08:03

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

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"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected		DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
					Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	Q,Y5	1	12/20/2022 13:15		12/27/2022 11:30
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	Q,Y5	1	12/20/2022 13:15		12/28/2022 10:30
				MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole							
1920	Odor Threshold	2150B	3	ton	1	ND	Q,Y5	1	12/20/2022 13:15		12/27/2022 11:15

Qualifiers:

Q: Sample analyzed beyond the accepted holding time.
Y5: Sample received above the recommended temperature. Sample does not meet method requirements for acceptable thermal preservation.

Analyst	Tests
SP	2120B,5540C,2150B

Christine MacMillan, Technical Director

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Laboratory ID: 0055

National Testing Laboratories, Ltd

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ANALYTICAL REPORTS

SAMPLE CODE: 440709

2/8/2023

Customer: Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood, CO 80228

Source: Caribou Well
Source City: Nederland
Source State: CO

Date/Time Received: 12/27/2022 08:03

Collected by: B. Moran

The results herein conform to TNI and ISO/IEC 17025:2017 standards, where applicable. These results may be used for compliance purposes, as required, unless otherwise narrated in the body of the report. The uncertainty of the test results are available upon request. All Dates and Times are reported as U.S. Eastern Time.

Legend:

Any 'Level Detected' marked with an asterisk (*) indicates that the value has exceeded the EPA Maximum Contaminant Level (MCL) or one of the Standards of Quality.

"ND" This contaminant was not detected at or above our lower reporting limit (LRL)

"NA" Not Analyzed

"Standard" This column indicates either the Maximum Contaminant Level (MCL) for EPA Primary Standards or the guideline values for EPA Secondary Standards.

"LRL" This column indicates the Lower Reporting Limit, which is the lowest level that the laboratory can detect a contaminant.

"DF" This column indicates the contaminant dilution factor.

Report Notes:

Fed Id #	Contaminant	Method	Standard	Units	LRL	Level Detected		DF	Date/Time Sampled	Date Prepped	Date/Time Analyzed
					Physical Factors						
1905	Apparent Color	2120B	15	CU	3	ND	Q,Y5	1	12/20/2022 13:30		12/27/2022 11:30
2905	Foaming Agents	5540C	0.5	mg/L	0.1	ND	Q,Y5	1	12/20/2022 13:30		12/28/2022 10:30
					MBAS, calculated as Linear Alkylate Sulfonate (LAS), mol wt of 342.4 g/mole						
1920	Odor Threshold	2150B	3	ton	1	ND	Q,Y5	1	12/20/2022 13:30		12/27/2022 11:15

Qualifiers:

Q: Sample analyzed beyond the accepted holding time.
Y5: Sample received above the recommended temperature. Sample does not meet method requirements for acceptable thermal preservation.

Analyst	Tests
SP	2120B,5540C,2150B

Christine MacMillan, Technical Director

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APPENDIX B OUTFALL-001 ANALYTICAL RESULTS

APPENDIX B.1 OCTOBER 2022 OUTFALL-001 ANALYTICAL RESULTS

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-167366-1
Client Project/Site: Wastewater Discharge - Nederland, CO

For:
GS Mining Company LLC
422 Gregory Street
Central City, Colorado 80427

Attn: Patrick Delaney

Authorized for release by:
10/21/2022 3:17:12 PM

Dylan Bieniulis, Project Manager I
(303)736-0138
Dylan.Bieniulis@et.eurofinsus.com

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

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Definitions/Glossary

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-167366-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-167366-1

Laboratory: Eurofins Denver

Narrative

CASE NARRATIVE

Client: GS Mining Company LLC

Project: Wastewater Discharge - Nederland, CO

Report Number: 280-167366-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT
The samples were received on 10/07/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.4 C.

TOTAL RECOVERABLE METALS (ICP)
Sample OUTFALL-001 (280-167366-1) was analyzed for Total Recoverable Metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 10/07/2022 and analyzed on 10/11/2022.

Iron was detected in method blank MB 280-589308/1-A at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POTENTIALLY DISSOLVED METALS (ICPMS)
Sample OUTFALL-001 (280-167366-1) was analyzed for potentially dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 10/10/2022 and 10/12/2022 and analyzed on 10/11/2022 and 10/13/2022.

This report includes Reporting Limits (RLs) for 200.8 Potentially Dissolved Silver that are less than Eurofins TestAmerica Denver's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Manganese was detected in method blank MB 280-589120/1-B at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)
Sample OUTFALL-001 (280-167366-1) was analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 10/09/2022 and 10/12/2022 and analyzed on 10/10/2022 and 10/13/2022.

Job ID: 280-167366-1 (Continued)

Laboratory: Eurofins Denver (Continued)

Zinc was detected in method blank MB 280-589618/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)
Sample OUTFALL-001 (280-167366-1) was analyzed for total mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared and analyzed on 10/10/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM - POTENTIALLY DISSOLVED
Sample OUTFALL-001 (280-167366-1) was analyzed for Trivalent Chromium - Potentially Dissolved in accordance with SM3500_CR3_B. The samples were analyzed on 10/20/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM - TOTAL RECOVERABLE
Sample OUTFALL-001 (280-167366-1) was analyzed for Trivalent Chromium - Total Recoverable in accordance with SM3500_CR3_B. The samples were analyzed on 10/20/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SPECIFIC CONDUCTIVITY
Sample OUTFALL-001 (280-167366-1) was analyzed for specific conductivity in accordance with SM20 2510B. The samples were analyzed on 10/10/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS
Sample OUTFALL-001 (280-167366-1) was analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 10/11/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED HEXAVALENT CHROMIUM
Sample OUTFALL-001 (280-167366-1) was analyzed for dissolved hexavalent chromium in accordance with SM 3500 CR B. The samples were analyzed on 10/07/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM
Sample OUTFALL-001 (280-167366-1) was analyzed for hexavalent chromium in accordance with 3500_CR_B. The samples were analyzed on 10/07/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CORROSIVITY (PH)
Sample OUTFALL-001 (280-167366-1) was analyzed for corrosivity (pH) in accordance with SM20 4500 H+ B. The samples were analyzed on 10/13/2022.

Sample OUTFALL-001 (280-167366-1) did not equilibrate to within 0.05 pH units after three measurements. This was observed previous analysis thus the sample was not rerun.

Job ID: 280-167366-1 (Continued)

Laboratory: Eurofins Denver (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SULFIDE

Sample OUTFALL-001 (280-167366-1) was analyzed for sulfide in accordance with SM20 4500 S2 D. The samples were analyzed on 10/10/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HYDROGEN SULFIDE

Sample OUTFALL-001 (280-167366-1) was analyzed for Hydrogen Sulfide in accordance with SM20 4500 S2 H. The samples were analyzed on 10/12/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-167366-1

Client Sample ID: OUTFALL-001

Lab Sample ID: 280-167366-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	38	J B	100	9.1	ug/L	1		200.7 Rev 4.4	Total Recoverable
Lead	0.63	J	1.0	0.23	ug/L	1		200.8	Total Recoverable
Copper	0.74	J	2.0	0.71	ug/L	1		200.8	Potentially Dissolved
Lead	0.61	J	1.0	0.23	ug/L	1		200.8	Potentially Dissolved
Zinc	12	B	10	2.0	ug/L	1		200.8	Potentially Dissolved
Specific Conductance	270		2.0	2.0	umhos/cm	1		SM 2510B	Total/NA
pH adj. to 25 deg C	7.9	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Temperature	21.4	HF	1.0	1.0	Degrees C	1		SM 4500 H+ B	Total/NA
Field pH	8.2		1.0	1.0	SU	1		SM4500 S2 H	Total/NA
Field Temperature	21		1.0	1.0	Celsius	1		SM4500 S2 H	Total/NA
Specific Conductance	270		2.0	2.0	umhos/cm	1		SM4500 S2 H	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-167366-1

Method	Method Description	Protocol	Laboratory
200.7 Rev 4.4	Metals (ICP)	EPA	EET DEN
200.8	Metals (ICP/MS)	EPA	EET DEN
245.1	Mercury (CVAA)	EPA	EET DEN
SM 2510B	Conductivity, Specific Conductance	SM	EET DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	EET DEN
SM 3500 CR B	Chromium, Hexavalent	SM	EET DEN
SM 4500 H+ B	pH	SM	EET DEN
SM 4500 S2 D	Sulfide, Total	SM	EET DEN
SM3500 CR B	Chromium, Trivalent	SM	EET DEN
SM4500 S2 H	Unionized Hydrogen Sulfide	SM	EET DEN
200.7	Preparation, Total Recoverable Metals	EPA	EET DEN
200.8	Preparation, Total Recoverable Metals	EPA	EET DEN
245.1	Preparation, Mercury	EPA	EET DEN
FILTRATION	Sample Filtration	None	EET DEN
Poten_Diss_Met	Filtration for Potentially Dissolved Metals	EPA	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-167366-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-167366-1	OUTFALL-001	Water	10/07/22 12:00	10/07/22 14:17

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 10/07/22 12:00
Date Received: 10/07/22 14:17

Lab Sample ID: 280-167366-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**38**	**J B**	100	9.1	ug/L		10/07/22 20:56	10/11/22 10:06	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 10/07/22 12:00
Date Received: 10/07/22 14:17

Lab Sample ID: 280-167366-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		10/09/22 14:32	10/10/22 21:51	1
Cadmium	ND		1.0	0.088	ug/L		10/09/22 14:32	10/10/22 21:51	1
Chromium	ND		3.0	0.88	ug/L		10/09/22 14:32	10/10/22 21:51	1
Copper	ND		2.0	0.71	ug/L		10/09/22 14:32	10/10/22 21:51	1
Lead	**0.63**	**J**	1.0	0.23	ug/L		10/09/22 14:32	10/10/22 21:51	1
Zinc	ND		10	2.0	ug/L		10/12/22 14:42	10/13/22 20:14	1

Method: EPA 200.8 - Metals (ICP/MS) - Potentially Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 10/07/22 12:00
Date Received: 10/07/22 14:17

Lab Sample ID: 280-167366-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		10/10/22 14:23	10/11/22 08:46	1
Cadmium	ND		1.0	0.088	ug/L		10/10/22 14:23	10/11/22 08:46	1
Chromium	ND		3.0	0.88	ug/L		10/10/22 14:23	10/11/22 08:46	1
Copper	**0.74**	**J**	2.0	0.71	ug/L		10/10/22 14:23	10/11/22 08:46	1
Lead	**0.61**	**J**	1.0	0.23	ug/L		10/10/22 14:23	10/11/22 08:46	1
Manganese	ND		2.0	0.51	ug/L		10/10/22 14:23	10/11/22 08:46	1
Nickel	ND		2.0	0.28	ug/L		10/10/22 14:23	10/11/22 08:46	1
Selenium	ND		5.0	1.0	ug/L		10/10/22 14:23	10/11/22 08:46	1
Silver	ND		0.50	0.045	ug/L		10/12/22 14:42	10/13/22 10:39	1
Zinc	**12**	**B**	10	2.0	ug/L		10/12/22 14:42	10/13/22 10:39	1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: OUTFALL-001
Date Collected: 10/07/22 12:00
Date Received: 10/07/22 14:17

Lab Sample ID: 280-167366-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		10/10/22 13:03	10/10/22 17:53	1

General Chemistry

Client Sample ID: OUTFALL-001
Date Collected: 10/07/22 12:00
Date Received: 10/07/22 14:17

Lab Sample ID: 280-167366-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (SM 2510B)	**270**		2.0	2.0	umhos/cm			10/10/22 10:36	1
Total Suspended Solids (SM 2540D)	ND		4.0	1.1	mg/L			10/11/22 11:30	1
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			10/07/22 18:14	1
pH adj. to 25 deg C (SM 4500 H+ B	**7.9**	**HF**	0.1	0.1	SU			10/13/22 14:42	1
Temperature (SM 4500 H+ B)	**21.4**	**HF**	1.0	1.0	Degrees C			10/13/22 14:42	1

General Chemistry (Continued)

Client Sample ID: OUTFALL-001
Date Collected: 10/07/22 12:00
Date Received: 10/07/22 14:17

Lab Sample ID: 280-167366-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SM 4500 S2 D)	ND		0.050	0.022	mg/L			10/10/22 13:36	1
Un-ionized Hydrogen Sulfide (SM4500 S2 H)	ND		1.0	1.0	mg/L			10/12/22 11:12	1
Field pH (SM4500 S2 H)	**8.2**		1.0	1.0	SU			10/12/22 11:12	1
Field Temperature (SM4500 S2 H)	**21**		1.0	1.0	Celsius			10/12/22 11:12	1
Specific Conductance (SM4500 S2 H)	**270**		2.0	2.0	umhos/cm			10/12/22 11:12	1
Sulfide (SM4500 S2 H)	ND		4.0	4.0	mg/L			10/12/22 11:12	1

General Chemistry - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 10/07/22 12:00
Date Received: 10/07/22 14:17

Lab Sample ID: 280-167366-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (SM3500 CR B)	ND	H	0.020	0.020	mg/L			10/20/22 10:15	1

General Chemistry - Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 10/07/22 12:00
Date Received: 10/07/22 14:17

Lab Sample ID: 280-167366-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			10/07/22 18:24	1

General Chemistry - Potentially Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 10/07/22 12:00
Date Received: 10/07/22 14:17

Lab Sample ID: 280-167366-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (dissolved) (SM3500 CR B)	ND		0.020	0.020	mg/L			10/20/22 10:19	1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 280-589308/1-A
Matrix: Water
Analysis Batch: 589567

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 589308

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	42.1	J	100	9.1	ug/L		10/07/22 20:56	10/11/22 08:36	1

Lab Sample ID: LCS 280-589308/2-A
Matrix: Water
Analysis Batch: 589567

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 589308

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	10000	10200		ug/L		102	85 - 115

Lab Sample ID: LCSD 280-589308/3-A
Matrix: Water
Analysis Batch: 589567

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 589308

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	10000	9920		ug/L		99	85 - 115	3	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 280-589307/1-A
Matrix: Water
Analysis Batch: 589509

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 589307

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		10/09/22 14:32	10/10/22 21:44	1
Cadmium	ND		1.0	0.088	ug/L		10/09/22 14:32	10/10/22 21:44	1
Chromium	ND		3.0	0.88	ug/L		10/09/22 14:32	10/10/22 21:44	1
Copper	ND		2.0	0.71	ug/L		10/09/22 14:32	10/10/22 21:44	1
Lead	ND		1.0	0.23	ug/L		10/09/22 14:32	10/10/22 21:44	1

Lab Sample ID: LCS 280-589307/2-A
Matrix: Water
Analysis Batch: 589509

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 589307

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	200	205		ug/L		102	89 - 111
Cadmium	200	200		ug/L		100	89 - 111
Chromium	200	194		ug/L		97	86 - 115
Copper	200	194		ug/L		97	90 - 115
Lead	200	202		ug/L		101	88 - 115

Lab Sample ID: 280-167366-1 MS
Matrix: Water
Analysis Batch: 589509

Client Sample ID: OUTFALL-001
Prep Type: Total Recoverable
Prep Batch: 589307

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		200	210		ug/L		105	79 - 120
Cadmium	ND		200	209		ug/L		104	89 - 111
Chromium	ND		200	195		ug/L		98	86 - 115
Copper	ND		200	198		ug/L		99	90 - 115
Lead	0.63	J	200	206		ug/L		103	88 - 115

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: 280-167366-1 MSD
Matrix: Water
Analysis Batch: 589509

Client Sample ID: OUTFALL-001
Prep Type: Total Recoverable
Prep Batch: 589307

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		200	208		ug/L		104	79 - 120	1	20
Cadmium	ND		200	210		ug/L		105	89 - 111	1	20
Chromium	ND		200	193		ug/L		96	86 - 115	1	20
Copper	ND		200	196		ug/L		98	90 - 115	1	20
Lead	0.63	J	200	206		ug/L		103	88 - 115	0	20

Lab Sample ID: MB 280-589618/1-A
Matrix: Water
Analysis Batch: 589861

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 589618

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.50	0.045	ug/L		10/12/22 14:42	10/13/22 10:21	1
Zinc	3.68	J	10	2.0	ug/L		10/12/22 14:42	10/13/22 10:21	1

Lab Sample ID: LCS 280-589618/2-A
Matrix: Water
Analysis Batch: 589861

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 589618

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Silver	40.0	38.8		ug/L		97	90 - 114
Zinc	40.0	40.3		ug/L		101	88 - 115

Lab Sample ID: MB 280-589621/1-A
Matrix: Water
Analysis Batch: 589943

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 589621

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		10	2.0	ug/L		10/12/22 14:42	10/13/22 20:07	1

Lab Sample ID: LCS 280-589621/2-A
Matrix: Water
Analysis Batch: 589943

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 589621

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Zinc	40.0	38.6		ug/L		96	88 - 115

Lab Sample ID: 280-167366-1 MS
Matrix: Water
Analysis Batch: 589943

Client Sample ID: OUTFALL-001
Prep Type: Total Recoverable
Prep Batch: 589621

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Zinc	ND		40.0	41.4		ug/L		103	88 - 115

Lab Sample ID: 280-167366-1 MSD
Matrix: Water
Analysis Batch: 589943

Client Sample ID: OUTFALL-001
Prep Type: Total Recoverable
Prep Batch: 589621

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Zinc	ND		40.0	41.4		ug/L		104	88 - 115	0	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-589120/1-B
Matrix: Water
Analysis Batch: 589568

Client Sample ID: Method Blank
Prep Type: Potentially Dissolved
Prep Batch: 589368

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		10/10/22 14:23	10/11/22 08:26	1
Cadmium	ND		1.0	0.088	ug/L		10/10/22 14:23	10/11/22 08:26	1
Chromium	ND		3.0	0.88	ug/L		10/10/22 14:23	10/11/22 08:26	1
Copper	ND		2.0	0.71	ug/L		10/10/22 14:23	10/11/22 08:26	1
Lead	ND		1.0	0.23	ug/L		10/10/22 14:23	10/11/22 08:26	1
Manganese	0.630	J	2.0	0.51	ug/L		10/10/22 14:23	10/11/22 08:26	1
Nickel	ND		2.0	0.28	ug/L		10/10/22 14:23	10/11/22 08:26	1
Selenium	ND		5.0	1.0	ug/L		10/10/22 14:23	10/11/22 08:26	1

Lab Sample ID: LCS 280-589120/2-B
Matrix: Water
Analysis Batch: 589568

Client Sample ID: Lab Control Sample
Prep Type: Potentially Dissolved
Prep Batch: 589368

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	200	209		ug/L		104	89 - 111
Cadmium	200	202		ug/L		101	89 - 111
Chromium	200	199		ug/L		99	86 - 115
Copper	200	203		ug/L		102	90 - 115
Lead	200	205		ug/L		102	88 - 115
Manganese	200	202		ug/L		101	87 - 115
Nickel	200	197		ug/L		99	86 - 115
Selenium	200	198		ug/L		99	85 - 114

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 280-589392/1-A
Matrix: Water
Analysis Batch: 589561

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 589392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		10/10/22 13:03	10/10/22 17:31	1

Lab Sample ID: LCS 280-589392/2-A
Matrix: Water
Analysis Batch: 589561

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 589392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.93		ug/L		99	90 - 110

Lab Sample ID: LCSD 280-589392/3-A
Matrix: Water
Analysis Batch: 589561

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 589392

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.93		ug/L		99	90 - 110	0	10

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 280-589400/32
Matrix: Water
Analysis Batch: 589400

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		2.0	2.0	umhos/cm			10/10/22 10:35	1

Lab Sample ID: LCS 280-589400/31
Matrix: Water
Analysis Batch: 589400

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1410	1360		umhos/cm		97	90 - 110

Lab Sample ID: LCSD 280-589400/5
Matrix: Water
Analysis Batch: 589400

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Specific Conductance	1410	1390		umhos/cm		99	90 - 110	NaN	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-589554/3
Matrix: Water
Analysis Batch: 589554

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			10/11/22 11:29	1

Lab Sample ID: LCS 280-589554/1
Matrix: Water
Analysis Batch: 589554

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	501	514		mg/L		102	79 - 114

Lab Sample ID: LCSD 280-589554/2
Matrix: Water
Analysis Batch: 589554

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids	501	440		mg/L		88	79 - 114	15	20

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: MB 280-589301/9
Matrix: Water
Analysis Batch: 589301

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.020	0.0040	mg/L			10/07/22 18:13	1

Method: SM 3500 CR B - Chromium, Hexavalent (Continued)

Lab Sample ID: LCS 280-589301/7
Matrix: Water
Analysis Batch: 589301

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent			0.100	0.104		mg/L		104	91 - 112		

Lab Sample ID: LCSD 280-589301/8
Matrix: Water
Analysis Batch: 589301

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent			0.100	0.103		mg/L		103	91 - 112	0	20

Lab Sample ID: 280-167366-1 MS
Matrix: Water
Analysis Batch: 589301

Client Sample ID: OUTFALL-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent	ND		0.100	0.103		mg/L		103	91 - 112		

Lab Sample ID: 280-167366-1 MSD
Matrix: Water
Analysis Batch: 589301

Client Sample ID: OUTFALL-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	ND		0.100	0.103		mg/L		103	91 - 112	1	20

Lab Sample ID: 280-167366-1 DU
Matrix: Water
Analysis Batch: 589301

Client Sample ID: OUTFALL-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	ND			ND		mg/L				NC	20

Lab Sample ID: MB 280-589299/3-A
Matrix: Water
Analysis Batch: 589301

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.020	0.0040	mg/L			10/07/22 18:23	1

Lab Sample ID: LCS 280-589299/1-A
Matrix: Water
Analysis Batch: 589301

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent			0.100	0.104		mg/L		104	91 - 112		

Lab Sample ID: LCSD 280-589299/2-A
Matrix: Water
Analysis Batch: 589301

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent			0.100	0.103		mg/L		103	91 - 112	0	20

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: 280-167366-1 MS
Matrix: Water
Analysis Batch: 589301

Client Sample ID: OUTFALL-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent	ND		0.100	0.104		mg/L		104	91 - 112		

Lab Sample ID: 280-167366-1 MSD
Matrix: Water
Analysis Batch: 589301

Client Sample ID: OUTFALL-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	ND		0.100	0.103		mg/L		103	91 - 112	1	20

Lab Sample ID: 280-167366-1 DU
Matrix: Water
Analysis Batch: 589301

Client Sample ID: OUTFALL-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	ND			ND		mg/L				NC	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 280-589953/4
Matrix: Water
Analysis Batch: 589953

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
pH adj. to 25 deg C			7.00	7.1		SU		101	99 - 101		

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 280-589455/11
Matrix: Water
Analysis Batch: 589455

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.050	0.022	mg/L			10/10/22 13:20	1

Lab Sample ID: LCS 280-589455/9
Matrix: Water
Analysis Batch: 589455

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			0.501	0.531		mg/L		106	81 - 122		

Lab Sample ID: LCSD 280-589455/10
Matrix: Water
Analysis Batch: 589455

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide			0.501	0.526		mg/L		105	81 - 122	1	10

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-167366-1

Method: SM4500 S2 H - Unionized Hydrogen Sulfide

Lab Sample ID: MB 280-589726/1
Matrix: Water
Analysis Batch: 589726

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Un-ionized Hydrogen Sulfide	ND		1.0	1.0	mg/L			10/12/22 11:12	1
Field pH	ND		1.0	1.0	SU			10/12/22 11:12	1
Field Temperature	ND		1.0	1.0	Celsius			10/12/22 11:12	1
Specific Conductance	ND		2.0	2.0	umhos/cm			10/12/22 11:12	1
Sulfide	ND		4.0	4.0	mg/L			10/12/22 11:12	1

Metals

Filtration Batch: 589120

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-589120/1-B	Method Blank	Potentially Dissolvec	Water	Poten_Diss_Met	
LCS 280-589120/2-B	Lab Control Sample	Potentially Dissolvec	Water	Poten_Diss_Met	

Filtration Batch: 589276

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Potentially Dissolvec	Water	Poten_Diss_Met	

Prep Batch: 589307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total Recoverable	Water	200.8	
MB 280-589307/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-589307/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
280-167366-1 MS	OUTFALL-001	Total Recoverable	Water	200.8	
280-167366-1 MSD	OUTFALL-001	Total Recoverable	Water	200.8	

Prep Batch: 589308

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total Recoverable	Water	200.7	
MB 280-589308/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 280-589308/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
LCSD 280-589308/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7	

Prep Batch: 589368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	589276
MB 280-589120/1-B	Method Blank	Potentially Dissolvec	Water	200.8	589120
LCS 280-589120/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	589120

Prep Batch: 589392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total/NA	Water	245.1	
MB 280-589392/1-A	Method Blank	Total/NA	Water	245.1	
LCS 280-589392/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 280-589392/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	

Analysis Batch: 589509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total Recoverable	Water	200.8	589307
MB 280-589307/1-A	Method Blank	Total Recoverable	Water	200.8	589307
LCS 280-589307/2-A	Lab Control Sample	Total Recoverable	Water	200.8	589307
280-167366-1 MS	OUTFALL-001	Total Recoverable	Water	200.8	589307
280-167366-1 MSD	OUTFALL-001	Total Recoverable	Water	200.8	589307

Analysis Batch: 589561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total/NA	Water	245.1	589392
MB 280-589392/1-A	Method Blank	Total/NA	Water	245.1	589392
LCS 280-589392/2-A	Lab Control Sample	Total/NA	Water	245.1	589392
LCSD 280-589392/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	589392

Metals

Analysis Batch: 589567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total Recoverable	Water	200.7 Rev 4.4	589308
MB 280-589308/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	589308
LCS 280-589308/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	589308
LCSD 280-589308/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.7 Rev 4.4	589308

Analysis Batch: 589568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	589368
MB 280-589120/1-B	Method Blank	Potentially Dissolvec	Water	200.8	589368
LCS 280-589120/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	589368

Prep Batch: 589618

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	589276
MB 280-589618/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-589618/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Prep Batch: 589621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total Recoverable	Water	200.8	
MB 280-589621/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-589621/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
280-167366-1 MS	OUTFALL-001	Total Recoverable	Water	200.8	
280-167366-1 MSD	OUTFALL-001	Total Recoverable	Water	200.8	

Analysis Batch: 589861

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	589618
MB 280-589618/1-A	Method Blank	Total Recoverable	Water	200.8	589618
LCS 280-589618/2-A	Lab Control Sample	Total Recoverable	Water	200.8	589618

Analysis Batch: 589943

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total Recoverable	Water	200.8	589621
MB 280-589621/1-A	Method Blank	Total Recoverable	Water	200.8	589621
LCS 280-589621/2-A	Lab Control Sample	Total Recoverable	Water	200.8	589621
280-167366-1 MS	OUTFALL-001	Total Recoverable	Water	200.8	589621
280-167366-1 MSD	OUTFALL-001	Total Recoverable	Water	200.8	589621

General Chemistry

Filtration Batch: 589299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Dissolved	Water	FILTRATION	
MB 280-589299/3-A	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-589299/1-A	Lab Control Sample	Dissolved	Water	FILTRATION	
LCSD 280-589299/2-A	Lab Control Sample Dup	Dissolved	Water	FILTRATION	
280-167366-1 MS	OUTFALL-001	Dissolved	Water	FILTRATION	
280-167366-1 MSD	OUTFALL-001	Dissolved	Water	FILTRATION	
280-167366-1 DU	OUTFALL-001	Dissolved	Water	FILTRATION	

General Chemistry

Analysis Batch: 589301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Dissolved	Water	SM 3500 CR B	589299
280-167366-1	OUTFALL-001	Total/NA	Water	SM 3500 CR B	
MB 280-589299/3-A	Method Blank	Dissolved	Water	SM 3500 CR B	589299
MB 280-589301/9	Method Blank	Total/NA	Water	SM 3500 CR B	
LCS 280-589299/1-A	Lab Control Sample	Dissolved	Water	SM 3500 CR B	589299
LCS 280-589301/7	Lab Control Sample	Total/NA	Water	SM 3500 CR B	
LCSD 280-589299/2-A	Lab Control Sample Dup	Dissolved	Water	SM 3500 CR B	589299
LCSD 280-589301/8	Lab Control Sample Dup	Total/NA	Water	SM 3500 CR B	
280-167366-1 MS	OUTFALL-001	Dissolved	Water	SM 3500 CR B	589299
280-167366-1 MS	OUTFALL-001	Total/NA	Water	SM 3500 CR B	
280-167366-1 MSD	OUTFALL-001	Dissolved	Water	SM 3500 CR B	589299
280-167366-1 MSD	OUTFALL-001	Total/NA	Water	SM 3500 CR B	
280-167366-1 DU	OUTFALL-001	Dissolved	Water	SM 3500 CR B	589299
280-167366-1 DU	OUTFALL-001	Total/NA	Water	SM 3500 CR B	

Analysis Batch: 589400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total/NA	Water	SM 2510B	
MB 280-589400/32	Method Blank	Total/NA	Water	SM 2510B	
LCS 280-589400/31	Lab Control Sample	Total/NA	Water	SM 2510B	
LCSD 280-589400/5	Lab Control Sample Dup	Total/NA	Water	SM 2510B	

Analysis Batch: 589455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total/NA	Water	SM 4500 S2 D	
MB 280-589455/11	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 280-589455/9	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 280-589455/10	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 589554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total/NA	Water	SM 2540D	
MB 280-589554/3	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-589554/1	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-589554/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 589726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total/NA	Water	SM4500 S2 H	
MB 280-589726/1	Method Blank	Total/NA	Water	SM4500 S2 H	

Analysis Batch: 589953

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total/NA	Water	SM 4500 H+ B	
LCS 280-589953/4	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 590620

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Total Recoverable	Water	SM3500 CR B	

QC Association Summary

Client: GS Mining Company LLC
Job ID: 280-167366-1
Project/Site: Wastewater Discharge - Nederland, CO

General Chemistry

Analysis Batch: 590621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-167366-1	OUTFALL-001	Potentially Dissolvec	Water	SM3500 CR B	

Lab Chronicle

Client: GS Mining Company LLC
Job ID: 280-167366-1
Project/Site: Wastewater Discharge - Nederland, CO

Client Sample ID: OUTFALL-001
Lab Sample ID: 280-167366-1

Date Collected: 10/07/22 12:00
Matrix: Water

Date Received: 10/07/22 14:17

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			50 mL	50 mL	589308	10/07/22 20:56	MCR	EET DEN
Total Recoverable	Analysis	200.7 Rev 4.4		1			589567	10/11/22 10:06	KRP	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			200 mL	200 mL	589276	10/07/22 16:41	CEH	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	589368	10/10/22 14:23	MCR	EET DEN
Potentially Dissolvec	Analysis	200.8		1			589568	10/11/22 08:46	LMT	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			200 mL	200 mL	589276	10/07/22 16:41	CEH	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	589618	10/12/22 14:42	MCR	EET DEN
Potentially Dissolvec	Analysis	200.8		1			589861	10/13/22 10:39	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	589307	10/09/22 14:32	MCR	EET DEN
Total Recoverable	Analysis	200.8		1			589509	10/10/22 21:51	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	589621	10/12/22 14:42	MCR	EET DEN
Total Recoverable	Analysis	200.8		1			589943	10/13/22 20:14	LMT	EET DEN
Total/NA	Prep	245.1			30 mL	50 mL	589392	10/10/22 13:03	CEH	EET DEN
Total/NA	Analysis	245.1		1			589561	10/10/22 17:53	KMS	EET DEN
Total/NA	Analysis	SM 2510B		1			589400	10/10/22 10:36	KEG	EET DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	589554	10/11/22 11:30	ASP	EET DEN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	589299	10/07/22 17:53	SJD	EET DEN
Dissolved	Analysis	SM 3500 CR B		1	2 mL	2 mL	589301	10/07/22 18:24	SJD	EET DEN
Total/NA	Analysis	SM 3500 CR B		1	2 mL	2 mL	589301	10/07/22 18:14	SJD	EET DEN
Total/NA	Analysis	SM 4500 H+ B		1			589953	10/13/22 14:42	KEG	EET DEN
Total/NA	Analysis	SM 4500 S2 D		1	2 mL	2 mL	589455	10/10/22 13:36	LRB	EET DEN
Potentially Dissolvec	Analysis	SM3500 CR B		1			590621	10/20/22 10:19	DNM	EET DEN
Total Recoverable	Analysis	SM3500 CR B		1			590620	10/20/22 10:15	DNM	EET DEN
Total/NA	Analysis	SM4500 S2 H		1			589726	10/12/22 11:12	ZPM	EET DEN

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: GS Mining Company LLC
Job ID: 280-167366-1
Project/Site: Wastewater Discharge - Nederland, CO

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-23
Arizona	State	AZ0713	12-20-22
Arkansas DEQ	State	19-047-0	06-01-22 *
California	State	2513	01-08-23
Connecticut	State	PH-0686	09-30-22 *
Florida	NELAP	E87667-57	06-30-23
Georgia	State	4025-011	01-08-23
Illinois	NELAP	2000172019-1	04-30-23
Iowa	State	IA#370	12-02-22
Kansas	NELAP	E-10166	04-30-23
Kentucky (WW)	State	KY98047	12-31-22
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23
Minnesota	NELAP	1788752	12-31-22
Nevada	State	CO000262020-1	07-31-23
New Hampshire	NELAP	205319	04-28-23
New Jersey	NELAP	190002	06-30-23
New York	NELAP	59923	04-01-23
North Carolina (WW/SW)	State	358	12-31-22
North Dakota	State	R-034	01-08-23
Oklahoma	NELAP	8614	08-31-23
Oregon	NELAP	4025-011	01-09-23
Pennsylvania	NELAP	013	07-31-23
South Carolina	State	72002001	01-08-23
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-20-00065	03-06-23
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23
Virginia	NELAP	10490	06-14-23
Washington	State	C583-19	08-03-23
West Virginia DEP	State	354	11-30-22
Wisconsin	State	999615430	08-31-23
Wyoming (UST)	A2LA	2907.01	10-31-22

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: BM	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No:
Client Contact: Patrick Delaney	Phone: 303-506-1618	E-Mail: Dylan.Bieniulis@Eurofinset.com	State of Origin:	Page:
Company: Grand Island Resources	PWSID:			Job #:
Address: 12567 West Cedar Road Suite 250	Due Date Requested:			
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80466	Compliance Project: Δ Yes Δ No			
Phone: 315-414-6986	PO #: Advance Payment Required			
Email: pdelaney@blackfoxmining.com	WO #:			
Project Name: Wastewater Discharge - Nederland, CO	Project #: 28022821			
Site: First half of the month event	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2510B - Specific Conductance, 2540D - TSS, SM4500_H+ - pH / Temp	3500_CR_B - Total Hexavalent Cr and Trivalent Cr (calc)	3500_CR_B - Dissolved Hexavalent Cr (LAB FILTER) and Potentially Dissolved Trivalent Cr (calc)	SM4500_S2_D - Sulfide and SM3500_S2_H - Unionized Hydrogen Sulfide (calc)	200.8 - Potentially Dissolved Metals (First half of the month permit list)	200.7 / 200.8 / 245.1 - Total Recoverable Metals and Mercury (First half of the month permit list)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	CB	D	D		
OUTFALL-001	10/7/22	12pm	G	W	N		X	X	X	X	X	X		*First half of the month potentially dissolved metals permit list = 200.8 (As, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Zn) *First half of the month total recoverable metals permit list = 200.7 (Fe), 200.8 (As, Cd, Cr, Cu, Pb, Zn), and 245.1 (Hg) temp = 8°C pH = 8.2

280-167366 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☒ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Paul Moran	10/7/22 14:17			10/7/22 1417	ETADGN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 4.4 IR12 CF 0.0

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-167366-1

Login Number: 167366
List Number: 1
Creator: Roehsner, Karen P

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

Eurofins Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-168389-1
Client Project/Site: Wastewater Discharge - Nederland, CO

For:
GS Mining Company LLC
422 Gregory Street
Central City, Colorado 80427

Attn: Patrick Delaney

Authorized for release by:
11/3/2022 5:09:03 PM

Dylan Bieniulis, Project Manager I
(303)736-0138
Dylan.Bieniulis@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GS Mining Company LLC
Job ID: 280-168389-1
Project/Site: Wastewater Discharge - Nederland, CO

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-168389-1

Laboratory: Eurofins Denver

Narrative

CASE NARRATIVE

Client: GS Mining Company LLC

Project: Wastewater Discharge - Nederland, CO

Report Number: 280-168389-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/28/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 6.6 C.

It can be noted that this sample set represents a re-sampling due to laboratory error associated with the original sample collected on 10/21/2022. The original sample volume collected for potentially dissolved metals on 10/21/2022 was not filtered by the laboratory within the 8-96 hours after the time of sample collection as is specified for reporting of potentially dissolved metals in the State of Colorado. The error has been identified as being related to an issue in the laboratory's information management system preventing filtration holding times from populating in the analysts' backlog for this task properly. Additional backlog monitoring mechanisms have been implemented by the laboratory since the error occurred to minimize the potential for this type of error/oversight moving forward.

POTENTIALLY DISSOLVED METALS (ICPMS)

Sample OUTFALL-001 (280-168389-1) was analyzed for potentially dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared and analyzed on 11/02/2022.

This report includes Reporting Limits (RLs) for 200.8 Potentially Dissolved Silver that are less than Eurofins TestAmerica Denver's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Sample OUTFALL-001 (280-168389-1) was analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 10/31/2022 and analyzed on 11/01/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GS Mining Company LLC
Job ID: 280-168389-1
Project/Site: Wastewater Discharge - Nederland, CO

Client Sample ID: OUTFALL-001
Lab Sample ID: 280-168389-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.48	J	1.0	0.23	ug/L	1		200.8	Total Recoverable
Lead	0.50	J	1.0	0.23	ug/L	1		200.8	Potentially Dissolved
Zinc	7.6	J	10	2.0	ug/L	1		200.8	Potentially Dissolved

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-168389-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	EET DEN
200.8	Preparation, Total Recoverable Metals	EPA	EET DEN
Poten_Diss_Met	Filtration for Potentially Dissolved Metals	EPA	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-168389-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-168389-1	OUTFALL-001	Water	10/28/22 12:10	10/28/22 16:23

Client Sample Results

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-168389-1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 10/28/22 12:10
Date Received: 10/28/22 16:23

Lab Sample ID: 280-168389-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.71	ug/L		10/31/22 15:03	11/01/22 09:49	1
Lead	**0.48**	**J**	1.0	0.23	ug/L		10/31/22 15:03	11/01/22 09:49	1

Method: EPA 200.8 - Metals (ICP/MS) - Potentially Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 10/28/22 12:10
Date Received: 10/28/22 16:23

Lab Sample ID: 280-168389-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.088	ug/L		11/02/22 08:33	11/02/22 15:44	1
Copper	ND		2.0	0.71	ug/L		11/02/22 08:33	11/02/22 15:44	1
Lead	**0.50**	**J**	1.0	0.23	ug/L		11/02/22 08:33	11/02/22 15:44	1
Silver	ND		0.50	0.045	ug/L		11/02/22 08:33	11/02/22 15:44	1
Zinc	**7.6**	**J**	10	2.0	ug/L		11/02/22 08:33	11/02/22 15:44	1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 280-591750/1-A
Matrix: Water
Analysis Batch: 591956

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 591750

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.71	ug/L		10/31/22 15:03	11/01/22 09:26	1
Lead	ND		1.0	0.23	ug/L		10/31/22 15:03	11/01/22 09:26	1

Lab Sample ID: LCS 280-591750/2-A
Matrix: Water
Analysis Batch: 591956

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 591750

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Copper	40.0	39.9		ug/L		100	90 - 115
Lead	40.0	39.9		ug/L		100	88 - 115

Lab Sample ID: LCSD 280-591750/3-A
Matrix: Water
Analysis Batch: 591956

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 591750

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Copper	40.0	40.5		ug/L		101	90 - 115	1	20
Lead	40.0	39.8		ug/L		99	88 - 115	0	20

Lab Sample ID: MB 280-591717/1-B
Matrix: Water
Analysis Batch: 592167

Client Sample ID: Method Blank
Prep Type: Potentially Dissolved
Prep Batch: 591813

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.088	ug/L		11/02/22 08:33	11/02/22 15:11	1
Copper	ND		2.0	0.71	ug/L		11/02/22 08:33	11/02/22 15:11	1
Lead	ND		1.0	0.23	ug/L		11/02/22 08:33	11/02/22 15:11	1
Silver	ND		0.50	0.045	ug/L		11/02/22 08:33	11/02/22 15:11	1
Zinc	ND		10	2.0	ug/L		11/02/22 08:33	11/02/22 15:11	1

Lab Sample ID: LCS 280-591717/2-B
Matrix: Water
Analysis Batch: 592167

Client Sample ID: Lab Control Sample
Prep Type: Potentially Dissolved
Prep Batch: 591813

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	40.0	41.0		ug/L		103	89 - 111
Copper	40.0	39.6		ug/L		99	90 - 115
Lead	40.0	39.8		ug/L		100	88 - 115
Silver	40.0	40.3		ug/L		101	90 - 114
Zinc	40.0	41.5		ug/L		104	88 - 115

QC Association Summary

Client: GS Mining Company LLC
Job ID: 280-168389-1
Project/Site: Wastewater Discharge - Nederland, CO

Metals

Filtration Batch: 591717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-591717/1-B	Method Blank	Potentially Dissolvec	Water	Poten_Diss_Met	
LCS 280-591717/2-B	Lab Control Sample	Potentially Dissolvec	Water	Poten_Diss_Met	

Filtration Batch: 591720

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168389-1	OUTFALL-001	Potentially Dissolvec	Water	Poten_Diss_Met	

Prep Batch: 591750

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168389-1	OUTFALL-001	Total Recoverable	Water	200.8	
MB 280-591750/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-591750/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 280-591750/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	

Prep Batch: 591813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168389-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	591720
MB 280-591717/1-B	Method Blank	Potentially Dissolvec	Water	200.8	591717
LCS 280-591717/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	591717

Analysis Batch: 591956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168389-1	OUTFALL-001	Total Recoverable	Water	200.8	591750
MB 280-591750/1-A	Method Blank	Total Recoverable	Water	200.8	591750
LCS 280-591750/2-A	Lab Control Sample	Total Recoverable	Water	200.8	591750
LCSD 280-591750/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	591750

Analysis Batch: 592167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168389-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	591813
MB 280-591717/1-B	Method Blank	Potentially Dissolvec	Water	200.8	591813
LCS 280-591717/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	591813

Lab Chronicle

Client: GS Mining Company LLC
Job ID: 280-168389-1
Project/Site: Wastewater Discharge - Nederland, CO

Client Sample ID: OUTFALL-001
Lab Sample ID: 280-168389-1
Date Collected: 10/28/22 12:10
Matrix: Water
Date Received: 10/28/22 16:23

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Potentially Dissolvec	Filtration	Poten_Diss_Met			250 mL	250 mL	591720	10/28/22 23:00	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	591813	11/02/22 08:33	LJS	EET DEN
Potentially Dissolvec	Analysis	200.8		1			592167	11/02/22 15:44	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	591750	10/31/22 15:03	MCR	EET DEN
Total Recoverable	Analysis	200.8		1			591956	11/01/22 09:49	LMT	EET DEN

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: GS Mining Company LLC
Job ID: 280-168389-1
Project/Site: Wastewater Discharge - Nederland, CO

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-23
Arizona	State	AZ0713	12-20-22
Arkansas DEQ	State	19-047-0	05-31-23
California	State	2513	01-08-23
Connecticut	State	PH-0686	09-30-22 *
Florida	NELAP	E87667-57	06-30-23
Georgia	State	4025-011	01-08-23
Illinois	NELAP	2000172019-1	04-30-23
Iowa	State	IA#370	12-02-22
Kansas	NELAP	E-10166	04-30-23
Kentucky (WW)	State	KY98047	12-31-22
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23
Minnesota	NELAP	1788752	12-31-22
Nevada	State	CO000262020-1	07-31-23
New Hampshire	NELAP	205319	04-28-23
New Jersey	NELAP	190002	06-30-23
New York	NELAP	59923	04-01-23
North Carolina (WW/SW)	State	358	12-31-22
North Dakota	State	R-034	01-08-23
Oklahoma	NELAP	8614	08-31-23
Oregon	NELAP	4025-011	01-09-23
Pennsylvania	NELAP	013	07-31-23
South Carolina	State	72002001	01-08-23
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-20-00065	03-06-23
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23
Virginia	NELAP	10490	06-14-23
Washington	State	C583-19	08-03-23
West Virginia DEP	State	354	11-30-22
Wisconsin	State	999615430	08-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

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Client Information	Sampler: Brooke Moran	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No:
Client Contact: [redacted] Patrick Delaney	Phone: 303-506-1618	E-Mail: Dylan.Bieniulis@Eurofinset.com	State of Origin:	Page:
Company: Grand Island Resources	PWSID:			Job #:

Address: 12567 West Cedar Road Suite 250	Due Date Requested:
City: Lakewood	TAT Requested (days):
State, Zip: CO, 80466	Compliance Project: Δ Yes Δ No
Phone: [redacted] 315-414-6986	PO #: Advance Payment Required
Email: [redacted] pdelaney@blackfoxmining.com	WO #:
Project Name: Wastewater Discharge - Nederland, CO	Project #: 28022821
Site: second half of the month event	SSOW#:

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8 - Potentially Dissolved Metals (Second half of the month permit list)	200.8 - Total Recoverable Metals (Second half of the month permit list)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D		
OUTFALL-001	10/28/22	12:10	G		N		X	X		

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

*Second half of the month potentially dissolved metals permit list = 200.8 (Cd, Cu, Pb, Ag, Zn)

*Second half of the month total recoverable metals permit list = 200.8 (Cu, Pb)

pH = 7.9

temp = 5°C

280-168389 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☒ Archive For 1 Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Brooke Moran	10/28/22 16:23	GIR		10/28/22 1623	ETAOEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 6.6 & 0.0 IR 12

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-168389-1

Login Number: 168389
List Number: 1
Creator: Roehsner, Karen P

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	Thermal preservation not required.
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX B.2 NOVEMBER 2022 OUTFALL-001 ANALYTICAL RESULTS

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ANALYTICAL REPORT

PREPARED FOR

Attn: Patrick Delaney
GS Mining Company LLC
422 Gregory Street
Central City, Colorado 80427

Generated 11/29/2022 6:06:05 PM

JOB DESCRIPTION

Nederland, CO

JOB NUMBER

280-169037-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

Job Notes

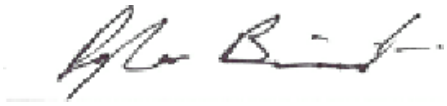
The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the Eurofins TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



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11/29/2022 6:06:05 PM

Authorized for release by
Dylan Bieniulis, Project Manager I
Dylan.Bieniulis@et.eurofinsus.com
(303)736-0138

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Definitions/Glossary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169037-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-169037-1

Laboratory: Eurofins Denver

Narrative

CASE NARRATIVE

Client: GS Mining Company LLC

Project: Nederland, CO

Report Number: 280-169037-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/11/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 4.6 C.

TOTAL RECOVERABLE METALS (ICP)

Sample OUTFALL-001 (280-169037-1) was analyzed for Total Recoverable Metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 11/16/2022 and analyzed on 11/17/2022.

Iron was detected in method blank MB 280-593337/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POTENTIALLY DISSOLVED METALS (ICPMS)

Sample OUTFALL-001 (280-169037-1) was analyzed for potentially dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 11/16/2022 and analyzed on 11/17/2022.

This report includes Reporting Limits (RLs) for 200.8 Potentially Dissolved Silver that are less than Eurofins TestAmerica Denver's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Sample OUTFALL-001 (280-169037-1) was analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared and analyzed on 11/17/2022.

Zinc was detected in method blank MB 280-593646/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

Job ID: 280-169037-1 (Continued)

Laboratory: Eurofins Denver (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)
Sample OUTFALL-001 (280-169037-1) was analyzed for total mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared on 11/17/2022 and analyzed on 11/19/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM - POTENTIALLY DISSOLVED
Sample OUTFALL-001 (280-169037-1) was analyzed for Trivalent Chromium - Potentially Dissolved in accordance with SM3500_CR3_B. The samples were analyzed on 11/28/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM - TOTAL RECOVERABLE
Sample OUTFALL-001 (280-169037-1) was analyzed for Trivalent Chromium - Total Recoverable in accordance with SM3500_CR3_B. The samples were analyzed on 11/28/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SPECIFIC CONDUCTIVITY
Sample OUTFALL-001 (280-169037-1) was analyzed for specific conductivity in accordance with SM20 2510B. The samples were analyzed on 11/15/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS
Sample OUTFALL-001 (280-169037-1) was analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 11/16/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED HEXAVALENT CHROMIUM
Sample OUTFALL-001 (280-169037-1) was analyzed for dissolved hexavalent chromium in accordance with SM 3500 CR B. The samples were analyzed on 11/11/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM
Sample OUTFALL-001 (280-169037-1) was analyzed for hexavalent chromium in accordance with 3500_CR_B. The samples were analyzed on 11/11/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CORROSIVITY (PH)
Sample OUTFALL-001 (280-169037-1) was analyzed for corrosivity (pH) in accordance with SM20 4500 H+ B. The samples were analyzed on 11/17/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SULFIDE
Sample OUTFALL-001 (280-169037-1) was analyzed for sulfide in accordance with SM20 4500 S2 D. The samples were analyzed on 11/15/2022.

Job ID: 280-169037-1 (Continued)

Laboratory: Eurofins Denver (Continued)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HYDROGEN SULFIDE

Sample OUTFALL-001 (280-169037-1) was analyzed for Hydrogen Sulfide in accordance with SM20 4500 S2 H. The samples were analyzed on 11/29/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169037-1

Client Sample ID: OUTFALL-001 — Lab Sample ID: 280-169037-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	25	J B	100	9.1	ug/L	1		200.7 Rev 4.4	Total Recoverable
Lead	0.54	J	1.0	0.23	ug/L	1		200.8	Total Recoverable
Zinc	2.4	J B	10	2.0	ug/L	1		200.8	Total Recoverable
Lead	0.52	J	1.0	0.23	ug/L	1		200.8	Potentially Dissolved
Zinc	6.7	J	10	2.0	ug/L	1		200.8	Potentially Dissolved
Specific Conductance	230		2.0	2.0	umhos/cm	1		SM 2510B	Total/NA
pH adj. to 25 deg C	8.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Temperature	23.0	HF	1.0	1.0	Degrees C	1		SM 4500 H+ B	Total/NA
Sulfide	0.057		0.050	0.022	mg/L	1		SM 4500 S2 D	Total/NA
Field pH	8.3		1.0	1.0	SU	1		SM4500 S2 H	Total/NA
Field Temperature	23		1.0	1.0	Celsius	1		SM4500 S2 H	Total/NA
Specific Conductance	230		2.0	2.0	umhos/cm	1		SM4500 S2 H	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169037-1

Method	Method Description	Protocol	Laboratory
200.7 Rev 4.4	Metals (ICP)	EPA	EET DEN
200.8	Metals (ICP/MS)	EPA	EET DEN
245.1	Mercury (CVAA)	EPA	EET DEN
SM 2510B	Conductivity, Specific Conductance	SM	EET DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	EET DEN
SM 3500 CR B	Chromium, Hexavalent	SM	EET DEN
SM 4500 H+ B	pH	SM	EET DEN
SM 4500 S2 D	Sulfide, Total	SM	EET DEN
SM3500 CR B	Chromium, Trivalent	SM	EET DEN
SM4500 S2 H	Unionized Hydrogen Sulfide	SM	EET DEN
200.7	Preparation, Total Recoverable Metals	EPA	EET DEN
200.8	Preparation, Total Recoverable Metals	EPA	EET DEN
245.1	Preparation, Mercury	EPA	EET DEN
FILTRATION	Sample Filtration	None	EET DEN
Poten_Diss_Met	Filtration for Potentially Dissolved Metals	EPA	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169037-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-169037-1	OUTFALL-001	Water	11/11/22 11:00	11/11/22 14:15

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 11/11/22 11:00
Date Received: 11/11/22 14:15

Lab Sample ID: 280-169037-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**25**	**J B**	100	9.1	ug/L		11/16/22 07:42	11/17/22 09:03	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 11/11/22 11:00
Date Received: 11/11/22 14:15

Lab Sample ID: 280-169037-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/17/22 08:05	11/17/22 18:56	1
Cadmium	ND		1.0	0.088	ug/L		11/17/22 08:05	11/17/22 18:56	1
Chromium	ND		3.0	0.88	ug/L		11/17/22 08:05	11/17/22 18:56	1
Copper	ND		2.0	0.71	ug/L		11/17/22 08:05	11/17/22 18:56	1
Lead	**0.54**	**J**	1.0	0.23	ug/L		11/17/22 08:05	11/17/22 18:56	1
Zinc	**2.4**	**J B**	10	2.0	ug/L		11/17/22 08:05	11/17/22 18:56	1

Method: EPA 200.8 - Metals (ICP/MS) - Potentially Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 11/11/22 11:00
Date Received: 11/11/22 14:15

Lab Sample ID: 280-169037-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/16/22 14:36	11/17/22 09:29	1
Cadmium	ND		1.0	0.088	ug/L		11/16/22 14:36	11/17/22 09:29	1
Chromium	ND		3.0	0.88	ug/L		11/16/22 14:36	11/17/22 09:29	1
Copper	ND		2.0	0.71	ug/L		11/16/22 14:36	11/17/22 09:29	1
Lead	**0.52**	**J**	1.0	0.23	ug/L		11/16/22 14:36	11/17/22 09:29	1
Manganese	ND		2.0	0.51	ug/L		11/16/22 14:36	11/17/22 09:29	1
Nickel	ND		2.0	0.28	ug/L		11/16/22 14:36	11/17/22 09:29	1
Selenium	ND		5.0	1.0	ug/L		11/16/22 14:36	11/17/22 09:29	1
Silver	ND		0.50	0.045	ug/L		11/16/22 14:36	11/17/22 09:29	1
Zinc	**6.7**	**J**	10	2.0	ug/L		11/16/22 14:36	11/17/22 09:29	1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: OUTFALL-001
Date Collected: 11/11/22 11:00
Date Received: 11/11/22 14:15

Lab Sample ID: 280-169037-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		11/17/22 17:30	11/19/22 00:55	1

General Chemistry

Client Sample ID: OUTFALL-001
Date Collected: 11/11/22 11:00
Date Received: 11/11/22 14:15

Lab Sample ID: 280-169037-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (SM 2510B)	**230**		2.0	2.0	umhos/cm			11/15/22 13:52	1
Total Suspended Solids (SM 2540D)	ND		4.0	1.1	mg/L			11/16/22 12:12	1
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			11/11/22 17:09	1
pH adj. to 25 deg C (SM 4500 H+ B	**8.3**	**HF**	0.1	0.1	SU			11/17/22 17:13	1
Temperature (SM 4500 H+ B)	**23.0**	**HF**	1.0	1.0	Degrees C			11/17/22 17:13	1

General Chemistry (Continued)

Client Sample ID: OUTFALL-001
Date Collected: 11/11/22 11:00
Date Received: 11/11/22 14:15

Lab Sample ID: 280-169037-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide (SM 4500 S2 D)	**0.057**		0.050	0.022	mg/L			11/15/22 15:17	1
Un-ionized Hydrogen Sulfide (SM4500 S2 H)	ND		1.0	1.0	mg/L			11/29/22 09:19	1
Field pH (SM4500 S2 H)	**8.3**		1.0	1.0	SU			11/29/22 09:19	1
Field Temperature (SM4500 S2 H)	**23**		1.0	1.0	Celsius			11/29/22 09:19	1
Specific Conductance (SM4500 S2 H)	**230**		2.0	2.0	umhos/cm			11/29/22 09:19	1
Sulfide (SM4500 S2 H)	ND		4.0	4.0	mg/L			11/29/22 09:19	1

General Chemistry - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 11/11/22 11:00
Date Received: 11/11/22 14:15

Lab Sample ID: 280-169037-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (SM3500 CR B)	ND	H	0.020	0.020	mg/L			11/28/22 09:39	1

General Chemistry - Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 11/11/22 11:00
Date Received: 11/11/22 14:15

Lab Sample ID: 280-169037-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			11/11/22 17:28	1

General Chemistry - Potentially Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 11/11/22 11:00
Date Received: 11/11/22 14:15

Lab Sample ID: 280-169037-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (dissolved) (SM3500 CR B)	ND		0.020	0.020	mg/L			11/28/22 09:40	1

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 280-593337/1-A
Matrix: Water
Analysis Batch: 593892

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 593337

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	20.6	J	100	9.1	ug/L		11/16/22 07:42	11/17/22 07:10	1

Lab Sample ID: LCS 280-593337/2-A
Matrix: Water
Analysis Batch: 593892

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 593337

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	10000	9700		ug/L		97	85 - 115

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 280-593646/1-A
Matrix: Water
Analysis Batch: 593987

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 593646

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/17/22 08:05	11/17/22 18:45	1
Cadmium	ND		1.0	0.088	ug/L		11/17/22 08:05	11/17/22 18:45	1
Chromium	ND		3.0	0.88	ug/L		11/17/22 08:05	11/17/22 18:45	1
Copper	ND		2.0	0.71	ug/L		11/17/22 08:05	11/17/22 18:45	1
Lead	ND		1.0	0.23	ug/L		11/17/22 08:05	11/17/22 18:45	1
Zinc	2.67	J	10	2.0	ug/L		11/17/22 08:05	11/17/22 18:45	1

Lab Sample ID: LCS 280-593646/2-A
Matrix: Water
Analysis Batch: 593987

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 593646

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	40.2		ug/L		101	89 - 111
Cadmium	40.0	40.7		ug/L		102	89 - 111
Chromium	40.0	38.5		ug/L		96	86 - 115
Copper	40.0	39.3		ug/L		98	90 - 115
Lead	40.0	39.2		ug/L		98	88 - 115
Zinc	40.0	41.7		ug/L		104	88 - 115

Lab Sample ID: 280-169037-1 MS
Matrix: Water
Analysis Batch: 593987

Client Sample ID: OUTFALL-001
Prep Type: Total Recoverable
Prep Batch: 593646

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		40.0	39.9		ug/L		100	79 - 120
Cadmium	ND		40.0	40.8		ug/L		102	89 - 111
Chromium	ND		40.0	38.9		ug/L		97	86 - 115
Copper	ND		40.0	40.1		ug/L		100	90 - 115
Lead	0.54	J	40.0	40.6		ug/L		100	88 - 115
Zinc	2.4	J B	40.0	44.6		ug/L		106	88 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-169037-1 MSD
Matrix: Water
Analysis Batch: 593987

Client Sample ID: OUTFALL-001
Prep Type: Total Recoverable
Prep Batch: 593646

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		40.0	39.5		ug/L		99	79 - 120	1	20
Cadmium	ND		40.0	40.7		ug/L		102	89 - 111	0	20
Chromium	ND		40.0	39.4		ug/L		99	86 - 115	1	20
Copper	ND		40.0	40.0		ug/L		100	90 - 115	0	20
Lead	0.54	J	40.0	40.4		ug/L		100	88 - 115	1	20
Zinc	2.4	J B	40.0	42.7		ug/L		101	88 - 115	4	20

Lab Sample ID: MB 280-593200/1-B
Matrix: Water
Analysis Batch: 593875

Client Sample ID: Method Blank
Prep Type: Potentially Dissolved
Prep Batch: 593526

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/16/22 14:36	11/17/22 09:16	1
Cadmium	ND		1.0	0.088	ug/L		11/16/22 14:36	11/17/22 09:16	1
Chromium	ND		3.0	0.88	ug/L		11/16/22 14:36	11/17/22 09:16	1
Copper	ND		2.0	0.71	ug/L		11/16/22 14:36	11/17/22 09:16	1
Lead	ND		1.0	0.23	ug/L		11/16/22 14:36	11/17/22 09:16	1
Manganese	ND		2.0	0.51	ug/L		11/16/22 14:36	11/17/22 09:16	1
Nickel	ND		2.0	0.28	ug/L		11/16/22 14:36	11/17/22 09:16	1
Selenium	ND		5.0	1.0	ug/L		11/16/22 14:36	11/17/22 09:16	1
Silver	ND		0.50	0.045	ug/L		11/16/22 14:36	11/17/22 09:16	1
Zinc	ND		10	2.0	ug/L		11/16/22 14:36	11/17/22 09:16	1

Lab Sample ID: LCS 280-593200/2-B
Matrix: Water
Analysis Batch: 593875

Client Sample ID: Lab Control Sample
Prep Type: Potentially Dissolved
Prep Batch: 593526

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	39.0		ug/L		97	89 - 111
Cadmium	40.0	40.4		ug/L		101	89 - 111
Chromium	40.0	40.1		ug/L		100	86 - 115
Copper	40.0	40.3		ug/L		101	90 - 115
Lead	40.0	39.7		ug/L		99	88 - 115
Manganese	40.0	40.9		ug/L		102	87 - 115
Nickel	40.0	39.9		ug/L		100	86 - 115
Selenium	40.0	41.3		ug/L		103	85 - 114
Silver	40.0	41.0		ug/L		103	90 - 114
Zinc	40.0	41.9		ug/L		105	88 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 280-593904/1-A
Matrix: Water
Analysis Batch: 594307

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 593904

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		11/17/22 17:30	11/18/22 23:52	1

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 280-593904/2-A
Matrix: Water
Analysis Batch: 594307

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 593904

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.85		ug/L		97	90 - 110

Lab Sample ID: LCSD 280-593904/3-A
Matrix: Water
Analysis Batch: 594307

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 593904

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.84		ug/L		97	90 - 110	0	10

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 280-593542/5
Matrix: Water
Analysis Batch: 593542

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		2.0	2.0	umhos/cm			11/15/22 13:52	1

Lab Sample ID: LCS 280-593542/4
Matrix: Water
Analysis Batch: 593542

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1410	1410		umhos/cm		100	90 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-593688/2
Matrix: Water
Analysis Batch: 593688

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			11/16/22 12:12	1

Lab Sample ID: LCS 280-593688/1
Matrix: Water
Analysis Batch: 593688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	502	458		mg/L		91	79 - 114

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: MB 280-593226/10
Matrix: Water
Analysis Batch: 593226

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.020	0.0040	mg/L			11/11/22 17:08	1

Method: SM 3500 CR B - Chromium, Hexavalent (Continued)

Lab Sample ID: LCS 280-593226/8
Matrix: Water
Analysis Batch: 593226

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.100	0.104		mg/L		104	91 - 112

Lab Sample ID: LCSD 280-593226/9
Matrix: Water
Analysis Batch: 593226

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	0.100	0.102		mg/L		102	91 - 112	2	20

Lab Sample ID: 280-169037-1 MS
Matrix: Water
Analysis Batch: 593226

Client Sample ID: OUTFALL-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	ND		0.100	0.104		mg/L		104	91 - 112

Lab Sample ID: 280-169037-1 MSD
Matrix: Water
Analysis Batch: 593226

Client Sample ID: OUTFALL-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	ND		0.100	0.105		mg/L		105	91 - 112	1	20

Lab Sample ID: 280-169037-1 DU
Matrix: Water
Analysis Batch: 593226

Client Sample ID: OUTFALL-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chromium, hexavalent	ND		ND		mg/L		NC	20

Lab Sample ID: MB 280-593217/3-A
Matrix: Water
Analysis Batch: 593226

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.020	0.0040	mg/L			11/11/22 17:27	1

Lab Sample ID: LCS 280-593217/1-A
Matrix: Water
Analysis Batch: 593226

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.100	0.103		mg/L		103	91 - 112

Lab Sample ID: LCSD 280-593217/2-A
Matrix: Water
Analysis Batch: 593226

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	0.100	0.103		mg/L		103	91 - 112	0	20

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: 280-169037-1 MS
Matrix: Water
Analysis Batch: 593226

Client Sample ID: OUTFALL-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	ND		0.100	0.104		mg/L		104	91 - 112

Lab Sample ID: 280-169037-1 MSD
Matrix: Water
Analysis Batch: 593226

Client Sample ID: OUTFALL-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	ND		0.100	0.101		mg/L		101	91 - 112	3	20

Lab Sample ID: 280-169037-1 DU
Matrix: Water
Analysis Batch: 593226

Client Sample ID: OUTFALL-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chromium, hexavalent	ND		ND		mg/L		NC	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 280-593984/50
Matrix: Water
Analysis Batch: 593984

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH adj. to 25 deg C	7.00	7.0		SU		101	99 - 101

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 280-593599/11
Matrix: Water
Analysis Batch: 593599

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.050	0.022	mg/L			11/15/22 15:02	1

Lab Sample ID: LCS 280-593599/9
Matrix: Water
Analysis Batch: 593599

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.500	0.452		mg/L		90	81 - 122

Lab Sample ID: LCSD 280-593599/10
Matrix: Water
Analysis Batch: 593599

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	0.500	0.441		mg/L		88	81 - 122	2	10

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169037-1

Method: SM4500 S2 H - Unionized Hydrogen Sulfide

Lab Sample ID: MB 280-594868/1
Matrix: Water
Analysis Batch: 594868

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Un-ionized Hydrogen Sulfide	ND		1.0	1.0	mg/L			11/29/22 09:19	1
Field pH	ND		1.0	1.0	SU			11/29/22 09:19	1
Field Temperature	ND		1.0	1.0	Celsius			11/29/22 09:19	1
Specific Conductance	ND		2.0	2.0	umhos/cm			11/29/22 09:19	1
Sulfide	ND		4.0	4.0	mg/L			11/29/22 09:19	1

Metals

Filtration Batch: 593200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-593200/1-B	Method Blank	Potentially Dissolvec	Water	Poten_Diss_Met	
LCS 280-593200/2-B	Lab Control Sample	Potentially Dissolvec	Water	Poten_Diss_Met	

Filtration Batch: 593251

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Potentially Dissolvec	Water	Poten_Diss_Met	

Prep Batch: 593337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total Recoverable	Water	200.7	
MB 280-593337/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 280-593337/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Prep Batch: 593526

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	593251
MB 280-593200/1-B	Method Blank	Potentially Dissolvec	Water	200.8	593200
LCS 280-593200/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	593200

Prep Batch: 593646

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total Recoverable	Water	200.8	
MB 280-593646/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-593646/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
280-169037-1 MS	OUTFALL-001	Total Recoverable	Water	200.8	
280-169037-1 MSD	OUTFALL-001	Total Recoverable	Water	200.8	

Analysis Batch: 593875

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	593526
MB 280-593200/1-B	Method Blank	Potentially Dissolvec	Water	200.8	593526
LCS 280-593200/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	593526

Analysis Batch: 593892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total Recoverable	Water	200.7 Rev 4.4	593337
MB 280-593337/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	593337
LCS 280-593337/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	593337

Prep Batch: 593904

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total/NA	Water	245.1	
MB 280-593904/1-A	Method Blank	Total/NA	Water	245.1	
LCS 280-593904/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 280-593904/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	

Analysis Batch: 593987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total Recoverable	Water	200.8	593646
MB 280-593646/1-A	Method Blank	Total Recoverable	Water	200.8	593646
LCS 280-593646/2-A	Lab Control Sample	Total Recoverable	Water	200.8	593646

Metals (Continued)

Analysis Batch: 593987 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1 MS	OUTFALL-001	Total Recoverable	Water	200.8	593646
280-169037-1 MSD	OUTFALL-001	Total Recoverable	Water	200.8	593646

Analysis Batch: 594307

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total/NA	Water	245.1	593904
MB 280-593904/1-A	Method Blank	Total/NA	Water	245.1	593904
LCS 280-593904/2-A	Lab Control Sample	Total/NA	Water	245.1	593904
LCSD 280-593904/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	593904

General Chemistry

Filtration Batch: 593217

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Dissolved	Water	FILTRATION	
MB 280-593217/3-A	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-593217/1-A	Lab Control Sample	Dissolved	Water	FILTRATION	
LCSD 280-593217/2-A	Lab Control Sample Dup	Dissolved	Water	FILTRATION	
280-169037-1 MS	OUTFALL-001	Dissolved	Water	FILTRATION	
280-169037-1 MSD	OUTFALL-001	Dissolved	Water	FILTRATION	
280-169037-1 DU	OUTFALL-001	Dissolved	Water	FILTRATION	

Analysis Batch: 593226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Dissolved	Water	SM 3500 CR B	593217
280-169037-1	OUTFALL-001	Total/NA	Water	SM 3500 CR B	
MB 280-593217/3-A	Method Blank	Dissolved	Water	SM 3500 CR B	593217
MB 280-593226/10	Method Blank	Total/NA	Water	SM 3500 CR B	
LCS 280-593217/1-A	Lab Control Sample	Dissolved	Water	SM 3500 CR B	593217
LCS 280-593226/8	Lab Control Sample	Total/NA	Water	SM 3500 CR B	
LCSD 280-593217/2-A	Lab Control Sample Dup	Dissolved	Water	SM 3500 CR B	593217
LCSD 280-593226/9	Lab Control Sample Dup	Total/NA	Water	SM 3500 CR B	
280-169037-1 MS	OUTFALL-001	Dissolved	Water	SM 3500 CR B	593217
280-169037-1 MS	OUTFALL-001	Total/NA	Water	SM 3500 CR B	
280-169037-1 MSD	OUTFALL-001	Dissolved	Water	SM 3500 CR B	593217
280-169037-1 MSD	OUTFALL-001	Total/NA	Water	SM 3500 CR B	
280-169037-1 DU	OUTFALL-001	Dissolved	Water	SM 3500 CR B	593217
280-169037-1 DU	OUTFALL-001	Total/NA	Water	SM 3500 CR B	

Analysis Batch: 593542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total/NA	Water	SM 2510B	
MB 280-593542/5	Method Blank	Total/NA	Water	SM 2510B	
LCS 280-593542/4	Lab Control Sample	Total/NA	Water	SM 2510B	

Analysis Batch: 593599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total/NA	Water	SM 4500 S2 D	
MB 280-593599/11	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 280-593599/9	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 280-593599/10	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	

General Chemistry

Analysis Batch: 593688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total/NA	Water	SM 2540D	
MB 280-593688/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-593688/1	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 593984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total/NA	Water	SM 4500 H+ B	
LCS 280-593984/50	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 594734

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total Recoverable	Water	SM3500 CR B	

Analysis Batch: 594735

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Potentially Dissolvec	Water	SM3500 CR B	

Analysis Batch: 594868

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169037-1	OUTFALL-001	Total/NA	Water	SM4500 S2 H	
MB 280-594868/1	Method Blank	Total/NA	Water	SM4500 S2 H	

Lab Chronicle

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169037-1

Client Sample ID: OUTFALL-001

Date Collected: 11/11/22 11:00
Date Received: 11/11/22 14:15

Lab Sample ID: 280-169037-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	200.7			50 mL	50 mL	593337	11/16/22 07:42	LJS	EET DEN
Total Recoverable	Analysis	200.7 Rev 4.4		1			593892	11/17/22 09:03	KRP	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			250 mL	250 mL	593251	11/12/22 10:00	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	593526	11/16/22 14:36	MCR	EET DEN
Potentially Dissolvec	Analysis	200.8		1			593875	11/17/22 09:29	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	593646	11/17/22 08:05	LJS	EET DEN
Total Recoverable	Analysis	200.8		1			593987	11/17/22 18:56	LMT	EET DEN
Total/NA	Prep	245.1			30 mL	50 mL	593904	11/17/22 17:30	KMS	EET DEN
Total/NA	Analysis	245.1		1			594307	11/19/22 00:55	KMS	EET DEN
Total/NA	Analysis	SM 2510B		1			593542	11/15/22 13:52	KEG	EET DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	593688	11/16/22 12:12	ASP	EET DEN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	593217	11/11/22 16:18	SJD	EET DEN
Dissolved	Analysis	SM 3500 CR B		1	2 mL	2 mL	593226	11/11/22 17:28	SJD	EET DEN
Total/NA	Analysis	SM 3500 CR B		1	2 mL	2 mL	593226	11/11/22 17:09	SJD	EET DEN
Total/NA	Analysis	SM 4500 H+ B		1			593984	11/17/22 17:13	KEG	EET DEN
Total/NA	Analysis	SM 4500 S2 D		1	2 mL	2 mL	593599	11/15/22 15:17	LRB	EET DEN
Potentially Dissolvec	Analysis	SM3500 CR B		1			594735	11/28/22 09:40	DNM	EET DEN
Total Recoverable	Analysis	SM3500 CR B		1			594734	11/28/22 09:39	DNM	EET DEN
Total/NA	Analysis	SM4500 S2 H		1			594868	11/29/22 09:19	SAH	EET DEN

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169037-1

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-23
Arizona	State	AZ0713	12-20-22
Arkansas DEQ	State	19-047-0	05-31-23
California	State	2513	01-08-23
Connecticut	State	PH-0686	09-30-22 *
Florida	NELAP	E87667-57	06-30-23
Georgia	State	4025-011	01-08-23
Illinois	NELAP	2000172019-1	04-30-23
Iowa	State	IA#370	11-30-22
Kansas	NELAP	E-10166	04-30-23
Kentucky (WW)	State	KY98047	12-31-22
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23
Louisiana (All)	NELAP	30785	06-30-23
Minnesota	NELAP	1788752	12-31-22
Nevada	State	CO000262020-1	07-31-23
New Hampshire	NELAP	205319	04-28-23
New Jersey	NELAP	190002	06-30-23
New York	NELAP	59923	04-01-23
North Carolina (WW/SW)	State	358	12-31-22
North Dakota	State	R-034	01-08-23
Oklahoma	NELAP	8614	08-31-23
Oregon	NELAP	4025-011	01-09-23
Pennsylvania	NELAP	013	07-31-23
South Carolina	State	72002001	01-08-23
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-20-00065	03-06-23
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23
Virginia	NELAP	10490	06-14-23
Washington	State	C583-19	08-03-23
West Virginia DEP	State	354	11-30-22
Wisconsin	State	999615430	08-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Brooke Moran	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No:
Client Contact: Patrick Delaney	Phone: 303-506-1618	E-Mail: Dylan.Bieniulis@Eurofinset.com	State of Origin:	Page:
Company: Grand Island Resources	PWSID:			Job #:
Address: 12567 West Cedar Road Suite 250	Due Date Requested:			
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80466	Compliance Project: Δ Yes Δ No			
Phone: 315-414-6986	PO #: Advance Payment Required			
Email: pdelaney@blackfoxmining.com	WO #:			
Project Name: Wastewater Discharge - Nederland, CO	Project #: 28022821			
Site: First half of the month event	SSOW#:			

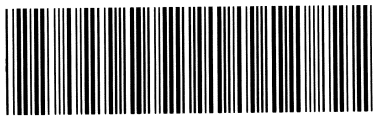
Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2510B - Specific Conductance, 2540D - TSS, SM4500_H+ - pH / Temp	3500_CR_B - Total Hexavalent Cr and Trivalent Cr (calc)	3500_CR_B - Dissolved Hexavalent Cr (LAB FILTER) and Potentially Dissolved Trivalent Cr (calc)	SM4500_S2_D - Sulfide and SM3500_S2_H - Unionized Hydrogen Sulfide (calc)	200.8 - Potentially Dissolved Metals (First half of the month permit list)	200.7 / 200.8 / 245.1 - Total Recoverable Metals and Mercury (First half of the month permit list)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	CB	D	D		
OUTFALL-001	11/11/22	11am	G	W	N		X	X	X	X	X	X		*First half of the month potentially dissolved metals permit list = 200.8 (As, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Zn)
														*First half of the month total recoverable metals permit list = 200.7 (Fe), 200.8 (As, Cd, Cr, Cu, Pb, Zn), and 245.1 (Hg)
														pH = 7.8
														temp = 3°C


280-169037 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☒ Archive For 1 Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Brooke Moran	11/11/22 14:15			11/11/22 14:15	ETDEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 4.6 IR2 CF0.0

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-169037-1

Login Number: 169037
List Number: 1
Creator: Roehsner, Karen P

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Patrick Delaney
GS Mining Company LLC
422 Gregory Street
Central City, Colorado 80427

Generated 12/7/2022 11:14:28 AM

JOB DESCRIPTION

Nederland, CO

JOB NUMBER

280-169501-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

Job Notes

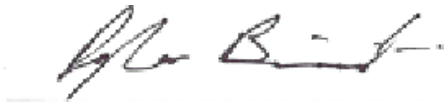
The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the Eurofins TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



Generated
12/7/2022 11:14:28 AM

Authorized for release by
Dylan Bieniulis, Project Manager I
Dylan.Bieniulis@et.eurofinsus.com
(303)736-0138

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Definitions/Glossary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169501-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-169501-1

Laboratory: Eurofins Denver

Narrative

CASE NARRATIVE

Client: GS Mining Company LLC

Project: Nederland, CO

Report Number: 280-169501-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/22/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 5.1 C.

POTENTIALLY DISSOLVED METALS (ICPMS)

Sample OUTFALL - 001 (280-169501-1) was analyzed for potentially dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 11/30/2022 and analyzed on 12/01/2022.

This report includes Reporting Limits (RLs) for 200.8 Potentially Dissolved Silver that are less than Eurofins TestAmerica Denver's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Sample OUTFALL - 001 (280-169501-1) was analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 11/30/2022 and analyzed on 12/01/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169501-1

Client Sample ID: OUTFALL - 001

Lab Sample ID: 280-169501-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Copper	0.84	J	2.0	0.71	ug/L	1		200.8	Total Recoverable
Lead	0.78	J	1.0	0.23	ug/L	1		200.8	Total Recoverable
Copper	0.83	J	2.0	0.71	ug/L	1		200.8	Potentially Dissolved
Lead	0.89	J	1.0	0.23	ug/L	1		200.8	Potentially Dissolved
Zinc	14		10	2.0	ug/L	1		200.8	Potentially Dissolved

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169501-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	EET DEN
200.8	Preparation, Total Recoverable Metals	EPA	EET DEN
Poten_Diss_Met	Filtration for Potentially Dissolved Metals	EPA	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169501-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-169501-1	OUTFALL - 001	Water	11/22/22 11:30	11/22/22 13:30

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169501-1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: OUTFALL - 001
Date Collected: 11/22/22 11:30
Date Received: 11/22/22 13:30

Lab Sample ID: 280-169501-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	**0.84**	**J**	2.0	0.71	ug/L		11/30/22 07:50	12/01/22 21:47	1
Lead	**0.78**	**J**	1.0	0.23	ug/L		11/30/22 07:50	12/01/22 21:47	1

Method: EPA 200.8 - Metals (ICP/MS) - Potentially Dissolved

Client Sample ID: OUTFALL - 001
Date Collected: 11/22/22 11:30
Date Received: 11/22/22 13:30

Lab Sample ID: 280-169501-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.088	ug/L		11/30/22 07:50	12/01/22 22:25	1
Copper	**0.83**	**J**	2.0	0.71	ug/L		11/30/22 07:50	12/01/22 22:25	1
Lead	**0.89**	**J**	1.0	0.23	ug/L		11/30/22 07:50	12/01/22 22:25	1
Silver	ND		0.50	0.045	ug/L		11/30/22 07:50	12/01/22 22:25	1
Zinc	**14**		10	2.0	ug/L		11/30/22 07:50	12/01/22 22:25	1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 280-594821/1-A
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 594821

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.71	ug/L		11/30/22 07:50	12/01/22 21:19	1
Lead	ND		1.0	0.23	ug/L		11/30/22 07:50	12/01/22 21:19	1

Lab Sample ID: LCS 280-594821/2-A
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 594821

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Copper	40.0	40.3		ug/L		101	90 - 115
Lead	40.0	41.0		ug/L		103	88 - 115

Lab Sample ID: LCSD 280-594821/3-A
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 594821

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Copper	40.0	40.7		ug/L		102	90 - 115	1	20
Lead	40.0	39.5		ug/L		99	88 - 115	4	20

Lab Sample ID: MB 280-594634/1-B
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Method Blank
Prep Type: Potentially Dissolved
Prep Batch: 594874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.088	ug/L		11/30/22 07:50	12/01/22 22:19	1
Copper	ND		2.0	0.71	ug/L		11/30/22 07:50	12/01/22 22:19	1
Lead	ND		1.0	0.23	ug/L		11/30/22 07:50	12/01/22 22:19	1
Silver	ND		0.50	0.045	ug/L		11/30/22 07:50	12/01/22 22:19	1
Zinc	ND		10	2.0	ug/L		11/30/22 07:50	12/01/22 22:19	1

Lab Sample ID: LCS 280-594634/2-B
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Lab Control Sample
Prep Type: Potentially Dissolved
Prep Batch: 594874

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	40.0	39.1		ug/L		98	89 - 111
Copper	40.0	39.7		ug/L		99	90 - 115
Lead	40.0	39.8		ug/L		99	88 - 115
Silver	40.0	38.7		ug/L		97	90 - 114
Zinc	40.0	40.4		ug/L		101	88 - 115

QC Association Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169501-1

Metals

Filtration Batch: 594634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169501-1	OUTFALL - 001	Potentially Dissolvec	Water	Poten_Diss_Met	
MB 280-594634/1-B	Method Blank	Potentially Dissolvec	Water	Poten_Diss_Met	
LCS 280-594634/2-B	Lab Control Sample	Potentially Dissolvec	Water	Poten_Diss_Met	

Prep Batch: 594821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169501-1	OUTFALL - 001	Total Recoverable	Water	200.8	
MB 280-594821/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-594821/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 280-594821/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	

Prep Batch: 594874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169501-1	OUTFALL - 001	Potentially Dissolvec	Water	200.8	594634
MB 280-594634/1-B	Method Blank	Potentially Dissolvec	Water	200.8	594634
LCS 280-594634/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	594634

Analysis Batch: 595318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169501-1	OUTFALL - 001	Potentially Dissolvec	Water	200.8	594874
280-169501-1	OUTFALL - 001	Total Recoverable	Water	200.8	594821
MB 280-594634/1-B	Method Blank	Potentially Dissolvec	Water	200.8	594874
MB 280-594821/1-A	Method Blank	Total Recoverable	Water	200.8	594821
LCS 280-594634/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	594874
LCS 280-594821/2-A	Lab Control Sample	Total Recoverable	Water	200.8	594821
LCSD 280-594821/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	594821

Lab Chronicle

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169501-1

Client Sample ID: OUTFALL - 001

Date Collected: 11/22/22 11:30
Date Received: 11/22/22 13:30

Lab Sample ID: 280-169501-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Potentially Dissolvec	Filtration	Poten_Diss_Met			250 mL	250 mL	594634	11/23/22 12:30	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	594874	11/30/22 07:50	LJS	EET DEN
Potentially Dissolvec	Analysis	200.8		1			595318	12/01/22 22:25	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	594821	11/30/22 07:50	LJS	EET DEN
Total Recoverable	Analysis	200.8		1			595318	12/01/22 21:47	LMT	EET DEN

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169501-1

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-23
Arizona	State	AZ0713	12-20-22
Arkansas DEQ	State	19-047-0	05-31-23
California	State	2513	01-08-23
Connecticut	State	PH-0686	09-30-22 *
Florida	NELAP	E87667-57	06-30-23
Georgia	State	4025-011	01-08-23
Illinois	NELAP	2000172019-1	04-30-23
Iowa	State	IA#370	12-01-24
Kansas	NELAP	E-10166	04-30-23
Kentucky (WW)	State	KY98047	12-31-22
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23
Louisiana (All)	NELAP	30785	06-30-23
Minnesota	NELAP	1788752	12-31-22
Nevada	State	CO000262020-1	07-31-23
New Hampshire	NELAP	205319	04-28-23
New Jersey	NELAP	190002	06-30-23
New York	NELAP	59923	04-01-23
North Carolina (WW/SW)	State	358	12-31-22
North Dakota	State	R-034	01-08-23
Oklahoma	NELAP	8614	08-31-23
Oregon	NELAP	4025-011	01-09-23
Pennsylvania	NELAP	013	07-31-23
South Carolina	State	72002001	01-08-23
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-20-00065	03-06-23
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23
Virginia	NELAP	10490	06-14-23
Washington	State	C583-19	08-03-23
Wisconsin	State	999615430	08-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

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Client Information	Sampler: Tracey Cottercll	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No:
Client Contact: Patrick Delaney	Phone: (307) 751-4767	E-Mail: Dylan.Bieniulis@Eurofinset.com	State of Origin:	Page:
Company: Grand Island Resources	PWSID:	Analysis Requested		Job #:
Address: 12567 West Cedar Road Suite 250	Due Date Requested:			Preservation Codes: A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80466	Compliance Project: Δ Yes Δ No			
Phone: 315-414-6986	PO #: Advance Payment Required			
Email: pdelaney@blackfoxmining.com	WO #:			
Project Name: Wastewater Discharge - Nederland, CO	Project #: 28022821			
Site: second half of the month event	SSOW#:			Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8 - Potentially Dissolved Metals (Second half of the month permit list)	200.8 - Total Recoverable Metals (Second half of the month permit list)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D		
OUTFALL - 001	11/22/22	11:30	G	W	N		X	X		*Second half of the month potentially dissolved metals permit list = 200.8 (Cd, Cu, Pb, Ag, Zn) *Second half of the month total recoverable metals permit list = 200.8 (Cu, Pb) pH = 7.6 temp = 4°C

280-169501 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☒ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	11/22/22, 1:28 pm		[signature]	11-22-22 1330	ETADEN
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.1 IR12 CF0.0

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-169501-1

Login Number: 169501
List Number: 1
Creator: Held, Wesley

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX B.3 DECEMBER 2022 OUTFALL-001 ANALYTICAL RESULTS

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ANALYTICAL REPORT

PREPARED FOR

Attn: Patrick Delaney
GS Mining Company LLC
422 Gregory Street
Central City, Colorado 80427

Generated 12/21/2022 5:46:58 PM

JOB DESCRIPTION

Nederland, CO

JOB NUMBER

280-170030-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

Job Notes

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the Eurofins TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

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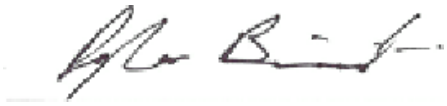
The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



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12/21/2022 5:46:58 PM

Authorized for release by
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Dylan.Bieniulis@et.eurofinsus.com
(303)736-0138

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Definitions/Glossary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170030-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-170030-1

Laboratory: Eurofins Denver

Narrative

CASE NARRATIVE

Client: GS Mining Company LLC

Project: Nederland, CO

Report Number: 280-170030-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/07/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 5.6 C.

The packaging of the low level mercury kit received for sample OUTFALL-001 (280-170030-1) was inadvertently opened during receipt/logging. The containers within the packaging were not opened. Containers were re-packed in the proper packaging with clean gloves and analysis proceeded. The client was notified after receipt.

TOTAL RECOVERABLE METALS (ICP)

Sample OUTFALL-001 (280-170030-1) was analyzed for Total Recoverable Metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 12/13/2022 and analyzed on 12/15/2022.

Iron was detected in method blank MB 280-596499/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POTENTIALLY DISSOLVED METALS (ICPMS)

Sample OUTFALL-001 (280-170030-1) was analyzed for potentially dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 12/14/2022 and analyzed on 12/15/2022 and 12/16/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Sample OUTFALL-001 (280-170030-1) was analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 12/13/2022 and analyzed on 12/13/2022 and 12/14/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)

Sample OUTFALL-001 (280-170030-1) was analyzed for total mercury (CVAA) in accordance with EPA Method 245.1. The samples were

Job ID: 280-170030-1 (Continued)

Laboratory: Eurofins Denver (Continued)

prepared on 12/12/2022 and analyzed on 12/13/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM - POTENTIALLY DISSOLVED
Sample OUTFALL-001 (280-170030-1) was analyzed for Trivalent Chromium - Potentially Dissolved in accordance with SM3500_CR3_B. The samples were analyzed on 12/20/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM - TOTAL RECOVERABLE
Sample OUTFALL-001 (280-170030-1) was analyzed for Trivalent Chromium - Total Recoverable in accordance with SM3500_CR3_B. The samples were analyzed on 12/20/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SPECIFIC CONDUCTIVITY
Sample OUTFALL-001 (280-170030-1) was analyzed for specific conductivity in accordance with SM20 2510B. The samples were analyzed on 12/08/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS
Sample OUTFALL-001 (280-170030-1) was analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 12/13/2022.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED HEXAVALENT CHROMIUM
Sample OUTFALL-001 (280-170030-1) was analyzed for dissolved hexavalent chromium in accordance with SM 3500 CR B. The samples were analyzed on 12/08/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM
Sample OUTFALL-001 (280-170030-1) was analyzed for hexavalent chromium in accordance with 3500_CR_B. The samples were analyzed on 12/08/2022.

Chromium, hexavalent failed the recovery criteria high for the MSD of sample OUTFALL-001 (280-170030-1) in batch 280-596037. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CORROSIVITY (PH)
Sample OUTFALL-001 (280-170030-1) was analyzed for corrosivity (pH) in accordance with SM20 4500 H+ B. The samples were analyzed on 12/08/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SULFIDE
Sample OUTFALL-001 (280-170030-1) was analyzed for sulfide in accordance with SM20 4500 S2 D. The samples were analyzed on 12/08/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 280-170030-1 (Continued)

Laboratory: Eurofins Denver (Continued)

HYDROGEN SULFIDE

Sample OUTFALL-001 (280-170030-1) was analyzed for Hydrogen Sulfide in accordance with SM20 4500 S2 H. The samples were analyzed on 12/13/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LOW LEVEL MERCURY

Sample OUTFALL-001 (280-170030-1) was analyzed for Low Level Mercury in accordance with EPA 1631. The samples were prepared on 12/09/2022 and analyzed on 12/13/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170030-1

Client Sample ID: OUTFALL-001 — Lab Sample ID: 280-170030-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	1.8		0.50	0.20	ng/L	1		1631E	Total/NA
Iron	20	J B	100	9.1	ug/L	1		200.7 Rev 4.4	Total Recoverable
Lead	0.49	J	1.0	0.23	ug/L	1		200.8	Total Recoverable
Zinc	3.3	J	10	2.0	ug/L	1		200.8	Total Recoverable
Lead	0.44	J	1.0	0.23	ug/L	1		200.8	Potentially Dissolved
Nickel	0.47	J	2.0	0.28	ug/L	1		200.8	Potentially Dissolved
Zinc	5.9	J	10	2.0	ug/L	1		200.8	Potentially Dissolved
Specific Conductance	230		2.0	2.0	umhos/cm	1		SM 2510B	Total/NA
pH adj. to 25 deg C	8.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Temperature	23.4	HF	1.0	1.0	Degrees C	1		SM 4500 H+ B	Total/NA
Field pH	8.2		1.0	1.0	SU	1		SM4500 S2 H	Total/NA
Field Temperature	23		1.0	1.0	Celsius	1		SM4500 S2 H	Total/NA
Specific Conductance	230		2.0	2.0	umhos/cm	1		SM4500 S2 H	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170030-1

Method	Method Description	Protocol	Laboratory
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.7 Rev 4.4	Metals (ICP)	EPA	EET DEN
200.8	Metals (ICP/MS)	EPA	EET DEN
245.1	Mercury (CVAA)	EPA	EET DEN
SM 2510B	Conductivity, Specific Conductance	SM	EET DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	EET DEN
SM 3500 CR B	Chromium, Hexavalent	SM	EET DEN
SM 4500 H+ B	pH	SM	EET DEN
SM 4500 S2 D	Sulfide, Total	SM	EET DEN
SM3500 CR B	Chromium, Trivalent	SM	EET DEN
SM4500 S2 H	Unionized Hydrogen Sulfide	SM	EET DEN
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.7	Preparation, Total Recoverable Metals	EPA	EET DEN
200.8	Preparation, Total Recoverable Metals	EPA	EET DEN
245.1	Preparation, Mercury	EPA	EET DEN
FILTRATION	Sample Filtration	None	EET DEN
Poten_Diss_Met	Filtration for Potentially Dissolved Metals	EPA	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170030-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-170030-1	OUTFALL-001	Water	12/07/22 12:00	12/07/22 16:02

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Client Sample ID: OUTFALL-001
Date Collected: 12/07/22 12:00
Date Received: 12/07/22 16:02

Lab Sample ID: 280-170030-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.8**		0.50	0.20	ng/L		12/09/22 16:25	12/13/22 10:56	1

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 12/07/22 12:00
Date Received: 12/07/22 16:02

Lab Sample ID: 280-170030-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**20**	**J B**	100	9.1	ug/L		12/13/22 11:29	12/15/22 00:26	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 12/07/22 12:00
Date Received: 12/07/22 16:02

Lab Sample ID: 280-170030-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		12/13/22 08:13	12/14/22 15:25	1
Cadmium	ND		1.0	0.088	ug/L		12/13/22 08:13	12/13/22 17:53	1
Chromium	ND		3.0	0.88	ug/L		12/13/22 08:13	12/13/22 17:53	1
Copper	ND		2.0	0.71	ug/L		12/13/22 08:13	12/14/22 15:25	1
Lead	**0.49**	**J**	1.0	0.23	ug/L		12/13/22 08:13	12/14/22 15:25	1
Zinc	**3.3**	**J**	10	2.0	ug/L		12/13/22 08:13	12/13/22 17:53	1

Method: EPA 200.8 - Metals (ICP/MS) - Potentially Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 12/07/22 12:00
Date Received: 12/07/22 16:02

Lab Sample ID: 280-170030-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		12/14/22 08:15	12/16/22 11:37	1
Cadmium	ND		1.0	0.088	ug/L		12/14/22 08:15	12/15/22 17:00	1
Chromium	ND		3.0	0.88	ug/L		12/14/22 08:15	12/15/22 17:00	1
Copper	ND		2.0	0.71	ug/L		12/14/22 08:15	12/15/22 17:00	1
Lead	**0.44**	**J**	1.0	0.23	ug/L		12/14/22 08:15	12/15/22 17:00	1
Manganese	ND		2.0	0.51	ug/L		12/14/22 08:15	12/16/22 11:37	1
Nickel	**0.47**	**J**	2.0	0.28	ug/L		12/14/22 08:15	12/15/22 17:00	1
Selenium	ND		5.0	1.0	ug/L		12/14/22 08:15	12/15/22 17:00	1
Silver	ND		0.50	0.045	ug/L		12/14/22 08:15	12/15/22 17:00	1
Zinc	**5.9**	**J**	10	2.0	ug/L		12/14/22 08:15	12/15/22 17:00	1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: OUTFALL-001
Date Collected: 12/07/22 12:00
Date Received: 12/07/22 16:02

Lab Sample ID: 280-170030-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		12/12/22 18:15	12/13/22 17:19	1

General Chemistry

Client Sample ID: OUTFALL-001
Date Collected: 12/07/22 12:00
Date Received: 12/07/22 16:02

Lab Sample ID: 280-170030-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (SM 2510B)	**230**		2.0	2.0	umhos/cm			12/08/22 13:55	1
Total Suspended Solids (SM 2540D)	ND		4.0	1.1	mg/L			12/13/22 11:55	1
Chromium, hexavalent (SM 3500 CR B)	ND	F1	0.020	0.0040	mg/L			12/08/22 11:03	1
pH adj. to 25 deg C (SM 4500 H+ B	**8.2**	**HF**	0.1	0.1	SU			12/08/22 14:31	1
Temperature (SM 4500 H+ B)	**23.4**	**HF**	1.0	1.0	Degrees C			12/08/22 14:31	1
Sulfide (SM 4500 S2 D)	ND		0.050	0.022	mg/L			12/08/22 15:51	1
Un-ionized Hydrogen Sulfide (SM4500 S2 H)	ND		1.0	1.0	mg/L			12/13/22 17:23	1
Field pH (SM4500 S2 H)	**8.2**		1.0	1.0	SU			12/13/22 17:23	1
Field Temperature (SM4500 S2 H)	**23**		1.0	1.0	Celsius			12/13/22 17:23	1
Specific Conductance (SM4500 S2 H)	**230**		2.0	2.0	umhos/cm			12/13/22 17:23	1
Sulfide (SM4500 S2 H)	ND		4.0	4.0	mg/L			12/13/22 17:23	1

General Chemistry - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 12/07/22 12:00
Date Received: 12/07/22 16:02

Lab Sample ID: 280-170030-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (SM3500 CR B)	ND	H	0.020	0.020	mg/L			12/20/22 17:22	1

General Chemistry - Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 12/07/22 12:00
Date Received: 12/07/22 16:02

Lab Sample ID: 280-170030-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			12/08/22 10:52	1

General Chemistry - Potentially Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 12/07/22 12:00
Date Received: 12/07/22 16:02

Lab Sample ID: 280-170030-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (dissolved) (SM3500 CR B)	ND		0.020	0.020	mg/L			12/20/22 17:24	1

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-604622/3-A
Matrix: Water
Analysis Batch: 604717

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 604622

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.20	ng/L		12/12/22 16:00	12/13/22 09:48	1

Lab Sample ID: LCS 400-604622/4-A
Matrix: Water
Analysis Batch: 604717

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 604622

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.97		ng/L		99	79 - 121

Lab Sample ID: LCSD 400-604622/5-A
Matrix: Water
Analysis Batch: 604717

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 604622

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.94		ng/L		99	79 - 121	1	20

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 280-596499/1-A
Matrix: Water
Analysis Batch: 596874

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 596499

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	18.8	J	100	9.1	ug/L		12/13/22 11:29	12/14/22 23:00	1

Lab Sample ID: LCS 280-596499/2-A
Matrix: Water
Analysis Batch: 596874

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 596499

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	10000	10100		ug/L		101	85 - 115

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 280-596318/1-A
Matrix: Water
Analysis Batch: 596619

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 596318

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		12/13/22 08:13	12/13/22 17:21	1
Cadmium	ND		1.0	0.088	ug/L		12/13/22 08:13	12/13/22 17:21	1
Chromium	ND		3.0	0.88	ug/L		12/13/22 08:13	12/13/22 17:21	1
Copper	ND		2.0	0.71	ug/L		12/13/22 08:13	12/13/22 17:21	1
Lead	ND		1.0	0.23	ug/L		12/13/22 08:13	12/13/22 17:21	1
Zinc	ND		10	2.0	ug/L		12/13/22 08:13	12/13/22 17:21	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-596318/2-A
Matrix: Water
Analysis Batch: 596619

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 596318

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Arsenic			40.0	37.2		ug/L		93	89 - 111		
Cadmium			40.0	41.8		ug/L		104	89 - 111		
Chromium			40.0	39.4		ug/L		99	86 - 115		
Copper			40.0	38.8		ug/L		97	90 - 115		
Lead			40.0	38.7		ug/L		97	88 - 115		
Zinc			40.0	40.6		ug/L		101	88 - 115		

Lab Sample ID: LCSD 280-596318/3-A
Matrix: Water
Analysis Batch: 596619

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 596318

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic			40.0	39.0		ug/L		97	89 - 111	5	20
Cadmium			40.0	39.0		ug/L		97	89 - 111	7	20
Chromium			40.0	39.0		ug/L		98	86 - 115	1	20
Copper			40.0	37.8		ug/L		94	90 - 115	3	20
Lead			40.0	38.2		ug/L		95	88 - 115	1	20
Zinc			40.0	39.8		ug/L		100	88 - 115	2	20

Lab Sample ID: MB 280-596256/1-B
Matrix: Water
Analysis Batch: 596920

Client Sample ID: Method Blank
Prep Type: Potentially Dissolved
Prep Batch: 596402

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.088	ug/L		12/14/22 08:15	12/15/22 16:49	1
Chromium	ND		3.0	0.88	ug/L		12/14/22 08:15	12/15/22 16:49	1
Copper	ND		2.0	0.71	ug/L		12/14/22 08:15	12/15/22 16:49	1
Lead	ND		1.0	0.23	ug/L		12/14/22 08:15	12/15/22 16:49	1
Nickel	ND		2.0	0.28	ug/L		12/14/22 08:15	12/15/22 16:49	1
Selenium	ND		5.0	1.0	ug/L		12/14/22 08:15	12/15/22 16:49	1
Silver	ND		0.50	0.045	ug/L		12/14/22 08:15	12/15/22 16:49	1
Zinc	ND		10	2.0	ug/L		12/14/22 08:15	12/15/22 16:49	1

Lab Sample ID: MB 280-596256/1-B
Matrix: Water
Analysis Batch: 596971

Client Sample ID: Method Blank
Prep Type: Potentially Dissolved
Prep Batch: 596402

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		12/14/22 08:15	12/16/22 11:29	1
Manganese	ND		2.0	0.51	ug/L		12/14/22 08:15	12/16/22 11:29	1

Lab Sample ID: LCS 280-596256/2-B
Matrix: Water
Analysis Batch: 596920

Client Sample ID: Lab Control Sample
Prep Type: Potentially Dissolved
Prep Batch: 596402

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Cadmium			40.0	39.6		ug/L		99	89 - 111		
Chromium			40.0	40.4		ug/L		101	86 - 115		
Copper			40.0	40.9		ug/L		102	90 - 115		

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 280-596256/2-B
Matrix: Water
Analysis Batch: 596920

Client Sample ID: Lab Control Sample
Prep Type: Potentially Dissolved
Prep Batch: 596402

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lead	40.0	40.5		ug/L		101	88 - 115
Nickel	40.0	40.1		ug/L		100	86 - 115
Selenium	40.0	39.3		ug/L		98	85 - 114
Silver	40.0	41.4		ug/L		103	90 - 114
Zinc	40.0	43.0		ug/L		108	88 - 115

Lab Sample ID: LCS 280-596256/2-B
Matrix: Water
Analysis Batch: 596971

Client Sample ID: Lab Control Sample
Prep Type: Potentially Dissolved
Prep Batch: 596402

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	38.7		ug/L		97	89 - 111
Manganese	40.0	39.0		ug/L		98	87 - 115

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 280-596370/1-A
Matrix: Water
Analysis Batch: 596650

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 596370

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		12/12/22 18:15	12/13/22 16:59	1

Lab Sample ID: LCS 280-596370/2-A
Matrix: Water
Analysis Batch: 596650

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 596370

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.97		ug/L		99	90 - 110

Lab Sample ID: 280-170030-1 MS
Matrix: Water
Analysis Batch: 596650

Client Sample ID: OUTFALL-001
Prep Type: Total/NA
Prep Batch: 596370

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		5.00	4.84		ug/L		97	80 - 120

Lab Sample ID: 280-170030-1 MSD
Matrix: Water
Analysis Batch: 596650

Client Sample ID: OUTFALL-001
Prep Type: Total/NA
Prep Batch: 596370

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		5.00	4.77		ug/L		95	80 - 120	2	10

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 280-596061/5
Matrix: Water
Analysis Batch: 596061

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		2.0	2.0	umhos/cm			12/08/22 13:55	1

Lab Sample ID: LCS 280-596061/4
Matrix: Water
Analysis Batch: 596061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1410	1430		umhos/cm		101	90 - 110

Lab Sample ID: 280-170030-1 DU
Matrix: Water
Analysis Batch: 596061

Client Sample ID: OUTFALL-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	230		232		umhos/cm		0.3	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-596513/2
Matrix: Water
Analysis Batch: 596513

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			12/13/22 11:55	1

Lab Sample ID: LCS 280-596513/1
Matrix: Water
Analysis Batch: 596513

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	501	455		mg/L		91	79 - 114

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: MB 280-596037/10
Matrix: Water
Analysis Batch: 596037

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.020	0.0040	mg/L			12/08/22 10:17	1

Lab Sample ID: LCS 280-596037/8
Matrix: Water
Analysis Batch: 596037

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.100	0.101		mg/L		101	91 - 112

Method: SM 3500 CR B - Chromium, Hexavalent (Continued)

Lab Sample ID: LCSD 280-596037/9
Matrix: Water
Analysis Batch: 596037

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent			0.100	0.0992		mg/L		99	91 - 112	2	20

Lab Sample ID: 280-170030-1 MS
Matrix: Water
Analysis Batch: 596037

Client Sample ID: OUTFALL-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent	ND	F1	0.100	0.104		mg/L		104	91 - 112		

Lab Sample ID: 280-170030-1 MSD
Matrix: Water
Analysis Batch: 596037

Client Sample ID: OUTFALL-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	ND	F1	0.100	0.117	F1	mg/L		117	91 - 112	12	20

Lab Sample ID: 280-170030-1 DU
Matrix: Water
Analysis Batch: 596037

Client Sample ID: OUTFALL-001
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	ND	F1		0.0226		mg/L				NC	20

Lab Sample ID: MB 280-596017/3-A
Matrix: Water
Analysis Batch: 596037

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.020	0.0040	mg/L			12/08/22 10:23	1

Lab Sample ID: LCS 280-596017/1-A
Matrix: Water
Analysis Batch: 596037

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent			0.100	0.101		mg/L		101	91 - 112		

Lab Sample ID: LCSD 280-596017/2-A
Matrix: Water
Analysis Batch: 596037

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent			0.100	0.101		mg/L		101	91 - 112	0	20

Lab Sample ID: 280-170030-1 MS
Matrix: Water
Analysis Batch: 596037

Client Sample ID: OUTFALL-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent	ND		0.100	0.103		mg/L		103	91 - 112		

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: 280-170030-1 MSD
Matrix: Water
Analysis Batch: 596037

Client Sample ID: OUTFALL-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	ND		0.100	0.103		mg/L		103	91 - 112	0	20

Lab Sample ID: 280-170030-1 DU
Matrix: Water
Analysis Batch: 596037

Client Sample ID: OUTFALL-001
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	ND		ND		mg/L				NC	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 280-596152/5
Matrix: Water
Analysis Batch: 596152

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
pH adj. to 25 deg C			7.00	7.1		SU		101	99 - 101		

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 280-596080/11
Matrix: Water
Analysis Batch: 596080

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.050	0.022	mg/L			12/08/22 15:20	1

Lab Sample ID: LCS 280-596080/9
Matrix: Water
Analysis Batch: 596080

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			0.499	0.497		mg/L		100	81 - 122		

Lab Sample ID: LCSD 280-596080/10
Matrix: Water
Analysis Batch: 596080

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide			0.499	0.527		mg/L		106	81 - 122	6	10

Method: SM4500 S2 H - Unionized Hydrogen Sulfide

Lab Sample ID: MB 280-596588/1
Matrix: Water
Analysis Batch: 596588

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Un-ionized Hydrogen Sulfide	ND		1.0	1.0	mg/L			12/13/22 17:23	1
Field pH	ND		1.0	1.0	SU			12/13/22 17:23	1
Field Temperature	ND		1.0	1.0	Celsius			12/13/22 17:23	1

Method: SM4500 S2 H - Unionized Hydrogen Sulfide (Continued)

Lab Sample ID: MB 280-596588/1
Matrix: Water
Analysis Batch: 596588

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		2.0	2.0	umhos/cm			12/13/22 17:23	1
Sulfide	ND		4.0	4.0	mg/L			12/13/22 17:23	1

Metals

Filtration Batch: 596256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Potentially Dissolvec	Water	Poten_Diss_Met	
MB 280-596256/1-B	Method Blank	Potentially Dissolvec	Water	Poten_Diss_Met	
LCS 280-596256/2-B	Lab Control Sample	Potentially Dissolvec	Water	Poten_Diss_Met	

Prep Batch: 596318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total Recoverable	Water	200.8	
MB 280-596318/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-596318/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 280-596318/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	

Prep Batch: 596370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total/NA	Water	245.1	
MB 280-596370/1-A	Method Blank	Total/NA	Water	245.1	
LCS 280-596370/2-A	Lab Control Sample	Total/NA	Water	245.1	
280-170030-1 MS	OUTFALL-001	Total/NA	Water	245.1	
280-170030-1 MSD	OUTFALL-001	Total/NA	Water	245.1	

Prep Batch: 596402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	596256
MB 280-596256/1-B	Method Blank	Potentially Dissolvec	Water	200.8	596256
LCS 280-596256/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	596256

Prep Batch: 596499

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total Recoverable	Water	200.7	
MB 280-596499/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 280-596499/2-A	Lab Control Sample	Total Recoverable	Water	200.7	

Analysis Batch: 596619

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total Recoverable	Water	200.8	596318
MB 280-596318/1-A	Method Blank	Total Recoverable	Water	200.8	596318
LCS 280-596318/2-A	Lab Control Sample	Total Recoverable	Water	200.8	596318
LCSD 280-596318/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	596318

Analysis Batch: 596650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total/NA	Water	245.1	596370
MB 280-596370/1-A	Method Blank	Total/NA	Water	245.1	596370
LCS 280-596370/2-A	Lab Control Sample	Total/NA	Water	245.1	596370
280-170030-1 MS	OUTFALL-001	Total/NA	Water	245.1	596370
280-170030-1 MSD	OUTFALL-001	Total/NA	Water	245.1	596370

Analysis Batch: 596725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total Recoverable	Water	200.8	596318

Metals

Analysis Batch: 596874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total Recoverable	Water	200.7 Rev 4.4	596499
MB 280-596499/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	596499
LCS 280-596499/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	596499

Analysis Batch: 596920

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	596402
MB 280-596256/1-B	Method Blank	Potentially Dissolvec	Water	200.8	596402
LCS 280-596256/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	596402

Analysis Batch: 596971

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	596402
MB 280-596256/1-B	Method Blank	Potentially Dissolvec	Water	200.8	596402
LCS 280-596256/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	596402

Prep Batch: 604622

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total/NA	Water	1631E	
MB 400-604622/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-604622/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-604622/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	

Analysis Batch: 604717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total/NA	Water	1631E	604622
MB 400-604622/3-A	Method Blank	Total/NA	Water	1631E	604622
LCS 400-604622/4-A	Lab Control Sample	Total/NA	Water	1631E	604622
LCSD 400-604622/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	604622

General Chemistry

Filtration Batch: 596017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Dissolved	Water	FILTRATION	
MB 280-596017/3-A	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-596017/1-A	Lab Control Sample	Dissolved	Water	FILTRATION	
LCSD 280-596017/2-A	Lab Control Sample Dup	Dissolved	Water	FILTRATION	
280-170030-1 MS	OUTFALL-001	Dissolved	Water	FILTRATION	
280-170030-1 MSD	OUTFALL-001	Dissolved	Water	FILTRATION	
280-170030-1 DU	OUTFALL-001	Dissolved	Water	FILTRATION	

Analysis Batch: 596037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Dissolved	Water	SM 3500 CR B	596017
280-170030-1	OUTFALL-001	Total/NA	Water	SM 3500 CR B	
MB 280-596017/3-A	Method Blank	Dissolved	Water	SM 3500 CR B	596017
MB 280-596037/10	Method Blank	Total/NA	Water	SM 3500 CR B	
LCS 280-596017/1-A	Lab Control Sample	Dissolved	Water	SM 3500 CR B	596017
LCS 280-596037/8	Lab Control Sample	Total/NA	Water	SM 3500 CR B	
LCSD 280-596017/2-A	Lab Control Sample Dup	Dissolved	Water	SM 3500 CR B	596017

General Chemistry (Continued)

Analysis Batch: 596037 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCSD 280-596037/9	Lab Control Sample Dup	Total/NA	Water	SM 3500 CR B	
280-170030-1 MS	OUTFALL-001	Dissolved	Water	SM 3500 CR B	596017
280-170030-1 MS	OUTFALL-001	Total/NA	Water	SM 3500 CR B	
280-170030-1 MSD	OUTFALL-001	Dissolved	Water	SM 3500 CR B	596017
280-170030-1 MSD	OUTFALL-001	Total/NA	Water	SM 3500 CR B	
280-170030-1 DU	OUTFALL-001	Dissolved	Water	SM 3500 CR B	596017
280-170030-1 DU	OUTFALL-001	Total/NA	Water	SM 3500 CR B	

Analysis Batch: 596061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total/NA	Water	SM 2510B	
MB 280-596061/5	Method Blank	Total/NA	Water	SM 2510B	
LCS 280-596061/4	Lab Control Sample	Total/NA	Water	SM 2510B	
280-170030-1 DU	OUTFALL-001	Total/NA	Water	SM 2510B	

Analysis Batch: 596080

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total/NA	Water	SM 4500 S2 D	
MB 280-596080/11	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 280-596080/9	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 280-596080/10	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 596152

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total/NA	Water	SM 4500 H+ B	
LCS 280-596152/5	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 596513

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total/NA	Water	SM 2540D	
MB 280-596513/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-596513/1	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 596588

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total/NA	Water	SM4500 S2 H	
MB 280-596588/1	Method Blank	Total/NA	Water	SM4500 S2 H	

Analysis Batch: 597379

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Total Recoverable	Water	SM3500 CR B	

Analysis Batch: 597380

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170030-1	OUTFALL-001	Potentially Dissolvec	Water	SM3500 CR B	

Lab Chronicle

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170030-1

Client Sample ID: OUTFALL-001

Date Collected: 12/07/22 12:00
Date Received: 12/07/22 16:02

Lab Sample ID: 280-170030-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	604622	12/09/22 16:25	VLC	EET PEN
							Completed:	12/12/22 09:30 [1]		
Total/NA	Analysis	1631E		1			604717	12/13/22 10:56	VLC	EET PEN
Total Recoverable	Prep	200.7			50 mL	50 mL	596499	12/13/22 11:29	PFM	EET DEN
Total Recoverable	Analysis	200.7 Rev 4.4		1			596874	12/15/22 00:26	KRP	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			200 mL	200 mL	596256	12/09/22 21:00	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	596402	12/14/22 08:15	PFM	EET DEN
Potentially Dissolvec	Analysis	200.8		1			596920	12/15/22 17:00	LMT	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			200 mL	200 mL	596256	12/09/22 21:00	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	596402	12/14/22 08:15	PFM	EET DEN
Potentially Dissolvec	Analysis	200.8		1			596971	12/16/22 11:37	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	596318	12/13/22 08:13	PFM	EET DEN
Total Recoverable	Analysis	200.8		1			596725	12/14/22 15:25	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	596318	12/13/22 08:13	PFM	EET DEN
Total Recoverable	Analysis	200.8		1			596619	12/13/22 17:53	LMT	EET DEN
Total/NA	Prep	245.1			30 mL	50 mL	596370	12/12/22 18:15	KMS	EET DEN
Total/NA	Analysis	245.1		1			596650	12/13/22 17:19	KMS	EET DEN
Total/NA	Analysis	SM 2510B		1			596061	12/08/22 13:55	KEG	EET DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	596513	12/13/22 11:55	ASP	EET DEN
Dissolved	Filtration	FILTRATION			2 mL	2 mL	596017	12/08/22 09:54	LRB	EET DEN
Dissolved	Analysis	SM 3500 CR B		1	2 mL	2 mL	596037	12/08/22 10:52	LRB	EET DEN
Total/NA	Analysis	SM 3500 CR B		1	2 mL	2 mL	596037	12/08/22 11:03	LRB	EET DEN
Total/NA	Analysis	SM 4500 H+ B		1			596152	12/08/22 14:31	KEG	EET DEN
Total/NA	Analysis	SM 4500 S2 D		1	2 mL	2 mL	596080	12/08/22 15:51	SJD	EET DEN
Potentially Dissolvec	Analysis	SM3500 CR B		1			597380	12/20/22 17:24	DNM	EET DEN
Total Recoverable	Analysis	SM3500 CR B		1			597379	12/20/22 17:22	DNM	EET DEN
Total/NA	Analysis	SM4500 S2 H		1			596588	12/13/22 17:23	ZPM	EET DEN

[1] Completion dates and times are reported or not reported per method requirements or individual lab discretion.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100
EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170030-1

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-23
Arizona	State	AZ0713	12-20-22
Arkansas DEQ	State	19-047-0	05-31-23
California	State	2513	01-08-23
Connecticut	State	PH-0686	09-30-22 *
Florida	NELAP	E87667-57	06-30-23
Georgia	State	4025-011	01-08-23
Illinois	NELAP	2000172019-1	04-30-23
Iowa	State	IA#370	12-01-24
Kansas	NELAP	E-10166	04-30-23
Kentucky (WW)	State	KY98047	12-31-22
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23
Louisiana (All)	NELAP	30785	06-30-23
Minnesota	NELAP	1788752	12-31-22
Nevada	State	CO000262020-1	07-31-23
New Hampshire	NELAP	205319	04-28-23
New Jersey	NELAP	190002	06-30-23
New York	NELAP	59923	04-01-23
North Carolina (WW/SW)	State	358	12-31-22
North Dakota	State	R-034	01-08-23
Oklahoma	NELAP	8614	08-31-23
Oregon	NELAP	4025-011	01-09-23
Pennsylvania	NELAP	013	07-31-23
South Carolina	State	72002001	01-08-23
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-20-00065	03-06-23
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23
Virginia	NELAP	10490	06-14-23
Washington	State	C583-19	08-03-23
Wisconsin	State	999615430	08-31-23

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-23-23
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170030-1

Laboratory: Eurofins Pensacola (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Kentucky (UST)	State	53	06-30-23
Kentucky (WW)	State	KY98030	12-31-22
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-22
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-22
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-23
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-23

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: BM	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No:
Client Contact: Patrick Delaney	Phone: 303-506-1618	E-Mail: Dylan.Bieniulis@Eurofinset.com	State of Origin:	Page:
Company: Grand Island Resources	PWSID:			Job #:
Address: 12567 West Cedar Road Suite 250	Due Date Requested:			
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80466	Compliance Project: Δ Yes Δ No			
Phone: 315-414-6986	PO #: Advance Payment Required			
Email: pdelaney@blackfoxmining.com	WO #:			
Project Name: Wastewater Discharge - Nederland, CO	Project #: 28022821			
Site: First half of the month event + Quarterly LL Hg	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2510B - Specific Conductance, 2540D - TSS, SM4500_H+ - pH / Temp	3500_CR_B - Total Hexavalent Cr and Trivalent Cr (calc)	3500_CR_B - Dissolved Hexavalent Cr (LAB FILTER) and Potentially Dissolved Trivalent Cr (calc)	SM4500_S2_D - Sulfide and SM3500_S2_H - Unionized Hydrogen Sulfide (calc)	1631E - Low Level Mercury CETAC Prep Screening	200.8 - Potentially Dissolved Metals (First half of the month permit list)	200.7 / 200.8 / 245.1 - Total Recoverable Metals and Mercury (First half of the month permit list)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	CB	M	D	D		
OUTFALL-001	12/7/22	12:00	G	W	N		X	X	X	X	X	X	X		*First half of the month potentially dissolved metals permit list = 200.8 (As, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Zn) *First half of the month total recoverable metals permit list = 200.7 (Fe), 200.8 (As, Cd, Cr, Cu, Pb, Zn), and 245.1 (Hg)

280-170030 Chain of Custody

temp = 4°C
pH = 7.5

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☒ Archive For 1 Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	12/7/2022 16:02	GIR	[signature]	12/7/22 1602	EAT DGA
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.6°C IR #17 CF 0.0

Ver: 01/16/2019

Eurofins Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No: 280-638886.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Dylan.Bieniulis@et.eurofinsus.com	State of Origin: Colorado	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast,		Accreditations Required (See note):		Job #: 280-170030-1
Address: 3355 McLemore Drive,	Due Date Requested: 12/21/2022			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #:			
Email:	WO #:			
Project Name: Nederland, CO	Project #: 28022821			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1631E/1631E_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
OUTFALL-001 (280-170030-1)	12/7/22	12:00 Mountain		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	12/8/22 15:35	ETATEN			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 12.9.22 09:21	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.6 IR8

Ver: 06/08/2021

Eurofins Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No: 280-638886.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Dylan.Bieniulis@et.eurofinsus.com	State of Origin: Colorado	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast,		Accreditations Required (See note):		Job #: 280-170030-1
Address: 3355 McLemore Drive, ,	Due Date Requested: 12/21/2022			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #:			
Email:	WO #:			
Project Name: Nederland, CO	Project #: 28022821			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA

M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1631E/1631E_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
OUTFALL-001 (280-170030-1)	12/7/22	12:00 Mountain		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

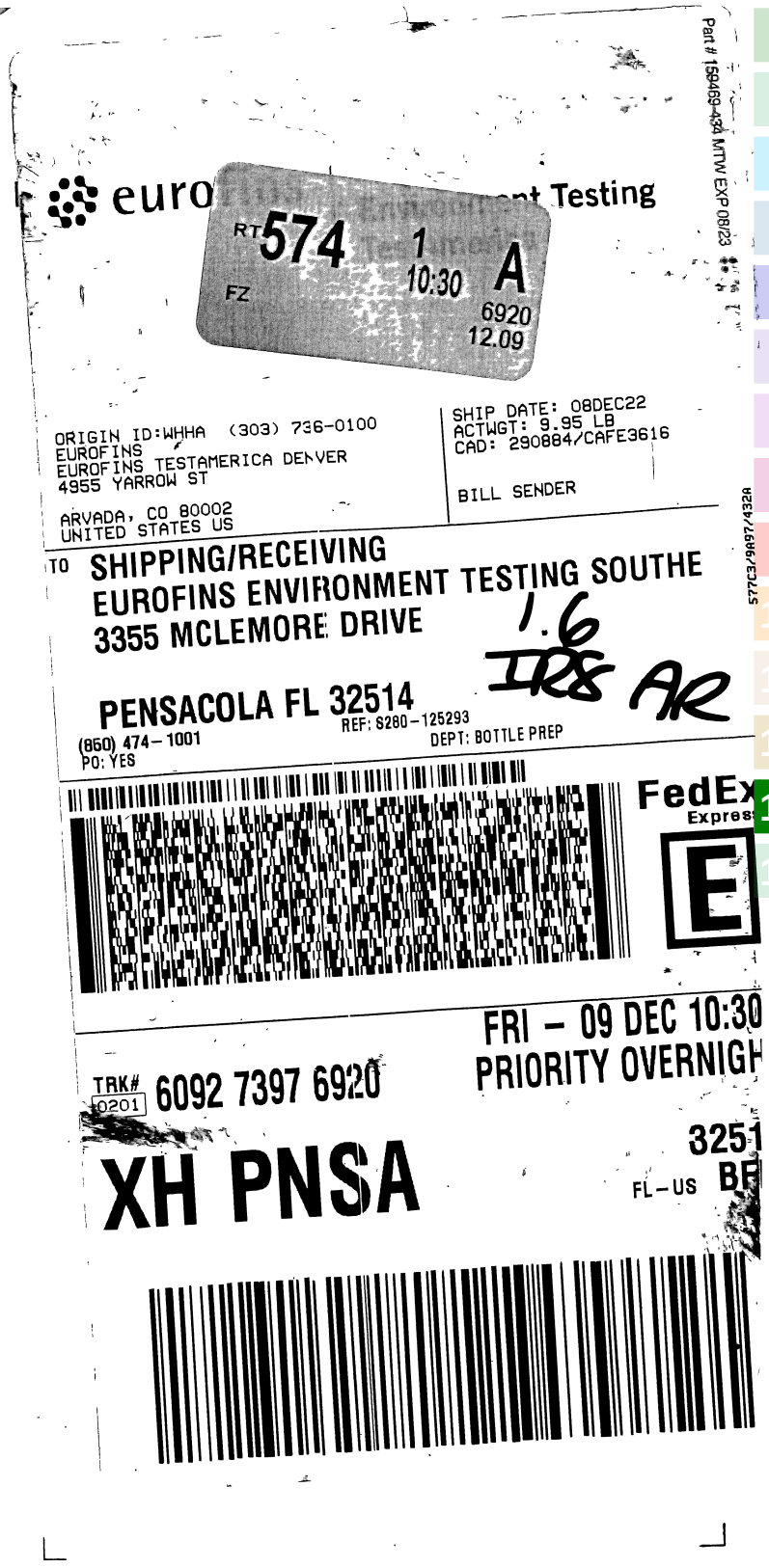
Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	12/8/22 15:35	ET TALEN			
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 12.9.22 09:21	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 1.6 IR8

Ver: 06/08/2021

12/21/2022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euro
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RT 574 1
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6920
12.09
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EUROFINS
EUROFINS TESTAMERICA DENVER
4955 YARROW ST
ARVADA, CO 80002
UNITED STATES US
SHIP DATE: 08DEC22
ACTWGT: 9.95 LB
CAD: 290884/CAFE3616
BILL SENDER
TO SHIPPING/RECEIVING
EUROFINS ENVIRONMENT TESTING SOUTHE
3355 MCLEMORE DRIVE
PENSACOLA FL 32514
(850) 474-1001
PO: YES
REF: S280-125293
DEPT: BOTTLE PREP
1.6
IRS AR
FedEx
Express
FRI - 09 DEC 10:30
PRIORITY OVERNIGH
TRK# 0201 6092 7397 6920
XH PNSA
3251
FL-US
577C3/9897/4328

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-170030-1

Login Number: 170030
List Number: 1
Creator: Roehsner, Karen P

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	False	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-170030-1

Login Number: 170030
List Number: 2
Creator: Roberts, Alexis J

List Source: Eurofins Pensacola
List Creation: 12/09/22 03:32 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	1.6°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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ANALYTICAL REPORT

PREPARED FOR

Attn: Patrick Delaney
GS Mining Company LLC
422 Gregory Street
Central City, Colorado 80427

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JOB DESCRIPTION

Nederland, CO

JOB NUMBER

280-170661-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

Eurofins Denver

Job Notes

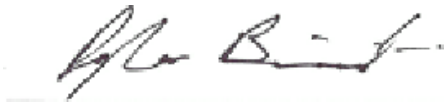
The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the Eurofins TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



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1/6/2023 4:11:52 PM

Authorized for release by
Dylan Bieniulis, Project Manager I
Dylan.Bieniulis@et.eurofinsus.com
(303)736-0138

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Definitions/Glossary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170661-1

Qualifiers

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-170661-1

Laboratory: Eurofins Denver

Narrative

CASE NARRATIVE

Client: GS Mining Company LLC

Project: Nederland, CO

Report Number: 280-170661-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/21/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 5.7 C.

POTENTIALLY DISSOLVED METALS (ICPMS)

Sample OUTFALL-001 (280-170661-1) was analyzed for potentially dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared and analyzed on 01/04/2023.

This report includes Reporting Limits (RLs) for 200.8 Potentially Dissolved Silver that are less than Eurofins TestAmerica Denver's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Sample OUTFALL-001 (280-170661-1) was analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 12/29/2022 and analyzed on 12/30/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170661-1

Client Sample ID: OUTFALL-001 — Lab Sample ID: 280-170661-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Lead	0.55	J	1.0	0.23	ug/L	1		200.8	Total Recoverable
Lead	0.60	J	1.0	0.23	ug/L	1		200.8	Potentially Dissolved
Zinc	8.6	J	10	2.0	ug/L	1		200.8	Potentially Dissolved

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170661-1

Method	Method Description	Protocol	Laboratory
200.8	Metals (ICP/MS)	EPA	EET DEN
200.8	Preparation, Total Recoverable Metals	EPA	EET DEN
Poten_Diss_Met	Filtration for Potentially Dissolved Metals	EPA	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Sample Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170661-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-170661-1	OUTFALL-001	Water	12/20/22 01:00	12/21/22 12:15

Client Sample Results

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170661-1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: OUTFALL-001
Date Collected: 12/20/22 01:00
Date Received: 12/21/22 12:15

Lab Sample ID: 280-170661-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.71	ug/L		12/29/22 08:16	12/30/22 02:26	1
Lead	**0.55**	**J**	1.0	0.23	ug/L		12/29/22 08:16	12/30/22 02:26	1

Method: EPA 200.8 - Metals (ICP/MS) - Potentially Dissolved

Client Sample ID: OUTFALL-001
Date Collected: 12/20/22 01:00
Date Received: 12/21/22 12:15

Lab Sample ID: 280-170661-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.088	ug/L		01/04/23 09:30	01/04/23 22:21	1
Copper	ND		2.0	0.71	ug/L		01/04/23 09:30	01/04/23 22:21	1
Lead	**0.60**	**J**	1.0	0.23	ug/L		01/04/23 09:30	01/04/23 22:21	1
Silver	ND		0.50	0.045	ug/L		01/04/23 09:30	01/04/23 22:21	1
Zinc	**8.6**	**J**	10	2.0	ug/L		01/04/23 09:30	01/04/23 22:21	1

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 280-597890/1-A
Matrix: Water
Analysis Batch: 598136

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 597890

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		2.0	0.71	ug/L		12/29/22 08:16	12/30/22 00:38	1
Lead	ND		1.0	0.23	ug/L		12/29/22 08:16	12/30/22 00:38	1

Lab Sample ID: LCS 280-597890/2-A
Matrix: Water
Analysis Batch: 598136

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 597890

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Copper	40.0	39.7		ug/L		99	90 - 115
Lead	40.0	39.7		ug/L		99	88 - 115

Lab Sample ID: MB 280-597996/1-E
Matrix: Water
Analysis Batch: 598553

Client Sample ID: Method Blank
Prep Type: Potentially Dissolved
Prep Batch: 598360

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.088	ug/L		01/04/23 09:30	01/04/23 22:06	1
Copper	ND		2.0	0.71	ug/L		01/04/23 09:30	01/04/23 22:06	1
Lead	ND		1.0	0.23	ug/L		01/04/23 09:30	01/04/23 22:06	1
Silver	ND		0.50	0.045	ug/L		01/04/23 09:30	01/04/23 22:06	1
Zinc	ND		10	2.0	ug/L		01/04/23 09:30	01/04/23 22:06	1

Lab Sample ID: LCS 280-597996/2-E
Matrix: Water
Analysis Batch: 598553

Client Sample ID: Lab Control Sample
Prep Type: Potentially Dissolved
Prep Batch: 598360

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cadmium	40.0	40.7		ug/L		102	89 - 111
Copper	40.0	40.5		ug/L		101	90 - 115
Lead	40.0	40.9		ug/L		102	88 - 115
Silver	40.0	41.5		ug/L		104	90 - 114
Zinc	40.0	41.8		ug/L		105	88 - 115

QC Association Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170661-1

Metals

Filtration Batch: 597682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170661-1	OUTFALL-001	Potentially Dissolvec	Water	Poten_Diss_Met	

Prep Batch: 597890

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170661-1	OUTFALL-001	Total Recoverable	Water	200.8	
MB 280-597890/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-597890/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Filtration Batch: 597996

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-597996/1-E	Method Blank	Potentially Dissolvec	Water	FILTRATION	
LCS 280-597996/2-E	Lab Control Sample	Potentially Dissolvec	Water	FILTRATION	

Analysis Batch: 598136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170661-1	OUTFALL-001	Total Recoverable	Water	200.8	597890
MB 280-597890/1-A	Method Blank	Total Recoverable	Water	200.8	597890
LCS 280-597890/2-A	Lab Control Sample	Total Recoverable	Water	200.8	597890

Prep Batch: 598360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170661-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	597682
MB 280-597996/1-E	Method Blank	Potentially Dissolvec	Water	200.8	597996
LCS 280-597996/2-E	Lab Control Sample	Potentially Dissolvec	Water	200.8	597996

Analysis Batch: 598553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-170661-1	OUTFALL-001	Potentially Dissolvec	Water	200.8	598360
MB 280-597996/1-E	Method Blank	Potentially Dissolvec	Water	200.8	598360
LCS 280-597996/2-E	Lab Control Sample	Potentially Dissolvec	Water	200.8	598360

Lab Chronicle

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170661-1

Client Sample ID: OUTFALL-001

Date Collected: 12/20/22 01:00
Date Received: 12/21/22 12:15

Lab Sample ID: 280-170661-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Potentially Dissolvec	Filtration	Poten_Diss_Met			250 mL	250 mL	597682	12/23/22 15:30	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	598360	01/04/23 09:30	ADL	EET DEN
Potentially Dissolvec	Analysis	200.8		1			598553	01/04/23 22:21	LRD	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	597890	12/29/22 08:16	LJS	EET DEN
Total Recoverable	Analysis	200.8		1			598136	12/30/22 02:26	LMT	EET DEN

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

Accreditation/Certification Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-170661-1

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-23
Arkansas DEQ	State	19-047-0	05-31-23
California	State	2513	01-08-23
Connecticut	State	PH-0686	09-30-22 *
Florida	NELAP	E87667-57	06-30-23
Georgia	State	4025-011	01-08-23
Illinois	NELAP	2000172019-1	04-30-23
Iowa	State	IA#370	12-01-24
Kansas	NELAP	E-10166	04-30-23
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23
Louisiana (All)	NELAP	30785	06-30-23
Nevada	State	CO000262020-1	07-31-23
New Hampshire	NELAP	205319	04-28-23
New Jersey	NELAP	190002	06-30-23
New York	NELAP	59923	04-01-23
North Dakota	State	R-034	01-08-23
Oklahoma	NELAP	8614	08-31-23
Oregon	NELAP	4025-011	01-09-23
Pennsylvania	NELAP	013	07-31-23
South Carolina	State	72002001	01-08-23
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-20-00065	03-06-23
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23
Virginia	NELAP	10490	06-14-23
Washington	State	C583-19	08-03-23
Wisconsin	State	999615430	08-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: BM	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No:
Client Contact: Patrick Delaney	Phone: 303-506-1618	E-Mail: Dylan.Bieniulis@Eurofinset.com	State of Origin:	Page:
Company: Grand Island Resources	PWSID:			Job #:
Address: 12567 West Cedar Road Suite 250	Due Date Requested:			
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80466	Compliance Project: Δ Yes Δ No			
Phone: 315-414-6986	PO #: Advance Payment Required			
Email: pdelaney@blackfoxmining.com	WO #:			
Project Name: Wastewater Discharge - Nederland, CO	Project #: 28022821			
Site: second half of the month event	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8 - Potentially Dissolved Metals (Second half of the month permit list)	200.8 - Total Recoverable Metals (Second half of the month permit list)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				D	D		
OUTFALL-001	12/20/22	1:00	G	W	N		X	X		

280-170661 Chain of Custody

*Second half of the month potentially dissolved metals permit list = 200.8 (Cd, Cu, Pb, Ag, Zn)

*Second half of the month total recoverable metals permit list = 200.8 (Cu, Pb)

pH =

temp =

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☒ Archive For 1 Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	Brodie Moran	12/21/22 12:15			12/21/2022 1215	ETADEN
2		12:15		Elizabeth	12/21/22 1215	ETA DEN
3						

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
		Temp 5.7 IR#12 CF 0.0

Ver: 01/16/2019

1/6/2023

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-170661-1

Login Number: 170661
List Number: 1
Creator: Scull, Jacob E

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX C SURFACE WATER ANALYTICAL RESULTS

APPENDIX C.1 OCTOBER 2022 SURFACE WATER ANALYTICAL RESULTS

eurofins | Environment Testing

ANALYTICAL REPORT

Eurofins Denver
4955 Yarrow Street
Arvada, CO 80002
Tel: (303)736-0100

Laboratory Job ID: 280-168251-1
Client Project/Site: Wastewater Discharge - Nederland, CO

For:
GS Mining Company LLC
422 Gregory Street
Central City, Colorado 80427

Attn: Patrick Delaney

Authorized for release by:
11/7/2022 3:31:44 PM

Dylan Bieniulis, Project Manager I
(303)736-0138
Dylan.Bieniulis@et.eurofinsus.com

LINKS

Review your project results through my EOL

Have a Question? Ask The Expert

Visit us at: www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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Definitions/Glossary

Client: GS Mining Company LLC
Job ID: 280-168251-1
Project/Site: Wastewater Discharge - Nederland, CO

Qualifiers

Metals

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-168251-1

Laboratory: Eurofins Denver

Narrative

CASE NARRATIVE

Client: GS Mining Company LLC

Project: Wastewater Discharge - Nederland, CO

Report Number: 280-168251-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 10/26/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 5.6 C.

2 extra low mercury kit containers were received for each sample listed on the chain of custody: 2022-02 (280-168251-1), 2022-02 (280-168251-1[MS]), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3). The extra set of containers for low level mercury analysis received for each sample were logged for storage but were not needed for analysis.

TOTAL RECOVERABLE METALS (ICP)

Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for Total Recoverable Metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 10/28/2022 and analyzed on 10/29/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POTENTIALLY DISSOLVED METALS (ICPMS)

Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for potentially dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared and analyzed on 11/02/2022.

This report includes Reporting Limits (RLs) for 200.8 Potentially Dissolved Silver that are less than Eurofins TestAmerica Denver's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

Zinc failed the recovery criteria high for the MS and MSD of sample 2022-02 (280-168251-1) in batch 280-592167. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 10/27/2022 and analyzed on

Job ID: 280-168251-1 (Continued)

Laboratory: Eurofins Denver (Continued)

10/28/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL MERCURY (CVAA)
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for total mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared and analyzed on 11/01/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM - POTENTIALLY DISSOLVED
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for Trivalent Chromium - Potentially Dissolved in accordance with SM3500_CR3_B. The samples were analyzed on 11/03/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM - TOTAL RECOVERABLE
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for Trivalent Chromium - Total Recoverable in accordance with SM3500_CR3_B. The samples were analyzed on 11/03/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SPECIFIC CONDUCTIVITY
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for specific conductivity in accordance with SM20 2510B. The samples were analyzed on 10/31/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 11/01/2022.

For the following samples, the high quantity of solids in liquid matrix required use of less than nominal volume for method analysis: 2022-02 (280-168251-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED HEXAVALENT CHROMIUM
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for dissolved hexavalent chromium in accordance with SM 3500 CR B. The samples were analyzed on 10/26/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for hexavalent chromium in accordance with 3500_CR_B. The samples were analyzed on 10/26/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CORROSIVITY (PH)
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for corrosivity (pH) in accordance with SM20 4500 H+ B. The samples were analyzed on 11/01/2022.

Sample 2022-02 (280-168251-1) did not equilibrate to within 0.05 pH units after three measurements but its duplicate did therefore the sample was not rerun.

Job ID: 280-168251-1 (Continued)

Laboratory: Eurofins Denver (Continued)

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SULFIDE
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for sulfide in accordance with SM20 4500 S2 D. The samples were analyzed on 10/27/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HYDROGEN SULFIDE
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for Hydrogen Sulfide in accordance with SM20 4500 S2 H. The samples were analyzed on 11/02/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LOW LEVEL MERCURY
Samples 2022-02 (280-168251-1), 2022-02-FB (280-168251-2) and 2022-02-DUPLICATE (280-168251-3) were analyzed for Low Level Mercury in accordance with EPA 1631. The samples were prepared on 10/31/2022 and analyzed on 11/03/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-168251-1

Client Sample ID: 2022-02 — Lab Sample ID: 280-168251-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	2.8		0.50	0.20	ng/L	1		1631E	Total/NA
Iron	49	J	100	9.1	ug/L	1		200.7 Rev 4.4	Total Recoverable
Copper	1.4	J	2.0	0.71	ug/L	1		200.8	Total Recoverable
Lead	0.86	J	1.0	0.23	ug/L	1		200.8	Total Recoverable
Zinc	5.2	J	10	2.0	ug/L	1		200.8	Total Recoverable
Copper	1.0	J	2.0	0.71	ug/L	1		200.8	Potentially Dissolved
Lead	0.89	J	1.0	0.23	ug/L	1		200.8	Potentially Dissolved
Manganese	3.5		2.0	0.51	ug/L	1		200.8	Potentially Dissolved
Zinc	14	F1	10	2.0	ug/L	1		200.8	Potentially Dissolved
Specific Conductance	23		2.0	2.0	umhos/cm	1		SM 2510B	Total/NA
Total Suspended Solids	7.2		4.0	1.1	mg/L	1		SM 2540D	Total/NA
pH adj. to 25 deg C	8.1	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Temperature	22.2	HF	1.0	1.0	Degrees C	1		SM 4500 H+ B	Total/NA
Field pH	8.1		1.0	1.0	SU	1		SM4500 S2 H	Total/NA
Field Temperature	22		1.0	1.0	Celsius	1		SM4500 S2 H	Total/NA
Specific Conductance	23		2.0	2.0	umhos/cm	1		SM4500 S2 H	Total/NA

Client Sample ID: 2022-02-FB — Lab Sample ID: 280-168251-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Iron	22	J	100	9.1	ug/L	1		200.7 Rev 4.4	Total Recoverable
Zinc	34		10	2.0	ug/L	1		200.8	Potentially Dissolved
Specific Conductance	4.2		2.0	2.0	umhos/cm	1		SM 2510B	Total/NA
pH adj. to 25 deg C	8.9	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Temperature	22.6	HF	1.0	1.0	Degrees C	1		SM 4500 H+ B	Total/NA
Field pH	8.9		1.0	1.0	SU	1		SM4500 S2 H	Total/NA
Field Temperature	23		1.0	1.0	Celsius	1		SM4500 S2 H	Total/NA
Specific Conductance	4.2		2.0	2.0	umhos/cm	1		SM4500 S2 H	Total/NA

Client Sample ID: 2022-02-DUPLICATE — Lab Sample ID: 280-168251-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	2.7		0.50	0.20	ng/L	1		1631E	Total/NA
Iron	53	J	100	9.1	ug/L	1		200.7 Rev 4.4	Total Recoverable
Copper	0.84	J	2.0	0.71	ug/L	1		200.8	Total Recoverable
Lead	0.83	J	1.0	0.23	ug/L	1		200.8	Total Recoverable
Zinc	5.3	J	10	2.0	ug/L	1		200.8	Total Recoverable
Copper	0.75	J	2.0	0.71	ug/L	1		200.8	Potentially Dissolved
Lead	0.90	J	1.0	0.23	ug/L	1		200.8	Potentially Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Denver

Client Sample ID: 2022-02-DUPLICATE (Continued)
Lab Sample ID: 280-168251-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Manganese	5.3		2.0	0.51	ug/L	1		200.8	Potentially Dissolved
Zinc	16		10	2.0	ug/L	1		200.8	Potentially Dissolved
Specific Conductance	220		2.0	2.0	umhos/cm	1		SM 2510B	Total/NA
Total Suspended Solids	1.6	J	4.0	1.1	mg/L	1		SM 2540D	Total/NA
pH adj. to 25 deg C	8.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Temperature	23.0	HF	1.0	1.0	Degrees C	1		SM 4500 H+ B	Total/NA
Field pH	8.3		1.0	1.0	SU	1		SM4500 S2 H	Total/NA
Field Temperature	23		1.0	1.0	Celsius	1		SM4500 S2 H	Total/NA
Specific Conductance	220		2.0	2.0	umhos/cm	1		SM4500 S2 H	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-168251-1

Method	Method Description	Protocol	Laboratory
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.7 Rev 4.4	Metals (ICP)	EPA	EET DEN
200.8	Metals (ICP/MS)	EPA	EET DEN
245.1	Mercury (CVAA)	EPA	EET DEN
SM 2510B	Conductivity, Specific Conductance	SM	EET DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	EET DEN
SM 3500 CR B	Chromium, Hexavalent	SM	EET DEN
SM 4500 H+ B	pH	SM	EET DEN
SM 4500 S2 D	Sulfide, Total	SM	EET DEN
SM3500 CR B	Chromium, Trivalent	SM	EET DEN
SM4500 S2 H	Unionized Hydrogen Sulfide	SM	EET DEN
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.7	Preparation, Total Recoverable Metals	EPA	EET DEN
200.8	Preparation, Total Recoverable Metals	EPA	EET DEN
245.1	Preparation, Mercury	EPA	EET DEN
FILTRATION	Sample Filtration	None	EET DEN
Poten_Diss_Met	Filtration for Potentially Dissolved Metals	EPA	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: GS Mining Company LLC
Job ID: 280-168251-1
Project/Site: Wastewater Discharge - Nederland, CO

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-168251-1	2022-02	Water	10/26/22 13:00	10/26/22 15:42
280-168251-2	2022-02-FB	Water	10/26/22 13:10	10/26/22 15:42
280-168251-3	2022-02-DUPLICATE	Water	10/26/22 13:15	10/26/22 15:42

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Client Sample ID: 2022-02
Date Collected: 10/26/22 13:00
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**2.8**		0.50	0.20	ng/L		10/31/22 15:00	11/03/22 10:22	1

Client Sample ID: 2022-02-FB
Date Collected: 10/26/22 13:10
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.20	ng/L		10/31/22 15:00	11/03/22 10:37	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 10/26/22 13:15
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**2.7**		0.50	0.20	ng/L		10/31/22 15:00	11/03/22 10:45	1

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Client Sample ID: 2022-02
Date Collected: 10/26/22 13:00
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**49**	**J**	100	9.1	ug/L		10/28/22 09:29	10/29/22 03:01	1

Client Sample ID: 2022-02-FB
Date Collected: 10/26/22 13:10
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**22**	**J**	100	9.1	ug/L		10/28/22 09:29	10/29/22 03:14	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 10/26/22 13:15
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**53**	**J**	100	9.1	ug/L		10/28/22 09:29	10/29/22 03:18	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: 2022-02
Date Collected: 10/26/22 13:00
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		10/27/22 15:15	10/28/22 09:31	1
Cadmium	ND		1.0	0.088	ug/L		10/27/22 15:15	10/28/22 09:31	1
Chromium	ND		3.0	0.88	ug/L		10/27/22 15:15	10/28/22 09:31	1
Copper	**1.4**	**J**	2.0	0.71	ug/L		10/27/22 15:15	10/28/22 09:31	1
Lead	**0.86**	**J**	1.0	0.23	ug/L		10/27/22 15:15	10/28/22 09:31	1
Zinc	**5.2**	**J**	10	2.0	ug/L		10/27/22 15:15	10/28/22 09:31	1

Client Sample ID: 2022-02-FB
Date Collected: 10/26/22 13:10
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		10/27/22 15:15	10/28/22 09:40	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Client Sample ID: 2022-02-FB
Date Collected: 10/26/22 13:10
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.088	ug/L		10/27/22 15:15	10/28/22 09:40	1
Chromium	ND		3.0	0.88	ug/L		10/27/22 15:15	10/28/22 09:40	1
Copper	ND		2.0	0.71	ug/L		10/27/22 15:15	10/28/22 09:40	1
Lead	ND		1.0	0.23	ug/L		10/27/22 15:15	10/28/22 09:40	1
Zinc	ND		10	2.0	ug/L		10/27/22 15:15	10/28/22 09:40	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 10/26/22 13:15
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		10/27/22 15:15	10/28/22 09:42	1
Cadmium	ND		1.0	0.088	ug/L		10/27/22 15:15	10/28/22 09:42	1
Chromium	ND		3.0	0.88	ug/L		10/27/22 15:15	10/28/22 09:42	1
Copper	**0.84**	**J**	2.0	0.71	ug/L		10/27/22 15:15	10/28/22 09:42	1
Lead	**0.83**	**J**	1.0	0.23	ug/L		10/27/22 15:15	10/28/22 09:42	1
Zinc	**5.3**	**J**	10	2.0	ug/L		10/27/22 15:15	10/28/22 09:42	1

Method: EPA 200.8 - Metals (ICP/MS) - Potentially Dissolved

Client Sample ID: 2022-02
Date Collected: 10/26/22 13:00
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/02/22 08:33	11/02/22 15:17	1
Cadmium	ND		1.0	0.088	ug/L		11/02/22 08:33	11/02/22 15:17	1
Chromium	ND		3.0	0.88	ug/L		11/02/22 08:33	11/02/22 15:17	1
Copper	**1.0**	**J**	2.0	0.71	ug/L		11/02/22 08:33	11/02/22 15:17	1
Lead	**0.89**	**J**	1.0	0.23	ug/L		11/02/22 08:33	11/02/22 15:17	1
Manganese	**3.5**		2.0	0.51	ug/L		11/02/22 08:33	11/02/22 15:17	1
Nickel	ND		2.0	0.28	ug/L		11/02/22 08:33	11/02/22 15:17	1
Selenium	ND		5.0	1.0	ug/L		11/02/22 08:33	11/02/22 15:17	1
Silver	ND		0.50	0.045	ug/L		11/02/22 08:33	11/02/22 15:17	1
Zinc	**14**	**F1**	10	2.0	ug/L		11/02/22 08:33	11/02/22 15:17	1

Client Sample ID: 2022-02-FB
Date Collected: 10/26/22 13:10
Date Received: 10/26/22 15:42
Lab Sample ID: 280-168251-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/02/22 08:33	11/02/22 15:23	1
Cadmium	ND		1.0	0.088	ug/L		11/02/22 08:33	11/02/22 15:23	1
Chromium	ND		3.0	0.88	ug/L		11/02/22 08:33	11/02/22 15:23	1
Copper	ND		2.0	0.71	ug/L		11/02/22 08:33	11/02/22 15:23	1
Lead	ND		1.0	0.23	ug/L		11/02/22 08:33	11/02/22 15:23	1
Manganese	ND		2.0	0.51	ug/L		11/02/22 08:33	11/02/22 15:23	1
Nickel	ND		2.0	0.28	ug/L		11/02/22 08:33	11/02/22 15:23	1
Selenium	ND		5.0	1.0	ug/L		11/02/22 08:33	11/02/22 15:23	1
Silver	ND		0.50	0.045	ug/L		11/02/22 08:33	11/02/22 15:23	1
Zinc	**34**		10	2.0	ug/L		11/02/22 08:33	11/02/22 15:23	1

Method: EPA 200.8 - Metals (ICP/MS) - Potentially Dissolved

Client Sample ID: 2022-02-DUPLICATE — **Lab Sample ID: 280-168251-3**
Date Collected: 10/26/22 13:15 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/02/22 08:33	11/02/22 15:25	1
Cadmium	ND		1.0	0.088	ug/L		11/02/22 08:33	11/02/22 15:25	1
Chromium	ND		3.0	0.88	ug/L		11/02/22 08:33	11/02/22 15:25	1
Copper	**0.75**	**J**	2.0	0.71	ug/L		11/02/22 08:33	11/02/22 15:25	1
Lead	**0.90**	**J**	1.0	0.23	ug/L		11/02/22 08:33	11/02/22 15:25	1
Manganese	**5.3**		2.0	0.51	ug/L		11/02/22 08:33	11/02/22 15:25	1
Nickel	ND		2.0	0.28	ug/L		11/02/22 08:33	11/02/22 15:25	1
Selenium	ND		5.0	1.0	ug/L		11/02/22 08:33	11/02/22 15:25	1
Silver	ND		0.50	0.045	ug/L		11/02/22 08:33	11/02/22 15:25	1
Zinc	**16**		10	2.0	ug/L		11/02/22 08:33	11/02/22 15:25	1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: 2022-02 — **Lab Sample ID: 280-168251-1**
Date Collected: 10/26/22 13:00 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		11/01/22 09:06	11/01/22 13:05	1

Client Sample ID: 2022-02-FB — **Lab Sample ID: 280-168251-2**
Date Collected: 10/26/22 13:10 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		11/01/22 09:06	11/01/22 13:23	1

Client Sample ID: 2022-02-DUPLICATE — **Lab Sample ID: 280-168251-3**
Date Collected: 10/26/22 13:15 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		11/01/22 09:06	11/01/22 13:26	1

General Chemistry

Client Sample ID: 2022-02 — **Lab Sample ID: 280-168251-1**
Date Collected: 10/26/22 13:00 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (SM 2510B)	**23**		2.0	2.0	umhos/cm			10/31/22 11:42	1
Total Suspended Solids (SM 2540D)	**7.2**		4.0	1.1	mg/L			11/01/22 13:16	1
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			10/26/22 18:06	1
pH adj. to 25 deg C (SM 4500 H+ B	**8.1**	**HF**	0.1	0.1	SU			11/01/22 16:02	1
Temperature (SM 4500 H+ B)	**22.2**	**HF**	1.0	1.0	Degrees C			11/01/22 16:02	1
Sulfide (SM 4500 S2 D)	ND		0.050	0.022	mg/L			10/27/22 12:02	1
Un-ionized Hydrogen Sulfide (SM4500 S2 H)	ND		1.0	1.0	mg/L			11/02/22 16:30	1
Field pH (SM4500 S2 H)	**8.1**		1.0	1.0	SU			11/02/22 16:30	1
Field Temperature (SM4500 S2 H)	**22**		1.0	1.0	Celsius			11/02/22 16:30	1
Specific Conductance (SM4500 S2 H)	**23**		2.0	2.0	umhos/cm			11/02/22 16:30	1
Sulfide (SM4500 S2 H)	ND		4.0	4.0	mg/L			11/02/22 16:30	1

General Chemistry

Client Sample ID: 2022-02-FB
Date Collected: 10/26/22 13:10
Date Received: 10/26/22 15:42

Lab Sample ID: 280-168251-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (SM 2510B)	**4.2**		2.0	2.0	umhos/cm			10/31/22 11:42	1
Total Suspended Solids (SM 2540D)	ND		4.0	1.1	mg/L			11/01/22 13:16	1
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			10/26/22 18:08	1
pH adj. to 25 deg C (SM 4500 H+ B	**8.9**	**HF**	0.1	0.1	SU			11/01/22 16:09	1
Temperature (SM 4500 H+ B)	**22.6**	**HF**	1.0	1.0	Degrees C			11/01/22 16:09	1
Sulfide (SM 4500 S2 D)	ND		0.050	0.022	mg/L			10/27/22 12:04	1
Un-ionized Hydrogen Sulfide (SM4500 S2 H)	ND		1.0	1.0	mg/L			11/02/22 16:30	1
Field pH (SM4500 S2 H)	**8.9**		1.0	1.0	SU			11/02/22 16:30	1
Field Temperature (SM4500 S2 H)	**23**		1.0	1.0	Celsius			11/02/22 16:30	1
Specific Conductance (SM4500 S2 H)	**4.2**		2.0	2.0	umhos/cm			11/02/22 16:30	1
Sulfide (SM4500 S2 H)	ND		4.0	4.0	mg/L			11/02/22 16:30	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 10/26/22 13:15
Date Received: 10/26/22 15:42

Lab Sample ID: 280-168251-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (SM 2510B)	**220**		2.0	2.0	umhos/cm			10/31/22 11:42	1
Total Suspended Solids (SM 2540D)	**1.6**	**J**	4.0	1.1	mg/L			11/01/22 13:16	1
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			10/26/22 18:08	1
pH adj. to 25 deg C (SM 4500 H+ B	**8.3**	**HF**	0.1	0.1	SU			11/01/22 16:13	1
Temperature (SM 4500 H+ B)	**23.0**	**HF**	1.0	1.0	Degrees C			11/01/22 16:13	1
Sulfide (SM 4500 S2 D)	ND		0.050	0.022	mg/L			10/27/22 12:04	1
Un-ionized Hydrogen Sulfide (SM4500 S2 H)	ND		1.0	1.0	mg/L			11/02/22 16:30	1
Field pH (SM4500 S2 H)	**8.3**		1.0	1.0	SU			11/02/22 16:30	1
Field Temperature (SM4500 S2 H)	**23**		1.0	1.0	Celsius			11/02/22 16:30	1
Specific Conductance (SM4500 S2 H)	**220**		2.0	2.0	umhos/cm			11/02/22 16:30	1
Sulfide (SM4500 S2 H)	ND		4.0	4.0	mg/L			11/02/22 16:30	1

General Chemistry - Total Recoverable

Client Sample ID: 2022-02
Date Collected: 10/26/22 13:00
Date Received: 10/26/22 15:42

Lab Sample ID: 280-168251-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (SM3500 CR B)	ND	H	0.020	0.020	mg/L			11/03/22 14:25	1

Client Sample ID: 2022-02-FB
Date Collected: 10/26/22 13:10
Date Received: 10/26/22 15:42

Lab Sample ID: 280-168251-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (SM3500 CR B)	ND	H	0.020	0.020	mg/L			11/03/22 14:25	1

General Chemistry - Total Recoverable

Client Sample ID: 2022-02-DUPLICATE — **Lab Sample ID: 280-168251-3**
Date Collected: 10/26/22 13:15 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (SM3500 CR B)	ND	H	0.020	0.020	mg/L			11/03/22 14:25	1

General Chemistry - Dissolved

Client Sample ID: 2022-02 — **Lab Sample ID: 280-168251-1**
Date Collected: 10/26/22 13:00 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			10/26/22 18:11	1

Client Sample ID: 2022-02-FB — **Lab Sample ID: 280-168251-2**
Date Collected: 10/26/22 13:10 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			10/26/22 18:13	1

Client Sample ID: 2022-02-DUPLICATE — **Lab Sample ID: 280-168251-3**
Date Collected: 10/26/22 13:15 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			10/26/22 18:13	1

General Chemistry - Potentially Dissolved

Client Sample ID: 2022-02 — **Lab Sample ID: 280-168251-1**
Date Collected: 10/26/22 13:00 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (dissolved) (SM3500 CR B)	ND		0.020	0.020	mg/L			11/03/22 14:26	1

Client Sample ID: 2022-02-FB — **Lab Sample ID: 280-168251-2**
Date Collected: 10/26/22 13:10 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (dissolved) (SM3500 CR B)	ND		0.020	0.020	mg/L			11/03/22 14:26	1

Client Sample ID: 2022-02-DUPLICATE — **Lab Sample ID: 280-168251-3**
Date Collected: 10/26/22 13:15 — **Matrix: Water**
Date Received: 10/26/22 15:42

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (dissolved) (SM3500 CR B)	ND		0.020	0.020	mg/L			11/03/22 14:26	1

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-599016/3-A
Matrix: Water
Analysis Batch: 599102

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 599016

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.20	ng/L		11/02/22 16:00	11/03/22 09:59	1

Lab Sample ID: LCS 400-599016/4-A
Matrix: Water
Analysis Batch: 599102

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 599016

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.29		ng/L		106	79 - 121

Lab Sample ID: LCSD 400-599016/5-A
Matrix: Water
Analysis Batch: 599102

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 599016

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	5.42		ng/L		108	79 - 121	2	20

Lab Sample ID: 280-168251-1 MS
Matrix: Water
Analysis Batch: 599102

Client Sample ID: 2022-02
Prep Type: Total/NA
Prep Batch: 599016

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	2.8		5.00	8.09		ng/L		106	71 - 125

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 280-591484/1-A
Matrix: Water
Analysis Batch: 591726

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 591484

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		100	9.1	ug/L		10/28/22 09:29	10/29/22 00:52	1

Lab Sample ID: LCS 280-591484/2-A
Matrix: Water
Analysis Batch: 591726

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 591484

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	10000	10200		ug/L		102	85 - 115

Lab Sample ID: 280-168251-1 MS
Matrix: Water
Analysis Batch: 591726

Client Sample ID: 2022-02
Prep Type: Total Recoverable
Prep Batch: 591484

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	49	J	10000	10200		ug/L		101	70 - 130

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 280-168251-1 MSD
Matrix: Water
Analysis Batch: 591726

Client Sample ID: 2022-02
Prep Type: Total Recoverable
Prep Batch: 591484

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	49	J	10000	10200		ug/L		102	70 - 130	1	20

Lab Sample ID: 280-168251-1 MSD
Matrix: Water
Analysis Batch: 591903

Client Sample ID: 2022-02
Prep Type: Total Recoverable
Prep Batch: 591484

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	47	J	10000	10200		ug/L		102	70 - 130	1	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 280-591408/1-A
Matrix: Water
Analysis Batch: 591631

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 591408

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		10/27/22 15:15	10/28/22 09:18	1
Cadmium	ND		1.0	0.088	ug/L		10/27/22 15:15	10/28/22 09:18	1
Chromium	ND		3.0	0.88	ug/L		10/27/22 15:15	10/28/22 09:18	1
Copper	ND		2.0	0.71	ug/L		10/27/22 15:15	10/28/22 09:18	1
Lead	ND		1.0	0.23	ug/L		10/27/22 15:15	10/28/22 09:18	1
Zinc	ND		10	2.0	ug/L		10/27/22 15:15	10/28/22 09:18	1

Lab Sample ID: LCS 280-591408/2-A
Matrix: Water
Analysis Batch: 591631

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 591408

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	40.5		ug/L		101	89 - 111
Cadmium	40.0	39.7		ug/L		99	89 - 111
Chromium	40.0	39.7		ug/L		99	86 - 115
Copper	40.0	39.6		ug/L		99	90 - 115
Lead	40.0	39.7		ug/L		99	88 - 115
Zinc	40.0	38.8		ug/L		97	88 - 115

Lab Sample ID: 280-168251-1 MS
Matrix: Water
Analysis Batch: 591631

Client Sample ID: 2022-02
Prep Type: Total Recoverable
Prep Batch: 591408

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		40.0	39.2		ug/L		98	79 - 120
Cadmium	ND		40.0	38.3		ug/L		96	89 - 111
Chromium	ND		40.0	38.0		ug/L		95	86 - 115
Copper	1.4	J	40.0	38.8		ug/L		93	90 - 115
Lead	0.86	J	40.0	41.2		ug/L		101	88 - 115
Zinc	5.2	J	40.0	42.0		ug/L		92	88 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-168251-1 MSD
Matrix: Water
Analysis Batch: 591631

Client Sample ID: 2022-02
Prep Type: Total Recoverable
Prep Batch: 591408

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		40.0	39.5		ug/L		99	79 - 120	1	20
Cadmium	ND		40.0	40.4		ug/L		101	89 - 111	5	20
Chromium	ND		40.0	39.0		ug/L		97	86 - 115	2	20
Copper	1.4	J	40.0	40.7		ug/L		98	90 - 115	5	20
Lead	0.86	J	40.0	40.5		ug/L		99	88 - 115	2	20
Zinc	5.2	J	40.0	44.1		ug/L		97	88 - 115	5	20

Lab Sample ID: MB 280-591717/1-B
Matrix: Water
Analysis Batch: 592167

Client Sample ID: Method Blank
Prep Type: Potentially Dissolved
Prep Batch: 591813

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/02/22 08:33	11/02/22 15:11	1
Cadmium	ND		1.0	0.088	ug/L		11/02/22 08:33	11/02/22 15:11	1
Chromium	ND		3.0	0.88	ug/L		11/02/22 08:33	11/02/22 15:11	1
Copper	ND		2.0	0.71	ug/L		11/02/22 08:33	11/02/22 15:11	1
Lead	ND		1.0	0.23	ug/L		11/02/22 08:33	11/02/22 15:11	1
Manganese	ND		2.0	0.51	ug/L		11/02/22 08:33	11/02/22 15:11	1
Nickel	ND		2.0	0.28	ug/L		11/02/22 08:33	11/02/22 15:11	1
Selenium	ND		5.0	1.0	ug/L		11/02/22 08:33	11/02/22 15:11	1
Silver	ND		0.50	0.045	ug/L		11/02/22 08:33	11/02/22 15:11	1
Zinc	ND		10	2.0	ug/L		11/02/22 08:33	11/02/22 15:11	1

Lab Sample ID: LCS 280-591717/2-B
Matrix: Water
Analysis Batch: 592167

Client Sample ID: Lab Control Sample
Prep Type: Potentially Dissolved
Prep Batch: 591813

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	39.3		ug/L		98	89 - 111
Cadmium	40.0	41.0		ug/L		103	89 - 111
Chromium	40.0	39.5		ug/L		99	86 - 115
Copper	40.0	39.6		ug/L		99	90 - 115
Lead	40.0	39.8		ug/L		100	88 - 115
Manganese	40.0	40.0		ug/L		100	87 - 115
Nickel	40.0	40.5		ug/L		101	86 - 115
Selenium	40.0	41.0		ug/L		102	85 - 114
Silver	40.0	40.3		ug/L		101	90 - 114
Zinc	40.0	41.5		ug/L		104	88 - 115

Lab Sample ID: 280-168251-1 MS
Matrix: Water
Analysis Batch: 592167

Client Sample ID: 2022-02
Prep Type: Potentially Dissolved
Prep Batch: 591813

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		40.0	40.4		ug/L		101	79 - 120
Cadmium	ND		40.0	42.0		ug/L		105	89 - 111
Chromium	ND		40.0	39.7		ug/L		99	86 - 115
Copper	1.0	J	40.0	40.2		ug/L		98	90 - 115
Lead	0.89	J	40.0	41.1		ug/L		101	88 - 115

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-168251-1 MS
Matrix: Water
Analysis Batch: 592167

Client Sample ID: 2022-02
Prep Type: Potentially Dissolved
Prep Batch: 591813

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Manganese	3.5		40.0	42.9		ug/L		98	87 - 115
Nickel	ND		40.0	39.6		ug/L		99	86 - 115
Selenium	ND		40.0	38.8		ug/L		97	85 - 114
Silver	ND		40.0	40.7		ug/L		102	70 - 130
Zinc	14	F1	40.0	63.4	F1	ug/L		124	88 - 115

Lab Sample ID: 280-168251-1 MSD
Matrix: Water
Analysis Batch: 592167

Client Sample ID: 2022-02
Prep Type: Potentially Dissolved
Prep Batch: 591813

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		40.0	39.9		ug/L		100	79 - 120	1	20
Cadmium	ND		40.0	39.5		ug/L		99	89 - 111	6	20
Chromium	ND		40.0	39.3		ug/L		98	86 - 115	1	20
Copper	1.0	J	40.0	39.4		ug/L		96	90 - 115	2	20
Lead	0.89	J	40.0	40.9		ug/L		100	88 - 115	1	20
Manganese	3.5		40.0	41.5		ug/L		95	87 - 115	3	20
Nickel	ND		40.0	39.1		ug/L		98	86 - 115	1	20
Selenium	ND		40.0	39.0		ug/L		97	85 - 114	0	20
Silver	ND		40.0	39.7		ug/L		99	70 - 130	2	20
Zinc	14	F1	40.0	61.6	F1	ug/L		120	88 - 115	3	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 280-591895/1-A
Matrix: Water
Analysis Batch: 592071

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 591895

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		11/01/22 09:06	11/01/22 12:54	1

Lab Sample ID: LCS 280-591895/2-A
Matrix: Water
Analysis Batch: 592071

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 591895

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.99		ug/L		100	90 - 110

Lab Sample ID: LCSD 280-591895/3-A
Matrix: Water
Analysis Batch: 592071

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 591895

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	5.00		ug/L		100	90 - 110	0	10

Method: 245.1 - Mercury (CVAA) (Continued)

Lab Sample ID: 280-168251-1 MS
Matrix: Water
Analysis Batch: 592071

Client Sample ID: 2022-02
Prep Type: Total/NA
Prep Batch: 591895

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		5.00	4.93		ug/L		99	80 - 120

Lab Sample ID: 280-168251-1 MSD
Matrix: Water
Analysis Batch: 592071

Client Sample ID: 2022-02
Prep Type: Total/NA
Prep Batch: 591895

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		5.00	4.95		ug/L		99	80 - 120	0	10

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 280-591808/5
Matrix: Water
Analysis Batch: 591808

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		2.0	2.0	umhos/cm			10/31/22 11:42	1

Lab Sample ID: LCS 280-591808/4
Matrix: Water
Analysis Batch: 591808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1410	1400		umhos/cm		99	90 - 110

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-591990/2
Matrix: Water
Analysis Batch: 591990

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			11/01/22 13:16	1

Lab Sample ID: LCS 280-591990/1
Matrix: Water
Analysis Batch: 591990

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	503	442		mg/L		88	79 - 114

Lab Sample ID: MB 280-592122/3
Matrix: Water
Analysis Batch: 592122

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			11/02/22 12:03	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 280-592122/1
Matrix: Water
Analysis Batch: 592122

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Total Suspended Solids			503	474		mg/L		94	79 - 114		

Lab Sample ID: LCSD 280-592122/2
Matrix: Water
Analysis Batch: 592122

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Total Suspended Solids			500	422		mg/L		84	79 - 114	12	20

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: MB 280-591394/10
Matrix: Water
Analysis Batch: 591394

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.020	0.0040	mg/L			10/26/22 18:05	1

Lab Sample ID: LCS 280-591394/8
Matrix: Water
Analysis Batch: 591394

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent			0.100	0.0980		mg/L		98	91 - 112		

Lab Sample ID: LCSD 280-591394/9
Matrix: Water
Analysis Batch: 591394

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent			0.100	0.0990		mg/L		99	91 - 112	1	20

Lab Sample ID: 280-168251-1 MS
Matrix: Water
Analysis Batch: 591394

Client Sample ID: 2022-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent	ND		0.100	0.0991		mg/L		99	91 - 112		

Lab Sample ID: 280-168251-1 MSD
Matrix: Water
Analysis Batch: 591394

Client Sample ID: 2022-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	ND		0.100	0.0993		mg/L		99	91 - 112	0	20

Method: SM 3500 CR B - Chromium, Hexavalent (Continued)

Lab Sample ID: 280-168251-1 DU
Matrix: Water
Analysis Batch: 591394

Client Sample ID: 2022-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	ND			0.00629	J	mg/L				NC	20

Lab Sample ID: MB 280-591390/3-A
Matrix: Water
Analysis Batch: 591394

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.020	0.0040	mg/L			10/26/22 18:10	1

Lab Sample ID: LCS 280-591390/1-A
Matrix: Water
Analysis Batch: 591394

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent			0.100	0.0976		mg/L		98	91 - 112		

Lab Sample ID: LCSD 280-591390/2-A
Matrix: Water
Analysis Batch: 591394

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent			0.100	0.0987		mg/L		99	91 - 112	1	20

Lab Sample ID: 280-168251-1 MS
Matrix: Water
Analysis Batch: 591394

Client Sample ID: 2022-02
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent	ND		0.100	0.0970		mg/L		97	91 - 112		

Lab Sample ID: 280-168251-1 MSD
Matrix: Water
Analysis Batch: 591394

Client Sample ID: 2022-02
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	ND		0.100	0.0985		mg/L		98	91 - 112	1	20

Lab Sample ID: 280-168251-1 DU
Matrix: Water
Analysis Batch: 591394

Client Sample ID: 2022-02
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	ND			ND		mg/L				NC	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 280-592061/73
Matrix: Water
Analysis Batch: 592061

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
pH adj. to 25 deg C			7.00	7.1		SU		101	99 - 101		

Lab Sample ID: 280-168251-1 DU
Matrix: Water
Analysis Batch: 592061

Client Sample ID: 2022-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH adj. to 25 deg C	8.1	HF		8.2		SU				2	5
Temperature	22.2	HF		22.3		Degrees C				0.5	10

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 280-591500/11
Matrix: Water
Analysis Batch: 591500

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.050	0.022	mg/L			10/27/22 11:56	1

Lab Sample ID: LCS 280-591500/9
Matrix: Water
Analysis Batch: 591500

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide			0.499	0.528		mg/L		106	81 - 122		

Lab Sample ID: LCSD 280-591500/10
Matrix: Water
Analysis Batch: 591500

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide			0.499	0.531		mg/L		106	81 - 122	1	10

Lab Sample ID: 280-168251-1 MS
Matrix: Water
Analysis Batch: 591500

Client Sample ID: 2022-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Sulfide	ND		0.499	0.473		mg/L		95	81 - 122		

Lab Sample ID: 280-168251-1 MSD
Matrix: Water
Analysis Batch: 591500

Client Sample ID: 2022-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	ND		0.499	0.479		mg/L		96	81 - 122	1	10

Client: GS Mining Company LLC
Job ID: 280-168251-1
Project/Site: Wastewater Discharge - Nederland, CO

Method: SM4500 S2 H - Unionized Hydrogen Sulfide

Lab Sample ID: MB 280-592172/1
Matrix: Water
Analysis Batch: 592172

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Un-ionized Hydrogen Sulfide	ND		1.0	1.0	mg/L			11/02/22 16:30	1
Field pH	ND		1.0	1.0	SU			11/02/22 16:30	1
Field Temperature	ND		1.0	1.0	Celsius			11/02/22 16:30	1
Specific Conductance	ND		2.0	2.0	umhos/cm			11/02/22 16:30	1
Sulfide	ND		4.0	4.0	mg/L			11/02/22 16:30	1

Metals

Prep Batch: 591408

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total Recoverable	Water	200.8	
280-168251-2	2022-02-FB	Total Recoverable	Water	200.8	
280-168251-3	2022-02-DUPLICATE	Total Recoverable	Water	200.8	
MB 280-591408/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-591408/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
280-168251-1 MS	2022-02	Total Recoverable	Water	200.8	
280-168251-1 MSD	2022-02	Total Recoverable	Water	200.8	

Prep Batch: 591484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total Recoverable	Water	200.7	
280-168251-2	2022-02-FB	Total Recoverable	Water	200.7	
280-168251-3	2022-02-DUPLICATE	Total Recoverable	Water	200.7	
MB 280-591484/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 280-591484/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
280-168251-1 MS	2022-02	Total Recoverable	Water	200.7	
280-168251-1 MSD	2022-02	Total Recoverable	Water	200.7	

Analysis Batch: 591631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total Recoverable	Water	200.8	591408
280-168251-2	2022-02-FB	Total Recoverable	Water	200.8	591408
280-168251-3	2022-02-DUPLICATE	Total Recoverable	Water	200.8	591408
MB 280-591408/1-A	Method Blank	Total Recoverable	Water	200.8	591408
LCS 280-591408/2-A	Lab Control Sample	Total Recoverable	Water	200.8	591408
280-168251-1 MS	2022-02	Total Recoverable	Water	200.8	591408
280-168251-1 MSD	2022-02	Total Recoverable	Water	200.8	591408

Filtration Batch: 591717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Potentially Dissolvec	Water	Poten_Diss_Met	
280-168251-2	2022-02-FB	Potentially Dissolvec	Water	Poten_Diss_Met	
280-168251-3	2022-02-DUPLICATE	Potentially Dissolvec	Water	Poten_Diss_Met	
MB 280-591717/1-B	Method Blank	Potentially Dissolvec	Water	Poten_Diss_Met	
LCS 280-591717/2-B	Lab Control Sample	Potentially Dissolvec	Water	Poten_Diss_Met	
280-168251-1 MS	2022-02	Potentially Dissolvec	Water	Poten_Diss_Met	
280-168251-1 MSD	2022-02	Potentially Dissolvec	Water	Poten_Diss_Met	

Analysis Batch: 591726

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total Recoverable	Water	200.7 Rev 4.4	591484
280-168251-2	2022-02-FB	Total Recoverable	Water	200.7 Rev 4.4	591484
280-168251-3	2022-02-DUPLICATE	Total Recoverable	Water	200.7 Rev 4.4	591484
MB 280-591484/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	591484
LCS 280-591484/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	591484
280-168251-1 MS	2022-02	Total Recoverable	Water	200.7 Rev 4.4	591484
280-168251-1 MSD	2022-02	Total Recoverable	Water	200.7 Rev 4.4	591484

Prep Batch: 591813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Potentially Dissolvec	Water	200.8	591717

Metals (Continued)

Prep Batch: 591813 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-2	2022-02-FB	Potentially Dissolvec	Water	200.8	591717
280-168251-3	2022-02-DUPLICATE	Potentially Dissolvec	Water	200.8	591717
MB 280-591717/1-B	Method Blank	Potentially Dissolvec	Water	200.8	591717
LCS 280-591717/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	591717
280-168251-1 MS	2022-02	Potentially Dissolvec	Water	200.8	591717
280-168251-1 MSD	2022-02	Potentially Dissolvec	Water	200.8	591717

Prep Batch: 591895

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total/NA	Water	245.1	
280-168251-2	2022-02-FB	Total/NA	Water	245.1	
280-168251-3	2022-02-DUPLICATE	Total/NA	Water	245.1	
MB 280-591895/1-A	Method Blank	Total/NA	Water	245.1	
LCS 280-591895/2-A	Lab Control Sample	Total/NA	Water	245.1	
LCSD 280-591895/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	
280-168251-1 MS	2022-02	Total/NA	Water	245.1	
280-168251-1 MSD	2022-02	Total/NA	Water	245.1	

Analysis Batch: 591903

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1 MSD	2022-02	Total Recoverable	Water	200.7 Rev 4.4	591484

Analysis Batch: 592071

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total/NA	Water	245.1	591895
280-168251-2	2022-02-FB	Total/NA	Water	245.1	591895
280-168251-3	2022-02-DUPLICATE	Total/NA	Water	245.1	591895
MB 280-591895/1-A	Method Blank	Total/NA	Water	245.1	591895
LCS 280-591895/2-A	Lab Control Sample	Total/NA	Water	245.1	591895
LCSD 280-591895/3-A	Lab Control Sample Dup	Total/NA	Water	245.1	591895
280-168251-1 MS	2022-02	Total/NA	Water	245.1	591895
280-168251-1 MSD	2022-02	Total/NA	Water	245.1	591895

Analysis Batch: 592167

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Potentially Dissolvec	Water	200.8	591813
280-168251-2	2022-02-FB	Potentially Dissolvec	Water	200.8	591813
280-168251-3	2022-02-DUPLICATE	Potentially Dissolvec	Water	200.8	591813
MB 280-591717/1-B	Method Blank	Potentially Dissolvec	Water	200.8	591813
LCS 280-591717/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	591813
280-168251-1 MS	2022-02	Potentially Dissolvec	Water	200.8	591813
280-168251-1 MSD	2022-02	Potentially Dissolvec	Water	200.8	591813

Prep Batch: 599016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total/NA	Water	1631E	
280-168251-2	2022-02-FB	Total/NA	Water	1631E	
280-168251-3	2022-02-DUPLICATE	Total/NA	Water	1631E	
MB 400-599016/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-599016/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-599016/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	

Metals (Continued)

Prep Batch: 599016 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1 MS	2022-02	Total/NA	Water	1631E	

Analysis Batch: 599102

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total/NA	Water	1631E	599016
280-168251-2	2022-02-FB	Total/NA	Water	1631E	599016
280-168251-3	2022-02-DUPLICATE	Total/NA	Water	1631E	599016
MB 400-599016/3-A	Method Blank	Total/NA	Water	1631E	599016
LCS 400-599016/4-A	Lab Control Sample	Total/NA	Water	1631E	599016
LCSD 400-599016/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	599016
280-168251-1 MS	2022-02	Total/NA	Water	1631E	599016

General Chemistry

Filtration Batch: 591390

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Dissolved	Water	FILTRATION	
280-168251-2	2022-02-FB	Dissolved	Water	FILTRATION	
280-168251-3	2022-02-DUPLICATE	Dissolved	Water	FILTRATION	
MB 280-591390/3-A	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-591390/1-A	Lab Control Sample	Dissolved	Water	FILTRATION	
LCSD 280-591390/2-A	Lab Control Sample Dup	Dissolved	Water	FILTRATION	
280-168251-1 MS	2022-02	Dissolved	Water	FILTRATION	
280-168251-1 MSD	2022-02	Dissolved	Water	FILTRATION	
280-168251-1 DU	2022-02	Dissolved	Water	FILTRATION	

Analysis Batch: 591394

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Dissolved	Water	SM 3500 CR B	591390
280-168251-1	2022-02	Total/NA	Water	SM 3500 CR B	
280-168251-2	2022-02-FB	Dissolved	Water	SM 3500 CR B	591390
280-168251-2	2022-02-FB	Total/NA	Water	SM 3500 CR B	
280-168251-3	2022-02-DUPLICATE	Dissolved	Water	SM 3500 CR B	591390
280-168251-3	2022-02-DUPLICATE	Total/NA	Water	SM 3500 CR B	
MB 280-591390/3-A	Method Blank	Dissolved	Water	SM 3500 CR B	591390
MB 280-591394/10	Method Blank	Total/NA	Water	SM 3500 CR B	
LCS 280-591390/1-A	Lab Control Sample	Dissolved	Water	SM 3500 CR B	591390
LCS 280-591394/8	Lab Control Sample	Total/NA	Water	SM 3500 CR B	
LCSD 280-591390/2-A	Lab Control Sample Dup	Dissolved	Water	SM 3500 CR B	591390
LCSD 280-591394/9	Lab Control Sample Dup	Total/NA	Water	SM 3500 CR B	
280-168251-1 MS	2022-02	Dissolved	Water	SM 3500 CR B	591390
280-168251-1 MS	2022-02	Total/NA	Water	SM 3500 CR B	
280-168251-1 MSD	2022-02	Dissolved	Water	SM 3500 CR B	591390
280-168251-1 MSD	2022-02	Total/NA	Water	SM 3500 CR B	
280-168251-1 DU	2022-02	Dissolved	Water	SM 3500 CR B	591390
280-168251-1 DU	2022-02	Total/NA	Water	SM 3500 CR B	

Analysis Batch: 591500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total/NA	Water	SM 4500 S2 D	
280-168251-2	2022-02-FB	Total/NA	Water	SM 4500 S2 D	

General Chemistry (Continued)

Analysis Batch: 591500 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-3	2022-02-DUPLICATE	Total/NA	Water	SM 4500 S2 D	
MB 280-591500/11	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 280-591500/9	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 280-591500/10	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
280-168251-1 MS	2022-02	Total/NA	Water	SM 4500 S2 D	
280-168251-1 MSD	2022-02	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 591808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total/NA	Water	SM 2510B	
280-168251-2	2022-02-FB	Total/NA	Water	SM 2510B	
280-168251-3	2022-02-DUPLICATE	Total/NA	Water	SM 2510B	
MB 280-591808/5	Method Blank	Total/NA	Water	SM 2510B	
LCS 280-591808/4	Lab Control Sample	Total/NA	Water	SM 2510B	

Analysis Batch: 591990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total/NA	Water	SM 2540D	
280-168251-2	2022-02-FB	Total/NA	Water	SM 2540D	
280-168251-3	2022-02-DUPLICATE	Total/NA	Water	SM 2540D	
MB 280-591990/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-591990/1	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 592061

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total/NA	Water	SM 4500 H+ B	
280-168251-2	2022-02-FB	Total/NA	Water	SM 4500 H+ B	
280-168251-3	2022-02-DUPLICATE	Total/NA	Water	SM 4500 H+ B	
LCS 280-592061/73	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
280-168251-1 DU	2022-02	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 592122

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-592122/3	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-592122/1	Lab Control Sample	Total/NA	Water	SM 2540D	
LCSD 280-592122/2	Lab Control Sample Dup	Total/NA	Water	SM 2540D	

Analysis Batch: 592172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total/NA	Water	SM4500 S2 H	
280-168251-2	2022-02-FB	Total/NA	Water	SM4500 S2 H	
280-168251-3	2022-02-DUPLICATE	Total/NA	Water	SM4500 S2 H	
MB 280-592172/1	Method Blank	Total/NA	Water	SM4500 S2 H	

Analysis Batch: 592290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Total Recoverable	Water	SM3500 CR B	
280-168251-2	2022-02-FB	Total Recoverable	Water	SM3500 CR B	
280-168251-3	2022-02-DUPLICATE	Total Recoverable	Water	SM3500 CR B	

QC Association Summary

Client: GS Mining Company LLC
Job ID: 280-168251-1
Project/Site: Wastewater Discharge - Nederland, CO

General Chemistry

Analysis Batch: 592291

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-168251-1	2022-02	Potentially Dissolvec	Water	SM3500 CR B	
280-168251-2	2022-02-FB	Potentially Dissolvec	Water	SM3500 CR B	
280-168251-3	2022-02-DUPLICATE	Potentially Dissolvec	Water	SM3500 CR B	

Lab Chronicle

Client: GS Mining Company LLC
Project/Site: Wastewater Discharge - Nederland, CO

Job ID: 280-168251-1

Client Sample ID: 2022-02

Date Collected: 10/26/22 13:00
Date Received: 10/26/22 15:42

Lab Sample ID: 280-168251-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	599016	10/31/22 15:00	VLC	EET PEN
							Completed:	11/01/22 10:00 [1]		
Total/NA	Analysis	1631E		1			599102	11/03/22 10:22	VLC	EET PEN
Total Recoverable	Prep	200.7			50 mL	50 mL	591484	10/28/22 09:29	LJS	EET DEN
Total Recoverable	Analysis	200.7 Rev 4.4		1			591726	10/29/22 03:01	KRP	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			250 mL	250 mL	591717	10/28/22 21:30	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	591813	11/02/22 08:33	LJS	EET DEN
Potentially Dissolvec	Analysis	200.8		1			592167	11/02/22 15:17	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	591408	10/27/22 15:15	MCR	EET DEN
Total Recoverable	Analysis	200.8		1			591631	10/28/22 09:31	LMT	EET DEN
Total/NA	Prep	245.1			30 mL	50 mL	591895	11/01/22 09:06	MAB	EET DEN
Total/NA	Analysis	245.1		1			592071	11/01/22 13:05	KMS	EET DEN
Total/NA	Analysis	SM 2510B		1			591808	10/31/22 11:42	KEG	EET DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	591990	11/01/22 13:16	ASP	EET DEN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	591390	10/26/22 17:43	SJD	EET DEN
Dissolved	Analysis	SM 3500 CR B		1	2 mL	2 mL	591394	10/26/22 18:11	SJD	EET DEN
Total/NA	Analysis	SM 3500 CR B		1	2 mL	2 mL	591394	10/26/22 18:06	SJD	EET DEN
Total/NA	Analysis	SM 4500 H+ B		1			592061	11/01/22 16:02	KEG	EET DEN
Total/NA	Analysis	SM 4500 S2 D		1	2 mL	2 mL	591500	10/27/22 12:02	LRB	EET DEN
Potentially Dissolvec	Analysis	SM3500 CR B		1			592291	11/03/22 14:26	DNM	EET DEN
Total Recoverable	Analysis	SM3500 CR B		1			592290	11/03/22 14:25	DNM	EET DEN
Total/NA	Analysis	SM4500 S2 H		1			592172	11/02/22 16:30	ZPM	EET DEN

Client Sample ID: 2022-02-FB

Date Collected: 10/26/22 13:10
Date Received: 10/26/22 15:42

Lab Sample ID: 280-168251-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	599016	10/31/22 15:00	VLC	EET PEN
							Completed:	11/01/22 10:00 [1]		
Total/NA	Analysis	1631E		1			599102	11/03/22 10:37	VLC	EET PEN
Total Recoverable	Prep	200.7			50 mL	50 mL	591484	10/28/22 09:29	LJS	EET DEN
Total Recoverable	Analysis	200.7 Rev 4.4		1			591726	10/29/22 03:14	KRP	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			250 mL	250 mL	591717	10/28/22 21:30	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	591813	11/02/22 08:33	LJS	EET DEN
Potentially Dissolvec	Analysis	200.8		1			592167	11/02/22 15:23	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	591408	10/27/22 15:15	MCR	EET DEN
Total Recoverable	Analysis	200.8		1			591631	10/28/22 09:40	LMT	EET DEN
Total/NA	Prep	245.1			30 mL	50 mL	591895	11/01/22 09:06	MAB	EET DEN
Total/NA	Analysis	245.1		1			592071	11/01/22 13:23	KMS	EET DEN
Total/NA	Analysis	SM 2510B		1			591808	10/31/22 11:42	KEG	EET DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	591990	11/01/22 13:16	ASP	EET DEN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	591390	10/26/22 17:43	SJD	EET DEN
Dissolved	Analysis	SM 3500 CR B		1	2 mL	2 mL	591394	10/26/22 18:13	SJD	EET DEN

Lab Chronicle

Client: GS Mining Company LLC
Job ID: 280-168251-1
Project/Site: Wastewater Discharge - Nederland, CO

Client Sample ID: 2022-02-FB
Lab Sample ID: 280-168251-2
Date Collected: 10/26/22 13:10
Matrix: Water
Date Received: 10/26/22 15:42

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 3500 CR B		1	2 mL	2 mL	591394	10/26/22 18:08	SJD	EET DEN
Total/NA	Analysis	SM 4500 H+ B		1			592061	11/01/22 16:09	KEG	EET DEN
Total/NA	Analysis	SM 4500 S2 D		1	2 mL	2 mL	591500	10/27/22 12:04	LRB	EET DEN
Potentially Dissolvec	Analysis	SM3500 CR B		1			592291	11/03/22 14:26	DNM	EET DEN
Total Recoverable	Analysis	SM3500 CR B		1			592290	11/03/22 14:25	DNM	EET DEN
Total/NA	Analysis	SM4500 S2 H		1			592172	11/02/22 16:30	ZPM	EET DEN

Client Sample ID: 2022-02-DUPLICATE
Lab Sample ID: 280-168251-3
Date Collected: 10/26/22 13:15
Matrix: Water
Date Received: 10/26/22 15:42

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	599016	10/31/22 15:00	VLC	EET PEN
							Completed:	11/01/22 10:00 [1]		
Total/NA	Analysis	1631E		1			599102	11/03/22 10:45	VLC	EET PEN
Total Recoverable	Prep	200.7			50 mL	50 mL	591484	10/28/22 09:29	LJS	EET DEN
Total Recoverable	Analysis	200.7 Rev 4.4		1			591726	10/29/22 03:18	KRP	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			1.0 mL	1.0 mL	591717	10/28/22 21:30	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	591813	11/02/22 08:33	LJS	EET DEN
Potentially Dissolvec	Analysis	200.8		1			592167	11/02/22 15:25	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	591408	10/27/22 15:15	MCR	EET DEN
Total Recoverable	Analysis	200.8		1			591631	10/28/22 09:42	LMT	EET DEN
Total/NA	Prep	245.1			30 mL	50 mL	591895	11/01/22 09:06	MAB	EET DEN
Total/NA	Analysis	245.1		1			592071	11/01/22 13:26	KMS	EET DEN
Total/NA	Analysis	SM 2510B		1			591808	10/31/22 11:42	KEG	EET DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	591990	11/01/22 13:16	ASP	EET DEN
Dissolved	Filtration	FILTRATION			1.0 mL	1.0 mL	591390	10/26/22 17:43	SJD	EET DEN
Dissolved	Analysis	SM 3500 CR B		1	2 mL	2 mL	591394	10/26/22 18:13	SJD	EET DEN
Total/NA	Analysis	SM 3500 CR B		1	2 mL	2 mL	591394	10/26/22 18:08	SJD	EET DEN
Total/NA	Analysis	SM 4500 H+ B		1			592061	11/01/22 16:13	KEG	EET DEN
Total/NA	Analysis	SM 4500 S2 D		1	2 mL	2 mL	591500	10/27/22 12:04	LRB	EET DEN
Potentially Dissolvec	Analysis	SM3500 CR B		1			592291	11/03/22 14:26	DNM	EET DEN
Total Recoverable	Analysis	SM3500 CR B		1			592290	11/03/22 14:25	DNM	EET DEN
Total/NA	Analysis	SM4500 S2 H		1			592172	11/02/22 16:30	ZPM	EET DEN

[1] Completion dates and times are reported or not reported per method requirements or individual lab discretion.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

Client: GS Mining Company LLC
Job ID: 280-168251-1
Project/Site: Wastewater Discharge - Nederland, CO

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-23
Arizona	State	AZ0713	12-20-22
Arkansas DEQ	State	19-047-0	05-31-23
California	State	2513	01-08-23
Connecticut	State	PH-0686	09-30-22 *
Florida	NELAP	E87667-57	06-30-23
Georgia	State	4025-011	01-08-23
Illinois	NELAP	2000172019-1	04-30-23
Iowa	State	IA#370	12-02-22
Kansas	NELAP	E-10166	04-30-23
Kentucky (WW)	State	KY98047	12-31-22
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23
Minnesota	NELAP	1788752	12-31-22
Nevada	State	CO000262020-1	07-31-23
New Hampshire	NELAP	205319	04-28-23
New Jersey	NELAP	190002	06-30-23
New York	NELAP	59923	04-01-23
North Carolina (WW/SW)	State	358	12-31-22
North Dakota	State	R-034	01-08-23
Oklahoma	NELAP	8614	08-31-23
Oregon	NELAP	4025-011	01-09-23
Pennsylvania	NELAP	013	07-31-23
South Carolina	State	72002001	01-08-23
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-20-00065	03-06-23
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23
Virginia	NELAP	10490	06-14-23
Washington	State	C583-19	08-03-23
West Virginia DEP	State	354	11-30-22
Wisconsin	State	999615430	08-31-23

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-23-23
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: GS Mining Company LLC
Job ID: 280-168251-1
Project/Site: Wastewater Discharge - Nederland, CO

Laboratory: Eurofins Pensacola (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Kentucky (UST)	State	53	06-30-23
Kentucky (WW)	State	KY98030	12-31-22
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-22
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-22
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-23
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-23

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: BM	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No:
Client Contact: ~~Patricia Delaney~~ Brooke Moran	Phone: 303-506-1618	E-Mail: Dylan.Bieniulis@Eurofinset.com	State of Origin:	Page:
Company: Grand Island Resources	PWSID:			Job #:
Address: 12567 West Cedar Road Suite 250	Due Date Requested:			
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80466	Compliance Project: Δ Yes Δ No			
Phone: ~~303-506-1618~~ 303-5061618	PO #: Advance Payment Required			
Email: ~~sergiorivera@novametalfix.com~~ sergioriverra@novametalfix.com & bmolsonm@g.emporia.edu	WO #:			
Project Name: ~~Wastewater Discharge~~ Surface Water Nederland, CO	Project #: 28022821			
Site: Surface Water Sampling	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2510B - Specific Conductance, 2540D - TSS, SM4500_H+ - pH / Temp	3500_CR_B - Total Hexavalent Cr and Trivalent Cr (calc)	3500_CR_B - Dissolved Hexavalent Cr (LAB FILTER) and Potentially Dissolved Trivalent Cr (calc)	SM4500_S2_D - Sulfide and SM3500_S2_H - Unionized Hydrogen Sulfide (calc)	1631E - Low Level Mercury (ETA Pensacola)	200.8 - Potentially Dissolved Metals (First half of the month permit list)	200.7 / 200.8 / 245.1 - Total Recoverable Metals and Mercury (First half of the month permit list)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	CB	N	D	D		
2022-02	10/26/22	13:00	G	W	N		X	X	X	X	X	X	X	10	* Surface water potentially dissolved metals permit list = 200.8 (As, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Zn)
2022-02-MS	10/26/22	13:00	G	W	N	Y	X	X	X	X	X	X	X	10	
2022-02-FB	10/26/22	13:10	G	W	N		X	X	X	X	X	X	X	10	*Surface water total recoverable metals list = 200.7 (Fe), 200.8 (As, Cd, Cr, Cu, Pb, Zn), and 245.1 (Hg)
2022-02-DUPLICATE	10/26/22	13:15	G	W	N		X	X	X	X	X	X	X	10	2022-02
															pH = 8.3
															temp = 5°C

280-168251 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☒ Archive For 1 Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	3:42pm 10/26/22			10/26/22 1542	Stokt
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 5.4 IR12 CF0.0

Ver: 01/16/2019

11/7/2022

Eurofins Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No: 280-633816.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Dylan.Bieniulis@et.eurofinsus.com	State of Origin: Colorado	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast,		Accreditations Required (See note):		Job #: 280-168251-1
Address: 3355 McLemore Drive, ,	Due Date Requested: 11/9/2022			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #:			
Email:	WO #:			
Project Name: Wastewater Discharge - Nederland, CO	Project #: 28022821			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA
M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1631E/1631E_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
2022-02 (280-168251-1)	10/26/22	13:00 Mountain		Water			X	1	
2022-02 (280-168251-1MS)	10/26/22	13:00 Mountain	MS	Water			X	1	
2022-02-FB (280-168251-2)	10/26/22	13:10 Mountain		Water			X	1	
2022-02-DUPLICATE (280-168251-3)	10/26/22	13:15 Mountain		Water			X	1	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
[signature]	10/27/2022 1536	GTA DEN			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 10.28.22 08:09	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 2.2°C IR8

Ver: 06/08/2021

eurofins
Environment Testing
TestAmerica
ORIGIN ID:WHHA (303) 736-0100
DEN IT
TESTAMERICA DENVER
4955 YARROW ST.
ARVADA, CO 80002
UNITED STATES US
SHIP DATE: 27OCT22
ACTWGT: 12.65 LB
CAD: 290884/CAFE3616
BILL SENDER
TO SHIPPING/RECEIVING
EUROFINS ENVIRONMENT TESTING SOUTHE
3355 MCLEMORE DRIVE
PENSACOLA FL 32514
(850) 474-1001
PO: YES
REF: S280-124155
DEPT: BOTTLE PREP
FedEx
Express
TRK# 0201 6092 7395 3850
FRI - 28 OCT 10:30A
PRIORITY OVERNIGHT
XH PNSA
32514
FL-US BFM

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-168251-1

Login Number: 168251
List Number: 1
Creator: Rystrom, Joshua R

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-168251-1

Login Number: 168251
List Number: 2
Creator: Whitley, Adrian

List Source: Eurofins Pensacola
List Creation: 10/28/22 11:29 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	2.2°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX C.2 NOVEMBER 2022 SURFACE WATER ANALYTICAL RESULTS

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ANALYTICAL REPORT

PREPARED FOR

Attn: Patrick Delaney
GS Mining Company LLC
422 Gregory Street
Central City, Colorado 80427

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JOB DESCRIPTION

Nederland, CO

JOB NUMBER

280-169645-1

Eurofins Denver
4955 Yarrow Street
Arvada CO 80002

See page two for job notes and contact information.

my EOL

Job Notes

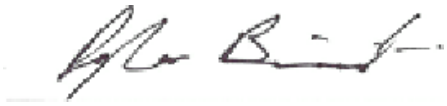
The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the Eurofins TestAmerica Denver Project Manager.

The Lab Certification ID# is 4025.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

The test results in this report relate only to the samples as received by the laboratory and will meet all requirements of the methodology, with any exceptions noted. This report shall not be reproduced except in full, without the express written approval of the laboratory. All questions should be directed to the Eurofins TestAmerica Project Manager.

Authorization



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12/8/2022 8:32:46 PM

Authorized for release by
Dylan Bieniulis, Project Manager I
Dylan.Bieniulis@et.eurofinsus.com
(303)736-0138

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Definitions/Glossary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169645-1

Qualifiers

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
H	Sample was prepped or analyzed beyond the specified holding time
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Job ID: 280-169645-1

Laboratory: Eurofins Denver

Narrative

CASE NARRATIVE

Client: GS Mining Company LLC

Project: Nederland, CO

Report Number: 280-169645-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 11/28/2022; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.9 C.

The unpreserved plastic 500mL bottle submitted for sample 2022-02 (280-169645-1) with a container label indicating the container is for Specific Conductivity, TSS, and pH analysis was received empty. The laboratory will use the 500mL plastic bottle of unpreserved sample volume submitted for the 2022-02-MS (280-169645-1 MS) for the parent sample analysis. No corrective action required. The client was notified on 11/28/2022.

TOTAL RECOVERABLE METALS (ICP)

Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for Total Recoverable Metals (ICP) in accordance with EPA Method 200.7. The samples were prepared on 11/30/2022 and analyzed on 12/01/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

POTENTIALLY DISSOLVED METALS (ICPMS)

Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for potentially dissolved metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 11/30/2022 and analyzed on 12/01/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL RECOVERABLE METALS (ICPMS)

Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA Method 200.8. The samples were prepared on 11/30/2022 and 12/06/2022 and analyzed on 12/01/2022 and 12/06/2022.

Cadmium and Zinc were detected in method blank MB 280-594821/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged. If the associated sample reported a result above the MDL and/or RL, the result has been flagged. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 280-169645-1 (Continued)

Laboratory: Eurofins Denver (Continued)

TOTAL MERCURY (CVAA)
Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for total mercury (CVAA) in accordance with EPA Method 245.1. The samples were prepared and analyzed on 12/03/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM - POTENTIALLY DISSOLVED
Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for Trivalent Chromium - Potentially Dissolved in accordance with SM3500_CR3_B. The samples were analyzed on 12/08/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TRIVALENT CHROMIUM - TOTAL RECOVERABLE
Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for Trivalent Chromium - Total Recoverable in accordance with SM3500_CR3_B. The samples were analyzed on 12/08/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

SPECIFIC CONDUCTIVITY
Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for specific conductivity in accordance with SM20 2510B. The samples were analyzed on 11/29/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

TOTAL SUSPENDED SOLIDS
Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for total suspended solids in accordance with SM20 2540D. The samples were analyzed on 11/29/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

DISSOLVED HEXAVALENT CHROMIUM
Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for dissolved hexavalent chromium in accordance with SM 3500 CR B. The samples were analyzed on 11/29/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HEXAVALENT CHROMIUM
Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for hexavalent chromium in accordance with 3500_CR_B. The samples were analyzed on 11/29/2022.

Chromium, hexavalent failed the recovery criteria high for the MS of sample 2022-02-MS (280-169645-1) in batch 280-594932. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits. Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

CORROSIVITY (PH)
Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for corrosivity (pH) in accordance with SM20 4500 H+ B. The samples were analyzed on 11/29/2022 and 12/05/2022.

Sample 2022-02-FB (280-169645-3) did not equilibrate to within 0.05 pH units after three measurements. This was observed in a previous analysis thus the sample was not rerun.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Job ID: 280-169645-1 (Continued)

Laboratory: Eurofins Denver (Continued)

SULFIDE

Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for sulfide in accordance with SM20 4500 S2 D. The samples were analyzed on 12/02/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

HYDROGEN SULFIDE

Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for Hydrogen Sulfide in accordance with SM20 4500 S2 H. The samples were analyzed on 12/06/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

LOW LEVEL MERCURY

Samples 2022-02 (280-169645-1), 2022-02-FB (280-169645-3) and 2022-02-DUPLICATE (280-169645-4) were analyzed for Low Level Mercury in accordance with EPA 1631. The samples were prepared on 11/30/2022 and analyzed on 12/01/2022.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169645-1

Client Sample ID: 2022-02 — Lab Sample ID: 280-169645-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	1.8		0.50	0.20	ng/L	1		1631E	Total/NA
Iron	37	J	100	9.1	ug/L	1		200.7 Rev 4.4	Total Recoverable
Cadmium	0.13	J	1.0	0.088	ug/L	1		200.8	Total Recoverable
Copper	0.78	J	2.0	0.71	ug/L	1		200.8	Total Recoverable
Lead	0.95	J	1.0	0.23	ug/L	1		200.8	Total Recoverable
Zinc	5.5	J	10	2.0	ug/L	1		200.8	Total Recoverable
Lead	0.63	J	1.0	0.23	ug/L	1		200.8	Potentially Dissolved
Manganese	1.6	J	2.0	0.51	ug/L	1		200.8	Potentially Dissolved
Zinc	8.9	J	10	2.0	ug/L	1		200.8	Potentially Dissolved
Specific Conductance	230		2.0	2.0	umhos/cm	1		SM 2510B	Total/NA
pH adj. to 25 deg C	8.2	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Temperature	23.4	HF	1.0	1.0	Degrees C	1		SM 4500 H+ B	Total/NA
Sulfide	0.036	J	0.050	0.022	mg/L	1		SM 4500 S2 D	Total/NA
Field pH	8.2		1.0	1.0	SU	1		SM4500 S2 H	Total/NA
Field Temperature	23		1.0	1.0	Celsius	1		SM4500 S2 H	Total/NA
Specific Conductance	230		2.0	2.0	umhos/cm	1		SM4500 S2 H	Total/NA

Client Sample ID: 2022-02-FB — Lab Sample ID: 280-169645-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Zinc	4.5	J	10	2.0	ug/L	1		200.8	Potentially Dissolved
pH adj. to 25 deg C	6.4	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Temperature	23.9	HF	1.0	1.0	Degrees C	1		SM 4500 H+ B	Total/NA
Field pH	6.4		1.0	1.0	SU	1		SM4500 S2 H	Total/NA
Field Temperature	24		1.0	1.0	Celsius	1		SM4500 S2 H	Total/NA

Client Sample ID: 2022-02-DUPLICATE — Lab Sample ID: 280-169645-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Mercury	1.9		0.50	0.20	ng/L	1		1631E	Total/NA
Iron	39	J	100	9.1	ug/L	1		200.7 Rev 4.4	Total Recoverable
Lead	0.74	J	1.0	0.23	ug/L	1		200.8	Total Recoverable
Zinc	3.9	J B	10	2.0	ug/L	1		200.8	Total Recoverable
Lead	0.62	J	1.0	0.23	ug/L	1		200.8	Potentially Dissolved
Manganese	1.7	J	2.0	0.51	ug/L	1		200.8	Potentially Dissolved
Zinc	8.6	J	10	2.0	ug/L	1		200.8	Potentially Dissolved
Specific Conductance	230		2.0	2.0	umhos/cm	1		SM 2510B	Total/NA
pH adj. to 25 deg C	8.3	HF	0.1	0.1	SU	1		SM 4500 H+ B	Total/NA
Temperature	23.4	HF	1.0	1.0	Degrees C	1		SM 4500 H+ B	Total/NA
Sulfide	0.032	J	0.050	0.022	mg/L	1		SM 4500 S2 D	Total/NA
Field pH	8.3		1.0	1.0	SU	1		SM4500 S2 H	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Denver

Client Sample ID: 2022-02-DUPLICATE (Continued)

Lab Sample ID: 280-169645-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Field Temperature	23		1.0	1.0	Celsius	1		SM4500 S2 H	Total/NA
Specific Conductance	230		2.0	2.0	umhos/cm	1		SM4500 S2 H	Total/NA

This Detection Summary does not include radiochemical test results.

Method Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169645-1

Method	Method Description	Protocol	Laboratory
1631E	Mercury, Low Level (CVAFS)	EPA	EET PEN
200.7 Rev 4.4	Metals (ICP)	EPA	EET DEN
200.8	Metals (ICP/MS)	EPA	EET DEN
245.1	Mercury (CVAA)	EPA	EET DEN
SM 2510B	Conductivity, Specific Conductance	SM	EET DEN
SM 2540D	Solids, Total Suspended (TSS)	SM	EET DEN
SM 3500 CR B	Chromium, Hexavalent	SM	EET DEN
SM 4500 H+ B	pH	SM	EET DEN
SM 4500 S2 D	Sulfide, Total	SM	EET DEN
SM3500 CR B	Chromium, Trivalent	SM	EET DEN
SM4500 S2 H	Unionized Hydrogen Sulfide	SM	EET DEN
1631E	Preparation, Mercury, Low Level	EPA	EET PEN
200.7	Preparation, Total Recoverable Metals	EPA	EET DEN
200.8	Preparation, Total Recoverable Metals	EPA	EET DEN
245.1	Preparation, Mercury	EPA	EET DEN
FILTRATION	Sample Filtration	None	EET DEN
Poten_Diss_Met	Filtration for Potentially Dissolved Metals	EPA	EET DEN

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Sample Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169645-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
280-169645-1	2022-02	Water	11/28/22 11:30	11/28/22 16:07
280-169645-3	2022-02-FB	Water	11/28/22 11:35	11/28/22 16:07
280-169645-4	2022-02-DUPLICATE	Water	11/28/22 11:40	11/28/22 16:07

Method: EPA 1631E - Mercury, Low Level (CVAFS)

Client Sample ID: 2022-02
Date Collected: 11/28/22 11:30
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.8**		0.50	0.20	ng/L		11/30/22 15:10	12/01/22 12:19	1

Client Sample ID: 2022-02-FB
Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.20	ng/L		11/30/22 15:10	12/01/22 12:34	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 11/28/22 11:40
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**1.9**		0.50	0.20	ng/L		11/30/22 15:10	12/01/22 12:41	1

Method: EPA 200.7 Rev 4.4 - Metals (ICP) - Total Recoverable

Client Sample ID: 2022-02
Date Collected: 11/28/22 11:30
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**37**	**J**	100	9.1	ug/L		11/30/22 14:42	12/01/22 17:32	1

Client Sample ID: 2022-02-FB
Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		100	9.1	ug/L		11/30/22 14:42	12/01/22 18:03	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 11/28/22 11:40
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	**39**	**J**	100	9.1	ug/L		11/30/22 14:42	12/01/22 18:07	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable

Client Sample ID: 2022-02
Date Collected: 11/28/22 11:30
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		12/06/22 07:58	12/06/22 22:14	1
Cadmium	**0.13**	**J**	1.0	0.088	ug/L		12/06/22 07:58	12/06/22 22:14	1
Chromium	ND		3.0	0.88	ug/L		12/06/22 07:58	12/06/22 22:14	1
Copper	**0.78**	**J**	2.0	0.71	ug/L		12/06/22 07:58	12/06/22 22:14	1
Lead	**0.95**	**J**	1.0	0.23	ug/L		12/06/22 07:58	12/06/22 22:14	1
Zinc	**5.5**	**J**	10	2.0	ug/L		12/06/22 07:58	12/06/22 22:14	1

Client Sample ID: 2022-02-FB
Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/30/22 07:50	12/01/22 22:02	1

Method: EPA 200.8 - Metals (ICP/MS) - Total Recoverable (Continued)

Client Sample ID: 2022-02-FB
Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		1.0	0.088	ug/L		11/30/22 07:50	12/01/22 22:02	1
Chromium	ND		3.0	0.88	ug/L		11/30/22 07:50	12/01/22 22:02	1
Copper	ND		2.0	0.71	ug/L		11/30/22 07:50	12/01/22 22:02	1
Lead	ND		1.0	0.23	ug/L		11/30/22 07:50	12/01/22 22:02	1
Zinc	ND		10	2.0	ug/L		11/30/22 07:50	12/01/22 22:02	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 11/28/22 11:40
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/30/22 07:50	12/01/22 22:04	1
Cadmium	ND		1.0	0.088	ug/L		11/30/22 07:50	12/01/22 22:04	1
Chromium	ND		3.0	0.88	ug/L		11/30/22 07:50	12/01/22 22:04	1
Copper	ND		2.0	0.71	ug/L		11/30/22 07:50	12/01/22 22:04	1
Lead	**0.74**	**J**	1.0	0.23	ug/L		11/30/22 07:50	12/01/22 22:04	1
Zinc	**3.9**	**J B**	10	2.0	ug/L		11/30/22 07:50	12/01/22 22:04	1

Method: EPA 200.8 - Metals (ICP/MS) - Potentially Dissolved

Client Sample ID: 2022-02
Date Collected: 11/28/22 11:30
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/30/22 07:50	12/01/22 22:32	1
Cadmium	ND		1.0	0.088	ug/L		11/30/22 07:50	12/01/22 22:32	1
Chromium	ND		3.0	0.88	ug/L		11/30/22 07:50	12/01/22 22:32	1
Copper	ND		2.0	0.71	ug/L		11/30/22 07:50	12/01/22 22:32	1
Lead	**0.63**	**J**	1.0	0.23	ug/L		11/30/22 07:50	12/01/22 22:32	1
Manganese	**1.6**	**J**	2.0	0.51	ug/L		11/30/22 07:50	12/01/22 22:32	1
Nickel	ND		2.0	0.28	ug/L		11/30/22 07:50	12/01/22 22:32	1
Selenium	ND		5.0	1.0	ug/L		11/30/22 07:50	12/01/22 22:32	1
Silver	ND		0.50	0.045	ug/L		11/30/22 07:50	12/01/22 22:32	1
Zinc	**8.9**	**J**	10	2.0	ug/L		11/30/22 07:50	12/01/22 22:32	1

Client Sample ID: 2022-02-FB
Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/30/22 07:50	12/01/22 22:38	1
Cadmium	ND		1.0	0.088	ug/L		11/30/22 07:50	12/01/22 22:38	1
Chromium	ND		3.0	0.88	ug/L		11/30/22 07:50	12/01/22 22:38	1
Copper	ND		2.0	0.71	ug/L		11/30/22 07:50	12/01/22 22:38	1
Lead	ND		1.0	0.23	ug/L		11/30/22 07:50	12/01/22 22:38	1
Manganese	ND		2.0	0.51	ug/L		11/30/22 07:50	12/01/22 22:38	1
Nickel	ND		2.0	0.28	ug/L		11/30/22 07:50	12/01/22 22:38	1
Selenium	ND		5.0	1.0	ug/L		11/30/22 07:50	12/01/22 22:38	1
Silver	ND		0.50	0.045	ug/L		11/30/22 07:50	12/01/22 22:38	1
Zinc	**4.5**	**J**	10	2.0	ug/L		11/30/22 07:50	12/01/22 22:38	1

Method: EPA 200.8 - Metals (ICP/MS) - Potentially Dissolved

Client Sample ID: 2022-02-DUPLICATE — **Lab Sample ID: 280-169645-4**
Date Collected: 11/28/22 11:40 — **Matrix: Water**
Date Received: 11/28/22 16:07

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/30/22 07:50	12/01/22 22:40	1
Cadmium	ND		1.0	0.088	ug/L		11/30/22 07:50	12/01/22 22:40	1
Chromium	ND		3.0	0.88	ug/L		11/30/22 07:50	12/01/22 22:40	1
Copper	ND		2.0	0.71	ug/L		11/30/22 07:50	12/01/22 22:40	1
Lead	**0.62**	**J**	1.0	0.23	ug/L		11/30/22 07:50	12/01/22 22:40	1
Manganese	**1.7**	**J**	2.0	0.51	ug/L		11/30/22 07:50	12/01/22 22:40	1
Nickel	ND		2.0	0.28	ug/L		11/30/22 07:50	12/01/22 22:40	1
Selenium	ND		5.0	1.0	ug/L		11/30/22 07:50	12/01/22 22:40	1
Silver	ND		0.50	0.045	ug/L		11/30/22 07:50	12/01/22 22:40	1
Zinc	**8.6**	**J**	10	2.0	ug/L		11/30/22 07:50	12/01/22 22:40	1

Method: EPA 245.1 - Mercury (CVAA)

Client Sample ID: 2022-02 — **Lab Sample ID: 280-169645-1**
Date Collected: 11/28/22 11:30 — **Matrix: Water**
Date Received: 11/28/22 16:07

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		12/03/22 13:04	12/03/22 18:15	1

Client Sample ID: 2022-02-FB — **Lab Sample ID: 280-169645-3**
Date Collected: 11/28/22 11:35 — **Matrix: Water**
Date Received: 11/28/22 16:07

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		12/03/22 13:04	12/03/22 18:28	1

Client Sample ID: 2022-02-DUPLICATE — **Lab Sample ID: 280-169645-4**
Date Collected: 11/28/22 11:40 — **Matrix: Water**
Date Received: 11/28/22 16:07

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		12/03/22 13:04	12/03/22 18:31	1

General Chemistry

Client Sample ID: 2022-02 — **Lab Sample ID: 280-169645-1**
Date Collected: 11/28/22 11:30 — **Matrix: Water**
Date Received: 11/28/22 16:07

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (SM 2510B)	**230**		2.0	2.0	umhos/cm			11/29/22 09:45	1
Total Suspended Solids (SM 2540D)	ND		4.0	1.1	mg/L			11/29/22 13:22	1
Chromium, hexavalent (SM 3500 CR B)	ND	F1	0.020	0.0040	mg/L			11/29/22 10:59	1
pH adj. to 25 deg C (SM 4500 H+ B	**8.2**	**HF**	0.1	0.1	SU			11/29/22 11:57	1
Temperature (SM 4500 H+ B)	**23.4**	**HF**	1.0	1.0	Degrees C			11/29/22 11:57	1
Sulfide (SM 4500 S2 D)	**0.036**	**J**	0.050	0.022	mg/L			12/02/22 15:05	1
Un-ionized Hydrogen Sulfide (SM4500 S2 H)	ND		1.0	1.0	mg/L			12/06/22 16:38	1
Field pH (SM4500 S2 H)	**8.2**		1.0	1.0	SU			12/06/22 16:38	1
Field Temperature (SM4500 S2 H)	**23**		1.0	1.0	Celsius			12/06/22 16:38	1
Specific Conductance (SM4500 S2 H)	**230**		2.0	2.0	umhos/cm			12/06/22 16:38	1
Sulfide (SM4500 S2 H)	ND		4.0	4.0	mg/L			12/06/22 16:38	1

General Chemistry

Client Sample ID: 2022-02-FB
Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (SM 2510B)	ND		2.0	2.0	umhos/cm			11/29/22 09:45	1
Total Suspended Solids (SM 2540D)	ND		4.0	1.1	mg/L			11/29/22 13:22	1
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			11/29/22 11:01	1
pH adj. to 25 deg C (SM 4500 H+ B	**6.4**	**HF**	0.1	0.1	SU			12/05/22 17:38	1
Temperature (SM 4500 H+ B)	**23.9**	**HF**	1.0	1.0	Degrees C			12/05/22 17:38	1
Sulfide (SM 4500 S2 D)	ND		0.050	0.022	mg/L			12/02/22 15:06	1
Un-ionized Hydrogen Sulfide (SM4500 S2 H)	ND		1.0	1.0	mg/L			12/06/22 16:38	1
Field pH (SM4500 S2 H)	**6.4**		1.0	1.0	SU			12/06/22 16:38	1
Field Temperature (SM4500 S2 H)	**24**		1.0	1.0	Celsius			12/06/22 16:38	1
Specific Conductance (SM4500 S2 H)	ND		2.0	2.0	umhos/cm			12/06/22 16:38	1
Sulfide (SM4500 S2 H)	ND		4.0	4.0	mg/L			12/06/22 16:38	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 11/28/22 11:40
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance (SM 2510B)	**230**		2.0	2.0	umhos/cm			11/29/22 09:45	1
Total Suspended Solids (SM 2540D)	ND		4.0	1.1	mg/L			11/29/22 13:22	1
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			11/29/22 11:02	1
pH adj. to 25 deg C (SM 4500 H+ B	**8.3**	**HF**	0.1	0.1	SU			11/29/22 12:07	1
Temperature (SM 4500 H+ B)	**23.4**	**HF**	1.0	1.0	Degrees C			11/29/22 12:07	1
Sulfide (SM 4500 S2 D)	**0.032**	**J**	0.050	0.022	mg/L			12/02/22 15:06	1
Un-ionized Hydrogen Sulfide (SM4500 S2 H)	ND		1.0	1.0	mg/L			12/06/22 16:38	1
Field pH (SM4500 S2 H)	**8.3**		1.0	1.0	SU			12/06/22 16:38	1
Field Temperature (SM4500 S2 H)	**23**		1.0	1.0	Celsius			12/06/22 16:38	1
Specific Conductance (SM4500 S2 H)	**230**		2.0	2.0	umhos/cm			12/06/22 16:38	1
Sulfide (SM4500 S2 H)	ND		4.0	4.0	mg/L			12/06/22 16:38	1

General Chemistry - Total Recoverable

Client Sample ID: 2022-02
Date Collected: 11/28/22 11:30
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (SM3500 CR B)	ND	H	0.020	0.020	mg/L			12/08/22 09:22	1

Client Sample ID: 2022-02-FB
Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (SM3500 CR B)	ND	H	0.020	0.020	mg/L			12/08/22 09:22	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 11/28/22 11:40
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (SM3500 CR B)	ND	H	0.020	0.020	mg/L			12/08/22 09:22	1

General Chemistry - Dissolved

Client Sample ID: 2022-02
Date Collected: 11/28/22 11:30
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			11/29/22 11:04	1

Client Sample ID: 2022-02-FB
Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			11/29/22 11:06	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 11/28/22 11:40
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent (SM 3500 CR B)	ND		0.020	0.0040	mg/L			11/29/22 11:21	1

General Chemistry - Potentially Dissolved

Client Sample ID: 2022-02
Date Collected: 11/28/22 11:30
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (dissolved) (SM3500 CR B)	ND		0.020	0.020	mg/L			12/08/22 09:24	1

Client Sample ID: 2022-02-FB
Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (dissolved) (SM3500 CR B)	ND		0.020	0.020	mg/L			12/08/22 09:24	1

Client Sample ID: 2022-02-DUPLICATE
Date Collected: 11/28/22 11:40
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-4
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, trivalent (dissolved) (SM3500 CR B)	ND		0.020	0.020	mg/L			12/08/22 09:24	1

Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 400-602962/3-A
Matrix: Water
Analysis Batch: 603035

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602962

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	0.20	ng/L		11/30/22 16:00	12/01/22 10:09	1

Lab Sample ID: LCS 400-602962/4-A
Matrix: Water
Analysis Batch: 603035

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602962

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	4.58		ng/L		92	79 - 121

Lab Sample ID: LCSD 400-602962/5-A
Matrix: Water
Analysis Batch: 603035

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 602962

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	5.00	4.62		ng/L		92	79 - 121	1	20

Lab Sample ID: 280-169645-1 MS
Matrix: Water
Analysis Batch: 603035

Client Sample ID: 2022-02-MS
Prep Type: Total/NA
Prep Batch: 602962

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	1.8		5.00	6.19		ng/L		87	71 - 125

Method: 200.7 Rev 4.4 - Metals (ICP)

Lab Sample ID: MB 280-594892/1-A
Matrix: Water
Analysis Batch: 595332

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 594892

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		100	9.1	ug/L		11/30/22 14:42	12/01/22 16:58	1

Lab Sample ID: LCS 280-594892/2-A
Matrix: Water
Analysis Batch: 595332

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 594892

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	10000	10500		ug/L		105	85 - 115

Lab Sample ID: 280-169645-1 MS
Matrix: Water
Analysis Batch: 595332

Client Sample ID: 2022-02-MS
Prep Type: Total Recoverable
Prep Batch: 594892

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Iron	37	J	10000	10300		ug/L		103	70 - 130

Method: 200.7 Rev 4.4 - Metals (ICP) (Continued)

Lab Sample ID: 280-169645-1 MSD
Matrix: Water
Analysis Batch: 595332

Client Sample ID: 2022-02
Prep Type: Total Recoverable
Prep Batch: 594892

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Iron	37	J	10000	10400		ug/L		103	70 - 130	0	20

Method: 200.8 - Metals (ICP/MS)

Lab Sample ID: MB 280-594821/1-A
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 594821

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/30/22 07:50	12/01/22 21:19	1
Cadmium	0.195	J	1.0	0.088	ug/L		11/30/22 07:50	12/01/22 21:19	1
Chromium	ND		3.0	0.88	ug/L		11/30/22 07:50	12/01/22 21:19	1
Copper	ND		2.0	0.71	ug/L		11/30/22 07:50	12/01/22 21:19	1
Lead	ND		1.0	0.23	ug/L		11/30/22 07:50	12/01/22 21:19	1
Zinc	4.00	J	10	2.0	ug/L		11/30/22 07:50	12/01/22 21:19	1

Lab Sample ID: LCS 280-594821/2-A
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 594821

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	40.1		ug/L		100	89 - 111
Cadmium	40.0	39.8		ug/L		100	89 - 111
Chromium	40.0	39.5		ug/L		99	86 - 115
Copper	40.0	40.3		ug/L		101	90 - 115
Lead	40.0	41.0		ug/L		103	88 - 115
Zinc	40.0	40.4		ug/L		101	88 - 115

Lab Sample ID: LCSD 280-594821/3-A
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Lab Control Sample Dup
Prep Type: Total Recoverable
Prep Batch: 594821

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	40.0	41.5		ug/L		104	89 - 111	4	20
Cadmium	40.0	38.8		ug/L		97	89 - 111	3	20
Chromium	40.0	40.2		ug/L		100	86 - 115	2	20
Copper	40.0	40.7		ug/L		102	90 - 115	1	20
Lead	40.0	39.5		ug/L		99	88 - 115	4	20
Zinc	40.0	40.1		ug/L		100	88 - 115	1	20

Lab Sample ID: MB 280-595529/1-A
Matrix: Water
Analysis Batch: 595811

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 595529

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		12/06/22 07:58	12/06/22 22:11	1
Cadmium	ND		1.0	0.088	ug/L		12/06/22 07:58	12/06/22 22:11	1
Chromium	ND		3.0	0.88	ug/L		12/06/22 07:58	12/06/22 22:11	1
Copper	ND		2.0	0.71	ug/L		12/06/22 07:58	12/06/22 22:11	1
Lead	ND		1.0	0.23	ug/L		12/06/22 07:58	12/06/22 22:11	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-595529/1-A
Matrix: Water
Analysis Batch: 595811

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 595529

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Zinc	ND		10	2.0	ug/L		12/06/22 07:58	12/06/22 22:11	1

Lab Sample ID: LCS 280-595529/2-A
Matrix: Water
Analysis Batch: 595811

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 595529

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	41.1		ug/L		103	89 - 111
Cadmium	40.0	39.5		ug/L		99	89 - 111
Chromium	40.0	39.6		ug/L		99	86 - 115
Copper	40.0	40.6		ug/L		102	90 - 115
Lead	40.0	39.1		ug/L		98	88 - 115
Zinc	40.0	40.8		ug/L		102	88 - 115

Lab Sample ID: 280-169645-1 MS
Matrix: Water
Analysis Batch: 595811

Client Sample ID: 2022-02-MS
Prep Type: Total Recoverable
Prep Batch: 595529

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		40.0	42.4		ug/L		106	79 - 120
Cadmium	0.13	J	40.0	40.6		ug/L		101	89 - 111
Chromium	ND		40.0	40.8		ug/L		102	86 - 115
Copper	0.78	J	40.0	41.3		ug/L		101	90 - 115
Lead	0.95	J	40.0	41.5		ug/L		101	88 - 115
Zinc	5.5	J	40.0	46.7		ug/L		103	88 - 115

Lab Sample ID: 280-169645-1 MSD
Matrix: Water
Analysis Batch: 595811

Client Sample ID: 2022-02
Prep Type: Total Recoverable
Prep Batch: 595529

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		40.0	42.0		ug/L		105	79 - 120	1	20
Cadmium	0.13	J	40.0	41.1		ug/L		102	89 - 111	1	20
Chromium	ND		40.0	41.2		ug/L		103	86 - 115	1	20
Copper	0.78	J	40.0	41.4		ug/L		101	90 - 115	0	20
Lead	0.95	J	40.0	41.8		ug/L		102	88 - 115	1	20
Zinc	5.5	J	40.0	46.9		ug/L		104	88 - 115	0	20

Lab Sample ID: MB 280-594634/1-B
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Method Blank
Prep Type: Potentially Dissolved
Prep Batch: 594874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		5.0	0.50	ug/L		11/30/22 07:50	12/01/22 22:19	1
Cadmium	ND		1.0	0.088	ug/L		11/30/22 07:50	12/01/22 22:19	1
Chromium	ND		3.0	0.88	ug/L		11/30/22 07:50	12/01/22 22:19	1
Copper	ND		2.0	0.71	ug/L		11/30/22 07:50	12/01/22 22:19	1
Lead	ND		1.0	0.23	ug/L		11/30/22 07:50	12/01/22 22:19	1
Manganese	ND		2.0	0.51	ug/L		11/30/22 07:50	12/01/22 22:19	1
Nickel	ND		2.0	0.28	ug/L		11/30/22 07:50	12/01/22 22:19	1

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: MB 280-594634/1-B
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Method Blank
Prep Type: Potentially Dissolved
Prep Batch: 594874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Selenium	ND		5.0	1.0	ug/L		11/30/22 07:50	12/01/22 22:19	1
Silver	ND		0.50	0.045	ug/L		11/30/22 07:50	12/01/22 22:19	1
Zinc	ND		10	2.0	ug/L		11/30/22 07:50	12/01/22 22:19	1

Lab Sample ID: LCS 280-594634/2-B
Matrix: Water
Analysis Batch: 595318

Client Sample ID: Lab Control Sample
Prep Type: Potentially Dissolved
Prep Batch: 594874

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	40.0	40.3		ug/L		101	89 - 111
Cadmium	40.0	39.1		ug/L		98	89 - 111
Chromium	40.0	39.4		ug/L		99	86 - 115
Copper	40.0	39.7		ug/L		99	90 - 115
Lead	40.0	39.8		ug/L		99	88 - 115
Manganese	40.0	39.4		ug/L		99	87 - 115
Nickel	40.0	39.2		ug/L		98	86 - 115
Selenium	40.0	39.6		ug/L		99	85 - 114
Silver	40.0	38.7		ug/L		97	90 - 114
Zinc	40.0	40.4		ug/L		101	88 - 115

Lab Sample ID: 280-169645-1 MS
Matrix: Water
Analysis Batch: 595318

Client Sample ID: 2022-02-MS
Prep Type: Potentially Dissolved
Prep Batch: 594874

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	ND		40.0	40.1		ug/L		100	79 - 120
Cadmium	ND		40.0	38.7		ug/L		97	89 - 111
Chromium	ND		40.0	39.5		ug/L		99	86 - 115
Copper	ND		40.0	40.4		ug/L		101	90 - 115
Lead	0.63	J	40.0	40.9		ug/L		101	88 - 115
Manganese	1.6	J	40.0	41.1		ug/L		99	87 - 115
Nickel	ND		40.0	39.0		ug/L		98	86 - 115
Selenium	ND		40.0	40.5		ug/L		101	85 - 114
Silver	ND		40.0	38.8		ug/L		97	70 - 130
Zinc	8.9	J	40.0	47.2		ug/L		96	88 - 115

Lab Sample ID: 280-169645-1 MSD
Matrix: Water
Analysis Batch: 595318

Client Sample ID: 2022-02
Prep Type: Potentially Dissolved
Prep Batch: 594874

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Arsenic	ND		40.0	41.2		ug/L		103	79 - 120	3	20
Cadmium	ND		40.0	40.4		ug/L		101	89 - 111	4	20
Chromium	ND		40.0	39.1		ug/L		98	86 - 115	1	20
Copper	ND		40.0	40.1		ug/L		100	90 - 115	1	20
Lead	0.63	J	40.0	41.2		ug/L		101	88 - 115	1	20
Manganese	1.6	J	40.0	41.5		ug/L		100	87 - 115	1	20
Nickel	ND		40.0	39.2		ug/L		98	86 - 115	0	20
Selenium	ND		40.0	41.0		ug/L		103	85 - 114	1	20

Method: 200.8 - Metals (ICP/MS) (Continued)

Lab Sample ID: 280-169645-1 MSD
Matrix: Water
Analysis Batch: 595318

Client Sample ID: 2022-02
Prep Type: Potentially Dissolved
Prep Batch: 594874

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Silver	ND		40.0	40.9		ug/L		102	70 - 130	5	20
Zinc	8.9	J	40.0	48.8		ug/L		100	88 - 115	3	20

Method: 245.1 - Mercury (CVAA)

Lab Sample ID: MB 280-595442/1-A
Matrix: Water
Analysis Batch: 595516

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 595442

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.20	0.061	ug/L		12/03/22 13:04	12/03/22 17:25	1

Lab Sample ID: LCS 280-595442/2-A
Matrix: Water
Analysis Batch: 595516

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 595442

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	5.00	5.01		ug/L		100	90 - 110

Lab Sample ID: 280-169645-1 MS
Matrix: Water
Analysis Batch: 595516

Client Sample ID: 2022-02-MS
Prep Type: Total/NA
Prep Batch: 595442

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Mercury	ND		5.00	4.94		ug/L		99	80 - 120

Lab Sample ID: 280-169645-1 MSD
Matrix: Water
Analysis Batch: 595516

Client Sample ID: 2022-02
Prep Type: Total/NA
Prep Batch: 595442

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Mercury	ND		5.00	5.01		ug/L		100	80 - 120	1	10

Method: SM 2510B - Conductivity, Specific Conductance

Lab Sample ID: MB 280-594879/5
Matrix: Water
Analysis Batch: 594879

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Specific Conductance	ND		2.0	2.0	umhos/cm			11/29/22 09:45	1

Lab Sample ID: LCS 280-594879/4
Matrix: Water
Analysis Batch: 594879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Specific Conductance	1410	1420		umhos/cm		101	90 - 110

Method: SM 2510B - Conductivity, Specific Conductance (Continued)

Lab Sample ID: 280-169645-1 DU
Matrix: Water
Analysis Batch: 594879

Client Sample ID: 2022-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Specific Conductance	230		230		umhos/cm		0.4	10

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 280-594944/2
Matrix: Water
Analysis Batch: 594944

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		4.0	1.1	mg/L			11/29/22 13:22	1

Lab Sample ID: LCS 280-594944/1
Matrix: Water
Analysis Batch: 594944

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Total Suspended Solids	501	468		mg/L		93	79 - 114

Method: SM 3500 CR B - Chromium, Hexavalent

Lab Sample ID: MB 280-594932/15
Matrix: Water
Analysis Batch: 594932

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.020	0.0040	mg/L			11/29/22 10:59	1

Lab Sample ID: LCS 280-594932/13
Matrix: Water
Analysis Batch: 594932

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	0.100	0.105		mg/L		105	91 - 112

Lab Sample ID: LCSD 280-594932/14
Matrix: Water
Analysis Batch: 594932

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	0.100	0.104		mg/L		104	91 - 112	1	20

Lab Sample ID: 280-169645-1 MS
Matrix: Water
Analysis Batch: 594932

Client Sample ID: 2022-02-MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chromium, hexavalent	ND	F1	0.100	0.119	F1	mg/L		119	91 - 112

Method: SM 3500 CR B - Chromium, Hexavalent (Continued)

Lab Sample ID: 280-169645-1 MSD
Matrix: Water
Analysis Batch: 594932

Client Sample ID: 2022-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	ND	F1	0.100	0.0973		mg/L		97	91 - 112	20	20

Lab Sample ID: 280-169645-1 DU
Matrix: Water
Analysis Batch: 594932

Client Sample ID: 2022-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	ND	F1		ND		mg/L				NC	20

Lab Sample ID: MB 280-594901/3-A
Matrix: Water
Analysis Batch: 594932

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium, hexavalent	ND		0.020	0.0040	mg/L			11/29/22 11:04	1

Lab Sample ID: LCS 280-594901/1-A
Matrix: Water
Analysis Batch: 594932

Client Sample ID: Lab Control Sample
Prep Type: Dissolved

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent			0.100	0.102		mg/L		102	91 - 112		

Lab Sample ID: LCSD 280-594901/2-A
Matrix: Water
Analysis Batch: 594932

Client Sample ID: Lab Control Sample Dup
Prep Type: Dissolved

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent			0.100	0.102		mg/L		102	91 - 112	0	20

Lab Sample ID: 280-169645-1 MS
Matrix: Water
Analysis Batch: 594932

Client Sample ID: 2022-02-MS
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
Chromium, hexavalent	ND		0.100	0.105		mg/L		105	91 - 112		

Lab Sample ID: 280-169645-1 MSD
Matrix: Water
Analysis Batch: 594932

Client Sample ID: 2022-02
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Chromium, hexavalent	ND		0.100	0.105		mg/L		105	91 - 112	0	20

Lab Sample ID: 280-169645-1 DU
Matrix: Water
Analysis Batch: 594932

Client Sample ID: 2022-02
Prep Type: Dissolved

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Chromium, hexavalent	ND			ND		mg/L				NC	20

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 280-594929/27
Matrix: Water
Analysis Batch: 594929

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH adj. to 25 deg C	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 280-595679/50
Matrix: Water
Analysis Batch: 595679

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
pH adj. to 25 deg C	7.00	7.1		SU		101	99 - 101

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 280-595425/11
Matrix: Water
Analysis Batch: 595425

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	ND		0.050	0.022	mg/L			12/02/22 14:51	1

Lab Sample ID: LCS 280-595425/9
Matrix: Water
Analysis Batch: 595425

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.500	0.462		mg/L		92	81 - 122

Lab Sample ID: LCSD 280-595425/10
Matrix: Water
Analysis Batch: 595425

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	0.500	0.474		mg/L		95	81 - 122	3	10

Lab Sample ID: 280-169645-1 MS
Matrix: Water
Analysis Batch: 595425

Client Sample ID: 2022-02-MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfide	0.036	J	0.500	0.456		mg/L		84	81 - 122

Lab Sample ID: 280-169645-1 MSD
Matrix: Water
Analysis Batch: 595425

Client Sample ID: 2022-02
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfide	0.036	J	0.500	0.445		mg/L		82	81 - 122	3	10

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169645-1

Method: SM4500 S2 H - Unionized Hydrogen Sulfide

Lab Sample ID: MB 280-595772/6
Matrix: Water
Analysis Batch: 595772

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Un-ionized Hydrogen Sulfide	ND		1.0	1.0	mg/L			12/06/22 16:38	1
Field pH	ND		1.0	1.0	SU			12/06/22 16:38	1
Field Temperature	ND		1.0	1.0	Celsius			12/06/22 16:38	1
Specific Conductance	ND		2.0	2.0	umhos/cm			12/06/22 16:38	1
Sulfide	ND		4.0	4.0	mg/L			12/06/22 16:38	1

Metals

Filtration Batch: 594634

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 280-594634/1-B	Method Blank	Potentially Dissolvec	Water	Poten_Diss_Met	
LCS 280-594634/2-B	Lab Control Sample	Potentially Dissolvec	Water	Poten_Diss_Met	

Prep Batch: 594821

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-3	2022-02-FB	Total Recoverable	Water	200.8	
280-169645-4	2022-02-DUPLICATE	Total Recoverable	Water	200.8	
MB 280-594821/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-594821/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
LCSD 280-594821/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	

Filtration Batch: 594843

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Potentially Dissolvec	Water	Poten_Diss_Met	
280-169645-3	2022-02-FB	Potentially Dissolvec	Water	Poten_Diss_Met	
280-169645-4	2022-02-DUPLICATE	Potentially Dissolvec	Water	Poten_Diss_Met	
280-169645-1 MS	2022-02-MS	Potentially Dissolvec	Water	Poten_Diss_Met	
280-169645-1 MSD	2022-02	Potentially Dissolvec	Water	Poten_Diss_Met	

Prep Batch: 594874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Potentially Dissolvec	Water	200.8	594843
280-169645-3	2022-02-FB	Potentially Dissolvec	Water	200.8	594843
280-169645-4	2022-02-DUPLICATE	Potentially Dissolvec	Water	200.8	594843
MB 280-594634/1-B	Method Blank	Potentially Dissolvec	Water	200.8	594634
LCS 280-594634/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	594634
280-169645-1 MS	2022-02-MS	Potentially Dissolvec	Water	200.8	594843
280-169645-1 MSD	2022-02	Potentially Dissolvec	Water	200.8	594843

Prep Batch: 594892

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total Recoverable	Water	200.7	
280-169645-3	2022-02-FB	Total Recoverable	Water	200.7	
280-169645-4	2022-02-DUPLICATE	Total Recoverable	Water	200.7	
MB 280-594892/1-A	Method Blank	Total Recoverable	Water	200.7	
LCS 280-594892/2-A	Lab Control Sample	Total Recoverable	Water	200.7	
280-169645-1 MS	2022-02-MS	Total Recoverable	Water	200.7	
280-169645-1 MSD	2022-02	Total Recoverable	Water	200.7	

Analysis Batch: 595318

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Potentially Dissolvec	Water	200.8	594874
280-169645-3	2022-02-FB	Potentially Dissolvec	Water	200.8	594874
280-169645-3	2022-02-FB	Total Recoverable	Water	200.8	594821
280-169645-4	2022-02-DUPLICATE	Potentially Dissolvec	Water	200.8	594874
280-169645-4	2022-02-DUPLICATE	Total Recoverable	Water	200.8	594821
MB 280-594634/1-B	Method Blank	Potentially Dissolvec	Water	200.8	594874
MB 280-594821/1-A	Method Blank	Total Recoverable	Water	200.8	594821
LCS 280-594634/2-B	Lab Control Sample	Potentially Dissolvec	Water	200.8	594874
LCS 280-594821/2-A	Lab Control Sample	Total Recoverable	Water	200.8	594821
LCSD 280-594821/3-A	Lab Control Sample Dup	Total Recoverable	Water	200.8	594821

Metals (Continued)

Analysis Batch: 595318 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1 MS	2022-02-MS	Potentially Dissolvec	Water	200.8	594874
280-169645-1 MSD	2022-02	Potentially Dissolvec	Water	200.8	594874

Analysis Batch: 595332

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total Recoverable	Water	200.7 Rev 4.4	594892
280-169645-3	2022-02-FB	Total Recoverable	Water	200.7 Rev 4.4	594892
280-169645-4	2022-02-DUPLICATE	Total Recoverable	Water	200.7 Rev 4.4	594892
MB 280-594892/1-A	Method Blank	Total Recoverable	Water	200.7 Rev 4.4	594892
LCS 280-594892/2-A	Lab Control Sample	Total Recoverable	Water	200.7 Rev 4.4	594892
280-169645-1 MS	2022-02-MS	Total Recoverable	Water	200.7 Rev 4.4	594892
280-169645-1 MSD	2022-02	Total Recoverable	Water	200.7 Rev 4.4	594892

Prep Batch: 595442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total/NA	Water	245.1	
280-169645-3	2022-02-FB	Total/NA	Water	245.1	
280-169645-4	2022-02-DUPLICATE	Total/NA	Water	245.1	
MB 280-595442/1-A	Method Blank	Total/NA	Water	245.1	
LCS 280-595442/2-A	Lab Control Sample	Total/NA	Water	245.1	
280-169645-1 MS	2022-02-MS	Total/NA	Water	245.1	
280-169645-1 MSD	2022-02	Total/NA	Water	245.1	

Analysis Batch: 595516

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total/NA	Water	245.1	595442
280-169645-3	2022-02-FB	Total/NA	Water	245.1	595442
280-169645-4	2022-02-DUPLICATE	Total/NA	Water	245.1	595442
MB 280-595442/1-A	Method Blank	Total/NA	Water	245.1	595442
LCS 280-595442/2-A	Lab Control Sample	Total/NA	Water	245.1	595442
280-169645-1 MS	2022-02-MS	Total/NA	Water	245.1	595442
280-169645-1 MSD	2022-02	Total/NA	Water	245.1	595442

Prep Batch: 595529

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total Recoverable	Water	200.8	
MB 280-595529/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 280-595529/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
280-169645-1 MS	2022-02-MS	Total Recoverable	Water	200.8	
280-169645-1 MSD	2022-02	Total Recoverable	Water	200.8	

Analysis Batch: 595811

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total Recoverable	Water	200.8	595529
MB 280-595529/1-A	Method Blank	Total Recoverable	Water	200.8	595529
LCS 280-595529/2-A	Lab Control Sample	Total Recoverable	Water	200.8	595529
280-169645-1 MS	2022-02-MS	Total Recoverable	Water	200.8	595529
280-169645-1 MSD	2022-02	Total Recoverable	Water	200.8	595529

Metals

Prep Batch: 602962

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total/NA	Water	1631E	
280-169645-3	2022-02-FB	Total/NA	Water	1631E	
280-169645-4	2022-02-DUPLICATE	Total/NA	Water	1631E	
MB 400-602962/3-A	Method Blank	Total/NA	Water	1631E	
LCS 400-602962/4-A	Lab Control Sample	Total/NA	Water	1631E	
LCSD 400-602962/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	
280-169645-1 MS	2022-02-MS	Total/NA	Water	1631E	

Analysis Batch: 603035

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total/NA	Water	1631E	602962
280-169645-3	2022-02-FB	Total/NA	Water	1631E	602962
280-169645-4	2022-02-DUPLICATE	Total/NA	Water	1631E	602962
MB 400-602962/3-A	Method Blank	Total/NA	Water	1631E	602962
LCS 400-602962/4-A	Lab Control Sample	Total/NA	Water	1631E	602962
LCSD 400-602962/5-A	Lab Control Sample Dup	Total/NA	Water	1631E	602962
280-169645-1 MS	2022-02-MS	Total/NA	Water	1631E	602962

General Chemistry

Analysis Batch: 594879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total/NA	Water	SM 2510B	
280-169645-3	2022-02-FB	Total/NA	Water	SM 2510B	
280-169645-4	2022-02-DUPLICATE	Total/NA	Water	SM 2510B	
MB 280-594879/5	Method Blank	Total/NA	Water	SM 2510B	
LCS 280-594879/4	Lab Control Sample	Total/NA	Water	SM 2510B	
280-169645-1 DU	2022-02	Total/NA	Water	SM 2510B	

Filtration Batch: 594901

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Dissolved	Water	FILTRATION	
280-169645-3	2022-02-FB	Dissolved	Water	FILTRATION	
280-169645-4	2022-02-DUPLICATE	Dissolved	Water	FILTRATION	
MB 280-594901/3-A	Method Blank	Dissolved	Water	FILTRATION	
LCS 280-594901/1-A	Lab Control Sample	Dissolved	Water	FILTRATION	
LCSD 280-594901/2-A	Lab Control Sample Dup	Dissolved	Water	FILTRATION	
280-169645-1 MS	2022-02-MS	Dissolved	Water	FILTRATION	
280-169645-1 MSD	2022-02	Dissolved	Water	FILTRATION	
280-169645-1 DU	2022-02	Dissolved	Water	FILTRATION	

Analysis Batch: 594929

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total/NA	Water	SM 4500 H+ B	
280-169645-4	2022-02-DUPLICATE	Total/NA	Water	SM 4500 H+ B	
LCS 280-594929/27	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 594932

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Dissolved	Water	SM 3500 CR B	594901
280-169645-1	2022-02	Total/NA	Water	SM 3500 CR B	

General Chemistry (Continued)

Analysis Batch: 594932 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-3	2022-02-FB	Dissolved	Water	SM 3500 CR B	594901
280-169645-3	2022-02-FB	Total/NA	Water	SM 3500 CR B	
280-169645-4	2022-02-DUPLICATE	Dissolved	Water	SM 3500 CR B	594901
280-169645-4	2022-02-DUPLICATE	Total/NA	Water	SM 3500 CR B	
MB 280-594901/3-A	Method Blank	Dissolved	Water	SM 3500 CR B	594901
MB 280-594932/15	Method Blank	Total/NA	Water	SM 3500 CR B	
LCS 280-594901/1-A	Lab Control Sample	Dissolved	Water	SM 3500 CR B	594901
LCS 280-594932/13	Lab Control Sample	Total/NA	Water	SM 3500 CR B	
LCSD 280-594901/2-A	Lab Control Sample Dup	Dissolved	Water	SM 3500 CR B	594901
LCSD 280-594932/14	Lab Control Sample Dup	Total/NA	Water	SM 3500 CR B	
280-169645-1 MS	2022-02-MS	Dissolved	Water	SM 3500 CR B	594901
280-169645-1 MS	2022-02-MS	Total/NA	Water	SM 3500 CR B	
280-169645-1 MSD	2022-02	Dissolved	Water	SM 3500 CR B	594901
280-169645-1 MSD	2022-02	Total/NA	Water	SM 3500 CR B	
280-169645-1 DU	2022-02	Dissolved	Water	SM 3500 CR B	594901
280-169645-1 DU	2022-02	Total/NA	Water	SM 3500 CR B	

Analysis Batch: 594944

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total/NA	Water	SM 2540D	
280-169645-3	2022-02-FB	Total/NA	Water	SM 2540D	
280-169645-4	2022-02-DUPLICATE	Total/NA	Water	SM 2540D	
MB 280-594944/2	Method Blank	Total/NA	Water	SM 2540D	
LCS 280-594944/1	Lab Control Sample	Total/NA	Water	SM 2540D	

Analysis Batch: 595425

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total/NA	Water	SM 4500 S2 D	
280-169645-3	2022-02-FB	Total/NA	Water	SM 4500 S2 D	
280-169645-4	2022-02-DUPLICATE	Total/NA	Water	SM 4500 S2 D	
MB 280-595425/11	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 280-595425/9	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 280-595425/10	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
280-169645-1 MS	2022-02-MS	Total/NA	Water	SM 4500 S2 D	
280-169645-1 MSD	2022-02	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 595679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-3	2022-02-FB	Total/NA	Water	SM 4500 H+ B	
LCS 280-595679/50	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 595772

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total/NA	Water	SM4500 S2 H	
280-169645-3	2022-02-FB	Total/NA	Water	SM4500 S2 H	
280-169645-4	2022-02-DUPLICATE	Total/NA	Water	SM4500 S2 H	
MB 280-595772/6	Method Blank	Total/NA	Water	SM4500 S2 H	

Analysis Batch: 596003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Total Recoverable	Water	SM3500 CR B	

General Chemistry (Continued)

Analysis Batch: 596003 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-3	2022-02-FB	Total Recoverable	Water	SM3500 CR B	
280-169645-4	2022-02-DUPLICATE	Total Recoverable	Water	SM3500 CR B	

Analysis Batch: 596004

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
280-169645-1	2022-02	Potentially Dissolvec	Water	SM3500 CR B	
280-169645-3	2022-02-FB	Potentially Dissolvec	Water	SM3500 CR B	
280-169645-4	2022-02-DUPLICATE	Potentially Dissolvec	Water	SM3500 CR B	

Lab Chronicle

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169645-1

Client Sample ID: 2022-02

Date Collected: 11/28/22 11:30
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	602962	11/30/22 15:10	VLC	EET PEN
							Completed:	12/01/22 09:30 [1]		
Total/NA	Analysis	1631E		1			603035	12/01/22 12:19	VLC	EET PEN
Total Recoverable	Prep	200.7			50 mL	50 mL	594892	11/30/22 14:42	MCR	EET DEN
Total Recoverable	Analysis	200.7 Rev 4.4		1			595332	12/01/22 17:32	KRP	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			250 mL	250 mL	594843	11/28/22 22:30	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	594874	11/30/22 07:50	LJS	EET DEN
Potentially Dissolvec	Analysis	200.8		1			595318	12/01/22 22:32	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	595529	12/06/22 07:58	LJS	EET DEN
Total Recoverable	Analysis	200.8		1			595811	12/06/22 22:14	LRD	EET DEN
Total/NA	Prep	245.1			30 mL	50 mL	595442	12/03/22 13:04	PFM	EET DEN
Total/NA	Analysis	245.1		1			595516	12/03/22 18:15	PFM	EET DEN
Total/NA	Analysis	SM 2510B		1			594879	11/29/22 09:45	KEG	EET DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	594944	11/29/22 13:22	ASP	EET DEN
Dissolved	Filtration	FILTRATION			2 mL	2 mL	594901	11/29/22 10:37	LRB	EET DEN
Dissolved	Analysis	SM 3500 CR B		1	2 mL	2 mL	594932	11/29/22 11:04	LRB	EET DEN
Total/NA	Analysis	SM 3500 CR B		1	2 mL	2 mL	594932	11/29/22 10:59	LRB	EET DEN
Total/NA	Analysis	SM 4500 H+ B		1			594929	11/29/22 11:57	KEG	EET DEN
Total/NA	Analysis	SM 4500 S2 D		1	2 mL	2 mL	595425	12/02/22 15:05	LRB	EET DEN
Potentially Dissolvec	Analysis	SM3500 CR B		1			596004	12/08/22 09:24	DNM	EET DEN
Total Recoverable	Analysis	SM3500 CR B		1			596003	12/08/22 09:22	DNM	EET DEN
Total/NA	Analysis	SM4500 S2 H		1			595772	12/06/22 16:38	ZPM	EET DEN

Client Sample ID: 2022-02-FB

Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	602962	11/30/22 15:10	VLC	EET PEN
							Completed:	12/01/22 09:30 [1]		
Total/NA	Analysis	1631E		1			603035	12/01/22 12:34	VLC	EET PEN
Total Recoverable	Prep	200.7			50 mL	50 mL	594892	11/30/22 14:42	MCR	EET DEN
Total Recoverable	Analysis	200.7 Rev 4.4		1			595332	12/01/22 18:03	KRP	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			250 mL	250 mL	594843	11/28/22 22:30	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	594874	11/30/22 07:50	LJS	EET DEN
Potentially Dissolvec	Analysis	200.8		1			595318	12/01/22 22:38	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	594821	11/30/22 07:50	LJS	EET DEN
Total Recoverable	Analysis	200.8		1			595318	12/01/22 22:02	LMT	EET DEN
Total/NA	Prep	245.1			30 mL	50 mL	595442	12/03/22 13:04	PFM	EET DEN
Total/NA	Analysis	245.1		1			595516	12/03/22 18:28	PFM	EET DEN
Total/NA	Analysis	SM 2510B		1			594879	11/29/22 09:45	KEG	EET DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	594944	11/29/22 13:22	ASP	EET DEN
Dissolved	Filtration	FILTRATION			2 mL	2 mL	594901	11/29/22 10:37	LRB	EET DEN
Dissolved	Analysis	SM 3500 CR B		1	2 mL	2 mL	594932	11/29/22 11:06	LRB	EET DEN

Lab Chronicle

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169645-1

Client Sample ID: 2022-02-FB

Date Collected: 11/28/22 11:35
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 3500 CR B		1	2 mL	2 mL	594932	11/29/22 11:01	LRB	EET DEN
Total/NA	Analysis	SM 4500 H+ B		1			595679	12/05/22 17:38	KEG	EET DEN
Total/NA	Analysis	SM 4500 S2 D		1	2 mL	2 mL	595425	12/02/22 15:06	LRB	EET DEN
Potentially Dissolvec	Analysis	SM3500 CR B		1			596004	12/08/22 09:24	DNM	EET DEN
Total Recoverable	Analysis	SM3500 CR B		1			596003	12/08/22 09:22	DNM	EET DEN
Total/NA	Analysis	SM4500 S2 H		1			595772	12/06/22 16:38	ZPM	EET DEN

Client Sample ID: 2022-02-DUPLICATE

Date Collected: 11/28/22 11:40
Date Received: 11/28/22 16:07

Lab Sample ID: 280-169645-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	1631E			40 mL	40 mL	602962	11/30/22 15:10	VLC	EET PEN
							Completed:	12/01/22 09:30 [1]		
Total/NA	Analysis	1631E		1			603035	12/01/22 12:41	VLC	EET PEN
Total Recoverable	Prep	200.7			50 mL	50 mL	594892	11/30/22 14:42	MCR	EET DEN
Total Recoverable	Analysis	200.7 Rev 4.4		1			595332	12/01/22 18:07	KRP	EET DEN
Potentially Dissolvec	Filtration	Poten_Diss_Met			250 mL	250 mL	594843	11/28/22 22:30	LRD	EET DEN
Potentially Dissolvec	Prep	200.8			50 mL	50 mL	594874	11/30/22 07:50	LJS	EET DEN
Potentially Dissolvec	Analysis	200.8		1			595318	12/01/22 22:40	LMT	EET DEN
Total Recoverable	Prep	200.8			50 mL	50 mL	594821	11/30/22 07:50	LJS	EET DEN
Total Recoverable	Analysis	200.8		1			595318	12/01/22 22:04	LMT	EET DEN
Total/NA	Prep	245.1			30 mL	50 mL	595442	12/03/22 13:04	PFM	EET DEN
Total/NA	Analysis	245.1		1			595516	12/03/22 18:31	PFM	EET DEN
Total/NA	Analysis	SM 2510B		1			594879	11/29/22 09:45	KEG	EET DEN
Total/NA	Analysis	SM 2540D		1	250 mL	250 mL	594944	11/29/22 13:22	ASP	EET DEN
Dissolved	Filtration	FILTRATION			2 mL	2 mL	594901	11/29/22 10:37	LRB	EET DEN
Dissolved	Analysis	SM 3500 CR B		1	2 mL	2 mL	594932	11/29/22 11:21	LRB	EET DEN
Total/NA	Analysis	SM 3500 CR B		1	2 mL	2 mL	594932	11/29/22 11:02	LRB	EET DEN
Total/NA	Analysis	SM 4500 H+ B		1			594929	11/29/22 12:07	KEG	EET DEN
Total/NA	Analysis	SM 4500 S2 D		1	2 mL	2 mL	595425	12/02/22 15:06	LRB	EET DEN
Potentially Dissolvec	Analysis	SM3500 CR B		1			596004	12/08/22 09:24	DNM	EET DEN
Total Recoverable	Analysis	SM3500 CR B		1			596003	12/08/22 09:22	DNM	EET DEN
Total/NA	Analysis	SM4500 S2 H		1			595772	12/06/22 16:38	ZPM	EET DEN

[1] Completion dates and times are reported or not reported per method requirements or individual lab discretion.

Laboratory References:

EET DEN = Eurofins Denver, 4955 Yarrow Street, Arvada, CO 80002, TEL (303)736-0100

EET PEN = Eurofins Pensacola, 3355 McLemore Drive, Pensacola, FL 32514, TEL (850)474-1001

Accreditation/Certification Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169645-1

Laboratory: Eurofins Denver

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
A2LA	Dept. of Defense ELAP	2907.01	10-31-23
A2LA	ISO/IEC 17025	2907.01	10-31-23
Alabama	State Program	40730	09-30-12 *
Alaska (UST)	State	18-001	02-08-23
Arizona	State	AZ0713	12-20-22
Arkansas DEQ	State	19-047-0	05-31-23
California	State	2513	01-08-23
Connecticut	State	PH-0686	09-30-22 *
Florida	NELAP	E87667-57	06-30-23
Georgia	State	4025-011	01-08-23
Illinois	NELAP	2000172019-1	04-30-23
Iowa	State	IA#370	12-01-24
Kansas	NELAP	E-10166	04-30-23
Kentucky (WW)	State	KY98047	12-31-22
Louisiana	NELAP	30785	06-30-14 *
Louisiana	NELAP	30785	06-30-23
Louisiana (All)	NELAP	30785	06-30-23
Minnesota	NELAP	1788752	12-31-22
Nevada	State	CO000262020-1	07-31-23
New Hampshire	NELAP	205319	04-28-23
New Jersey	NELAP	190002	06-30-23
New York	NELAP	59923	04-01-23
North Carolina (WW/SW)	State	358	12-31-22
North Dakota	State	R-034	01-08-23
Oklahoma	NELAP	8614	08-31-23
Oregon	NELAP	4025-011	01-09-23
Pennsylvania	NELAP	013	07-31-23
South Carolina	State	72002001	01-08-23
Texas	NELAP	TX104704183-08-TX	09-30-09 *
Texas	NELAP	T104704183-21-19	09-30-23
US Fish & Wildlife	US Federal Programs	058448	07-31-23
USDA	US Federal Programs	P330-20-00065	03-06-23
Utah	NELAP	QUAN5	06-30-13 *
Utah	NELAP	CO000262019-11	07-31-23
Virginia	NELAP	10490	06-14-23
Washington	State	C583-19	08-03-23
Wisconsin	State	999615430	08-31-23

Laboratory: Eurofins Pensacola

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alabama	State	40150	06-30-23
ANAB	ISO/IEC 17025	L2471	02-23-23
Arkansas DEQ	State	88-0689	09-01-23
California	State	2510	06-30-23
Florida	NELAP	E81010	06-30-23
Georgia	State	E81010(FL)	06-30-23
Illinois	NELAP	200041	10-09-23
Kansas	NELAP	E-10253	10-31-23

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Accreditation/Certification Summary

Client: GS Mining Company LLC
Project/Site: Nederland, CO

Job ID: 280-169645-1

Laboratory: Eurofins Pensacola (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Kentucky (UST)	State	53	06-30-23
Kentucky (WW)	State	KY98030	12-31-22
Louisiana (All)	NELAP	30976	06-30-23
Louisiana (DW)	State	LA017	12-31-22
Maryland	State	233	09-30-23
Michigan	State	9912	06-30-23
North Carolina (WW/SW)	State	314	12-31-22
Oklahoma	NELAP	9810	08-31-23
Pennsylvania	NELAP	68-00467	01-31-23
South Carolina	State	96026	06-30-23
Tennessee	State	TN02907	06-30-23
Texas	NELAP	T104704286	09-30-23
US Fish & Wildlife	US Federal Programs	A22340	06-30-23
USDA	US Federal Programs	P330-21-00056	05-17-24
Virginia	NELAP	460166	06-14-23
West Virginia DEP	State	136	03-31-23

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing America

12/8/2022

Client Information	Sampler: Brooke Moran	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No:
Client Contact: ~~Patrick Delaney~~ Brooke Moran	Phone: 303-506-1618	E-Mail: Dylan.Bieniulis@Eurofinset.com	State of Origin:	Page:
Company: Grand Island Resources	PWSID:			Job #:
Address: 12567 West Cedar Road Suite 250	Due Date Requested:			
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80466	Compliance Project: Δ Yes Δ No			
Phone: ~~612-342-8445~~ 303-506-1618	PO #: Advance Payment Required			
Email: bmolsonm@g.emporia.edu ~~pdelaney@blackfoxmining.com~~ sergio.rivera@novametallix.com	WO #:			
Project Name: ~~Wastewater Discharge - Nederland, CO~~	Project #: 28022821			
Site: Surface Water Sampling	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	2510B - Specific Conductance, 2540D - TSS, SM4500_H+ - pH / Temp	3500_CR_B - Total Hexavalent Cr and Trivalent Cr (calc)	3500_CR_B - Dissolved Hexavalent Cr (LAB FILTER) and Potentially Dissolved Trivalent Cr (calc)	SM4500_S2_D - Sulfide and SM3500_S2_H - Unionized Hydrogen Sulfide (calc)	1631E - Low Level Mercury (ETA Pensacola)	200.8 - Potentially Dissolved Metals (First half of the month permit list)	200.7 / 200.8 / 245.1 - Total Recoverable Metals and Mercury (First half of the month permit list)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	CB	N	D	D		
2022-02	11/28/22	11:30	G	W	N		X	X	X	X	X	X	X	8	* Surface water potentially dissolved metals permit list = 200.8 (As, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Zn)
2022-02-MS	11/28/22	11:30	G	W	N	Y	X	X	X	X	X	X	X	8	
2022-02-FB	11/28/22	11:35	G	W	N		X	X	X	X	X	X	X	8	*Surface water total recoverable metals list = 200.7 (Fe), 200.8 (As, Cd, Cr, Cu, Pb, Zn), and 245.1 (Hg)
2022-02-DUPLICATE	11/28/22	11:40	G	W	N		X	X	X	X	X	X	X	8	
															pH = 8.5
															Temp = 2.6°C

280-169645 Chain of Custody

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☒ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
~~Relinquished by:~~	16:07 11/28/22	GIR	Jeff Camp	11/28/22 1607	ETA-DEN
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: Sealed Tape | Cooler Temperature(s) °C and Other Remarks: IR#12 Temp. 1.9 CF (0.0)

Ver: 01/16/2019

Eurofins Denver
4955 Yarrow Street
Arvada, CO 80002
Phone: 303-736-0100 Fax: 303-431-7171

Chain of Custody Record

eurofins | Environment Testing

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No: 280-637707.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Dylan.Bieniulis@et.eurofinsus.com	State of Origin: Colorado	Page: Page 1 of 1
Company: Eurofins Environment Testing Southeast,		Accreditations Required (See note):		Job #: 280-169645-1
Address: 3355 McLemore Drive, ,	Due Date Requested: 12/12/2022			
City: Pensacola	TAT Requested (days):			
State, Zip: FL, 32514				
Phone: 850-474-1001(Tel) 850-478-2671(Fax)	PO #:			
Email:	WO #:			
Project Name: Nederland, CO	Project #: 28022821			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL
B - NaOH
C - Zn Acetate
D - Nitric Acid
E - NaHSO4
F - MeOH
G - Amchlor
H - Ascorbic Acid
I - Ice
J - DI Water
K - EDTA
L - EDA

M - Hexane
N - None
O - AsNaO2
P - Na2O4S
Q - Na2SO3
R - Na2S2O3
S - H2SO4
T - TSP Dodecahydrate
U - Acetone
V - MCAA
W - pH 4-5
Y - Trizma
Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	1631E/1631E_Prep	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
2022-02 (280-169645-1)	11/28/22	11:30 Mountain		Water			X	2	
2022-02-MS (280-169645-1MS)	11/28/22	11:30 Mountain	MS	Water			X	2	
2022-02-FB (280-169645-3)	11/28/22	11:35 Mountain		Water			X	2	
2022-02-DUPLICATE (280-169645-4)	11/28/22	11:40 Mountain		Water			X	2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins TestAmerica.

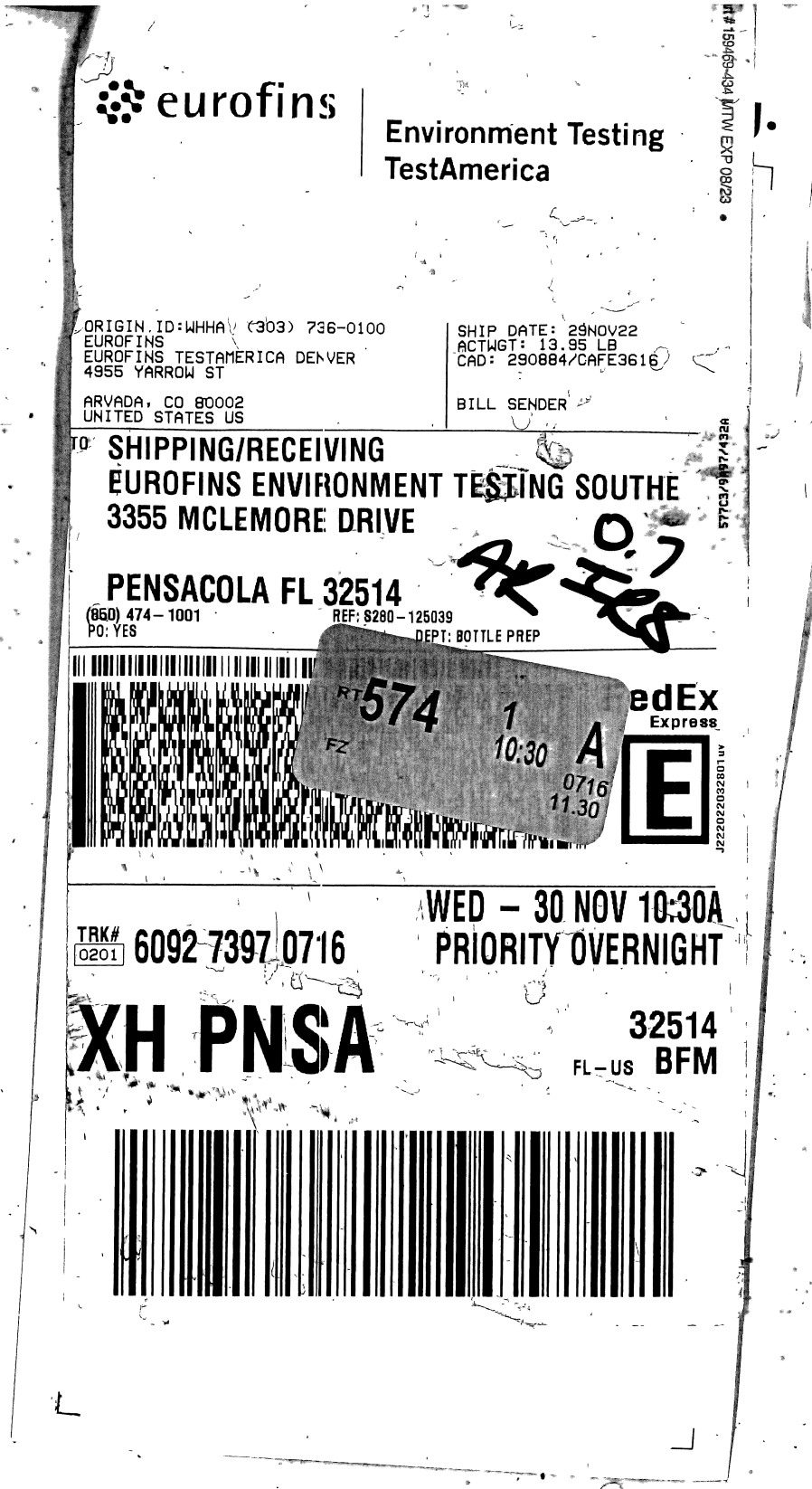
Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/29/22 15:00	ETADEN			
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 11-30-22 / 959	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 0.7°C IR8

Ver: 06/08/2021



eurofins | Environment Testing TestAmerica

ORIGIN ID:WHHA (303) 736-0100
EUROFINS
EUROFINS TESTAMERICA DENVER
4955 YARROW ST

ARVADA, CO 80002
UNITED STATES US

SHIP DATE: 29NOV22
ACTWGT: 13.95 LB
CAD: 290884/CAFE3616

BILL SENDER

TO SHIPPING/RECEIVING
EUROFINS ENVIRONMENT TESTING SOUTHE
3355 MCLEMORE DRIVE

PENSACOLA FL 32514
(850) 474-1001
PO: YES

REF: S280-125039
DEPT: BOTTLE PREP

AK 0.7 lbs

RT 574 1 10:30 A
FZ 0716 11.30

FedEx Express

J222022032801uv

TRK# 0201 6092 7397 0716

WED - 30 NOV 10:30A
PRIORITY OVERNIGHT

XH PNSA

32514
FL-US BFM

577C3/9837/432A

15649-434 WTW EXP 08/23

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-169645-1

Login Number: 169645
List Number: 1
Creator: Naylis, Patrick J

List Source: Eurofins Denver

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	False	CONTAINER RECEIVED EMPTY...SEE NARRATION
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: GS Mining Company LLC

Job Number: 280-169645-1

Login Number: 169645
List Number: 2
Creator: Whitley, Adrian

List Source: Eurofins Pensacola
List Creation: 11/30/22 12:19 PM

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	0.7°C IR8
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

APPENDIX C.3 DECEMBER 2022 SURFACE WATER ANALYTICAL RESULTS

No observable flow, therefore no samples collected.

APPENDIX D CHAIN OF CUSTODY (COC) FORMS

Eurofins TestAmerica, Denver
4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information For this project,	Sampler: BM	Lab PM: Bieniulis, Dylan T	Carrier Tracking No(s):	COC No:
Client Contact: [redacted] Brooke Moran	Phone: 303-506-1618	E-Mail: Dylan.Bieniulis@Eurofinset.com	State of Origin:	Page:
Company: Grand Island Resources	PWSID:			Job #:
Address: 12567 West Cedar Road Suite 250	Due Date Requested:			
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80466	Compliance Project: Δ Yes Δ No			
Phone: [redacted] 303-5061618	PO #: Advance Payment Required			
Email: [redacted] sergioriver a@novametal ix.com & bmolsonm @g.emporia.edu	WO #:			
Project Name: [redacted] Surface Water Nederland, CO	Project #: 28022821			
Site: Surface Water Sampling	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2O3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - pH 4-5; Z - other (specify)
Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Solid, Oil=Waste, BT=Tissue, Air=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	25108 - Specific Conductance, 2540D - TSS, SM4500_H+ - pH / Temp	3500_CR_B - Total Hexavalent Cr and Trivalent Cr (calc)	3500_CR_B - Dissolved Hexavalent Cr (LAB FILTER) and Potentially Dissolved Trivalent Cr (calc)	SM4500_S2_D - Sulfide and SM4500_S2_H - Unionized Hydrogen Sulfide (calc)	1631E - Low Level Mercury (ETA Peristaltic)	200.8 - Potentially Dissolved Metals (First half of the month permit list)	200.7 / 200.8 / 245.1 - Total Recoverable Metals and Mercury (First half of the month permit list)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				N	N	N	CB	N	D	D		
2022-02	10/26/22	13:00	G	W	N		X	X	X	X	X	X	X	10	* Surface water potentially dissolved metals permit list = 200.8 (As, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, Zn)
2022-02-MS	10/26/22	13:00	G	W	N	Y	X	X	X	X	X	X	X	10	
2022-02-FB	10/26/22	13:10	G	W	N		X	X	X	X	X	X	X	10	*Surface water total recoverable metals list = 200.7 (Fe), 200.8 (As, Cd, Cr, Cu, Pb, Zn), and 245.1 (Hg)
2022-02-DUPLICATE	10/26/22	13:15	G	W	N		X	X	X	X	X	X	X	10	2022-02
															pH = 8.3
															temp = 5°C

280-168251 Chain of Custody

Possible Hazard Identification
X Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab X Archive For 1 Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment:	
Relinquished by:	Date/Time: 3:42pm 10/26/22	Company	Received by:	Date/Time: 10/26/22 1542	Company Stokb
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 5.4 IR12 C-TUN

Ver: 01/16/2019

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Maran	Contact Name:	
Address: 12567 W. Cedar Dr	Address:	Task Number (Lab Use Only)
City Lakewood State CO Zip 80228	City State Zip	
Phone: 303-506-1618	Phone:	
Email: bmolsonm@g.emporia.edu	Email:	
~~Sample Collector: Brooke Maran~~		
Sample Collector Phone: 303-506-1618	PO No.:	

Please also email results to:
sergio.rivera@novametallix.com

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Tests Requested

QB022050014
TO BE UPDATED BASED ON EMAIL TO JENNIFER KANMORE ON 10/27/22

Date	Time	Sample ID	No. of Containers	Grab or Composite (Check One Only)
10/27/22	11:30	CROSS PORTAL	8	G
10/27/22	12:30	COMPLIANCE WELL	8	G
10/27/22	12:00	CROSS WELL	8	G
10/27/22	13:00	CARIBOU PORTAL	8	G
10/27/22	14:00	CARIBOU WELL	8	G
10/27/22	12:30	COMPLIANCE WELL-FB	8	G

Instructions: FIELD FILTERED THE NITRIC PRESERVED BOTTLE FOR COMPLIANCE WELL, CROSS WELL, & CARIBOU WELL. ALL OTHER BOTTLES ARE UNFILTERED.

C/S Info:
Deliver Via:
C/S Charge ☐

Seals Present Yes ☐ No ☐
Temp. °C/Ice
Sample Pres. Yes ☐ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:

National Testing Laboratories, Ltd.
Quality Water Analysis

1-800-458-3330

General Compliance

Order Number: 2204813
Order Date: 10/4/2022
Sample Number:
Product: Custom Compliance
Paid: No **Payment Method:** **P.O.:**
TSR: EF

Sold To:
Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood CO 80228
303-506-1618
bmolsonm@g.emporia.edu

Date Sampled: 10/27/22

Time Sampled: Please see below
Please Use Military Time, e.g. 3:00pm = 15:00

Check Time Zone: ☐ EST ☐ CST ☒ MST ☐ PST

Client Name: Grand Island Resources

Phone Number: 303-506-1618

Fax Number:

PWS ID# (if applicable):

Sample ID or Source: please see below

Source Type: ☐ Spring ☐ Well ☐ Municipal ☐ Surface
☒ Other: groundwater

City & State: Nederland, COLORADO
(If Different than Above)

Sample Collected By: Brooke Moran
(Signature)

Sample Collected By: Brooke Moran
(Please Print)

Form Completed By: Brooke Moran

11:30 CROSS PORTAL
12:30 COMPLIANCE WELL
12:00 CROSS WELL
13:00 CARIBOU PORTAL
14:00 CARIBOU WELL

For Laboratory Use ONLY

Lab Accounting Information:
Payment $:
Check #:

Lab Comments/Special Instructions:

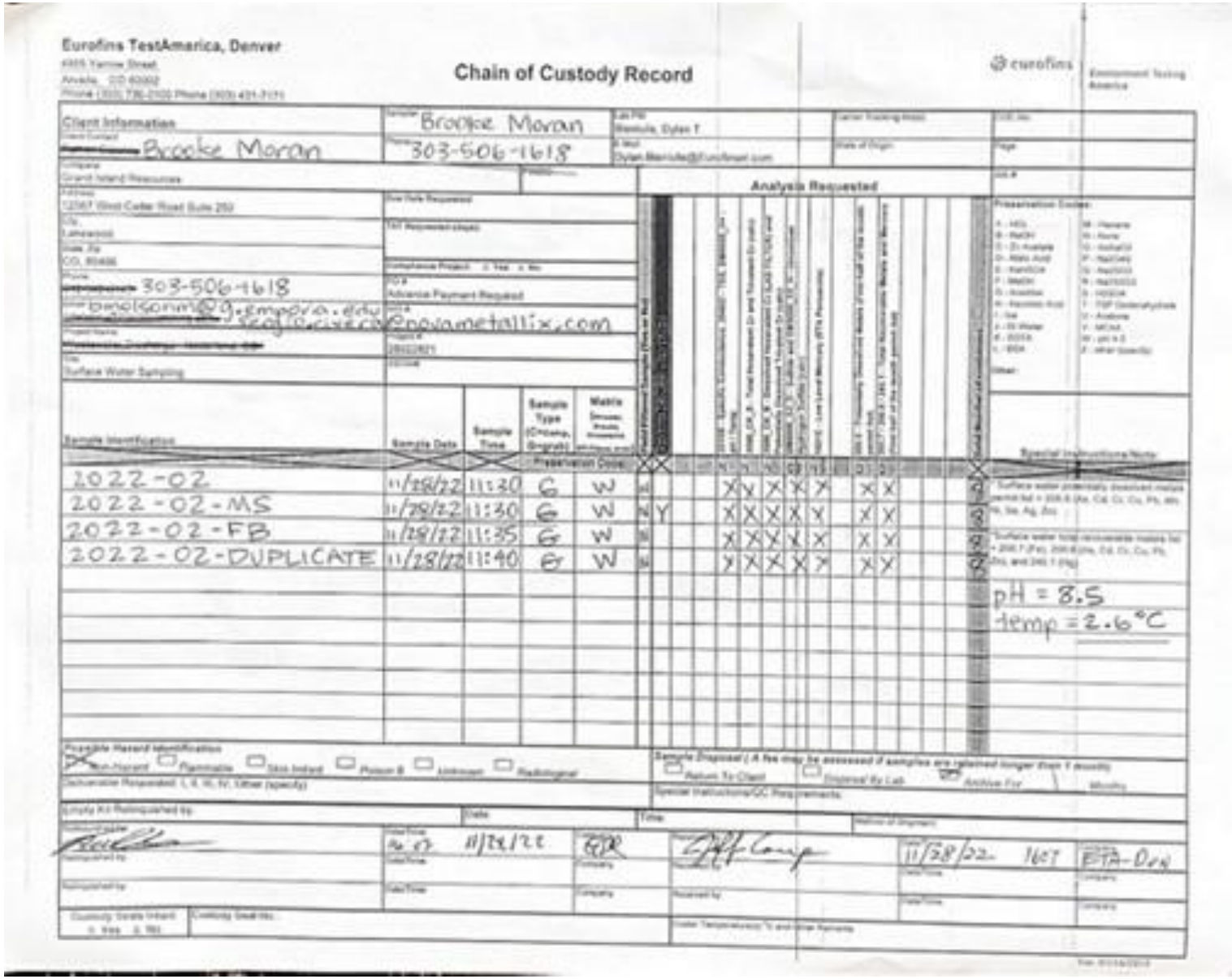
Color, Odor, Foaming Agents

State Forms:

Lab Sample Information:
Date Received: ____/____/____
Time Received: ____:____
Received By:

☐ Sample receipt criteria checked & acceptable.
☐ Deviations from acceptable sample receipt criteria noted on PSA form.

Rev: SRT102120 **INCOMPLETE INFORMATION MAY DELAY ANALYSIS AND/OR INVALIDATE RESULTS**



Eurofins TestAmerica, Denver

4955 Yarrow Street
Arvada, CO 80002
Phone (303) 736-0100 Phone (303) 431-7171

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: Brooke Moran	Lab PM: Westhuis, Dylan T	Carrier Tracking No(s):	COC No:
Client Contact: Brooke Moran	Phone: 303-506-1618	E-Mail: Dylan.Westhuis@EurofinsUS.com	State of Origin:	Page:
Company: Grand Island Resources				Job #:
Address: 12067 West Cedar Road Suite 250	Due Date Requested:			
City: Lakewood	TAT Requested (days):			
State, Zip: CO, 80228	Compliance Project: ☐ Yes ☐ No			
Phone: 303-506-1618	PO #: Advance Payment Required			
Email: pnolson@gmail.com, brooke.moran@pavametallix.com	WO #:			
Project Name:	Project #: 28022021			
Site: Surface Water Sampling	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2SO3, Q - Na2S2O3, R - NaHSO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify), Other:

Special Instructions/Note:

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code:	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	200.8 - Dissolved Cu, Pb, Zn	pH - Field Measurement (SM 4500-H+ B)	200.8 - Total Recoverable Cu, Pb, Zn	200.8 - Dissolved Hardness (Ca and Mg)	200.8 - Total Recoverable Hardness (Ca and Mg)	Hardness (SM 2340B) - Calculation	Alkalinity (SM 2320B)	200.7 - Preliminary Screening Metals (Fe and Mn)	200.7 - Total Recoverable Metals (Fe and Mn)	Total Number of containers	
2022-02	11/28/22	11:30	G	W		N	N	X	X	X	X	X	X	X	X	X	12	
2022-02-MS	11/28/22	11:30	G	W		N	Y	X	X	X	X	X	X	X	X	X	12	
2022-02-FB	11/28/22	11:35	G	W		N	N	X	X	X	X	X	X	X	X	X	12	
2022-02-DUPLICATE	11/28/22	11:40	G	W		N	N	X	X	X	X	X	X	X	X	X	12	

pH = 8.5
temp = 2.6°C

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return To Client ☐ Disposal By Lab ☐ Archive For ___ Months

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 11/28/22	Company: EDR	Received by:	Date/Time: 11/28/22 1617	Company: ETA-Den
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		

Form 9-1124-0210

Chain of Custody Form

Colorado Analytical Laboratories, Inc.

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Mason	Contact Name:	
Address: 12867 W. Cedar Dr.	Address:	Task Number (Lab Use Only)
City: Lakewood State: CO Zip: 80228	City State Zip	
Phone: 303-506-1618	Phone:	
Email: bmasson@grandislandres.com	Email: regionwest@grandislandres.com	
Sample Collector: BM		
Sample Collector Phone: 303-506-1618	PO No.:	

Sample Matrix (Select One Only)			No. of Containers	Grab or (Check One Only) Composite	Tests Requested
Waste Water ☐	Soil ☐	Drinking Water ☐			9B02 2050014 UPDATED 10/27/22
Ground Water ☑	Sludge ☐				
Surface Water ☐					

Date	Time	Sample ID			
11/14/22	11:10	CROSS PORTAL	9	G	
11/14/22	11:30	CROSS WELL	9	G	
11/14/22	12:10	COMPLIANCE WELL	9	G	
11/14/22	12:00	COMPLIANCE WELL - FB	9	G	
11/14/22	12:30	CARIBOU PORTAL	9	G	
11/14/22	12:50	CARIBOU PORTAL - FB	9	G	
11/14/22	13:30	CARIBOU WELL	9	G	

Instructions: WELL FILTERED FOR U/NITRICK CROSS ALPHA. OTHER BOTTLES NOT FILTERED

COA Info: Deliver Via: HD COA Charge ☐

Seals Present Yes ☐ No ☐ Temp. °C/Rec. Y Sample Pres. Yes ☐ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
	12/7/22	HA	11/14/22 1630				

National Testing Laboratories, Ltd.
Quality Water Analysis
1-800-458-3330

General Compliance

Order Number: 2207450
Order Date: 11/11/2022
Sample Number:
Product: Custom Compliance
Paid: No **Payment Method:** **P.O.:**
TSR: EF

Sold To:
Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood CO 80228
303-506-1618
bmolsonm@g.emporia.edu

Date Sampled: 11/29/22
Time Sampled: see below Please Use Military Time, e.g. 3:00pm = 15:00
Check Time Zone: ☐ EST ☐ CST ☒ MST ☐ PST
Client Name: See above
Phone Number:
Fax Number: n/a

PWS ID# (if applicable): n/a
Sample ID or Source: see below
Source Type: ☐ Spring ☐ Well ☐ Municipal ☐ Surface
☒ Other: Groundwater & Mine Effluent
City & State: Nederland, CO
(If Different than Above)

Sample Collected By: Brooke Moran
(Signature)
Sample Collected By: Brooke Moran
(Please Print)
Form Completed By: Brooke Moran

SAMPLE ID'S:
11:00 CROSS PORTAL
11:30 CROSS WELL
12:00 COMPLIANCE WELL
12:00 COMPLIANCE WELL-FB
12:30 CARIBOU PORTAL
12:30 CARIBOU PORTAL-FB
13:30 CARIBOU WELL

For Laboratory Use ONLY

Lab Accounting Information:
Payment $:
Check #:

Lab Comments/Special Instructions:
Color, Order & Foaming Agents

State Forms:

Lab Sample Information:
Date Received: ____/____/____
Time Received: ____:____
Received By:
☐ Sample receipt criteria checked & acceptable.
☐ Deviations from acceptable sample receipt criteria noted on PSA form.

Rev: SRT102120 **INCOMPLETE INFORMATION MAY DELAY ANALYSIS AND/OR INVALIDATE RESULTS**

Chain of Custody Form

Colorado Analytical LABORATORIES, INC

Commerce City Lab
10411 Heinz Way
Commerce City CO 80640

Lakewood Service Center
12860 W. Cedar Dr, Suite 100A
Lakewood CO 80228

Phone: 303-659-2313

www.coloradolab.com

Report To Information	Bill To Information (If different from report to)	Project Name / Number
Company Name: Grand Island Resources	Company Name: Credit Card	
Contact Name: Brooke Moran	Contact Name:	
Address: 12567 W. Cedar Dr Ste. 250	Address:	Task Number (Lab Use Only)
City Lakewood State CO Zip 80228	City State Zip	
Phone: 303-506-1618	Phone:	
Email: sergio.rivera@novamethanol.com brooke.mg@colorado.edu	Email: ix.com	
Sample Collector: BM		
Sample Collector Phone: 303-506-1618	PO No.:	

Sample Matrix (Select One Only)

Waste Water ☐ Soil ☐ Drinking Water ☐
Ground Water ☒ Sludge ☐
Surface Water ☐

Date	Time	Sample ID (FIELD PH)	No. of Containers	Grab or (Check One Only) Composite	Tests Requested: QB0220501014 (updated 10/27/22)
12/20/22	13:00	CROSS WELL	9	G	
12/20/22	13:30	COMPLIANCE WELL	9	G	
12/20/22	13:30	COMPLIANCE WELL-FB	9	G	
12/20/22	11:30	CARIBOU WELL	9	G	
12/20/22	12:15	CROSS PORTAL	9	G	
12/20/22	11:15	CARIBOU PORTAL	9	G	
12/20/22	11:15	CARIBOU PORTAL-FB	9	G	

Instructions: FIELD FILTERED FOR NITRIC & GROSS ALPHA

C/S Info: HD
Deliver Via: C/S Charge ☐

Seals Present Yes ☐ No ☐
Temp. °C/Ice Y Sample Pres. Yes ☐ No ☐

Relinquished By:	Date/Time:	Received By:	Date/Time:	Relinquished By:	Date/Time:	Received By:	Date/Time:
BM	12/20/22 17:14	DM	12-20-22 1715				

National Testing Laboratories, Ltd.
Quality Water Analysis

1-800-458-3330

General Compliance

Order Number: 2207451
Order Date: 11/11/2022
Sample Number:
Product: Custom Compliance
Paid: No **Payment Method:** **P.O.:**
TSR: EF

Sold To:
Grand Island Resources
Brooke Moran
12567 West Cedar Rd
Lakewood CO 80228
303-506-1618
bmolsonm@g.emporia.edu

Date Sampled: 12/20/22

Time Sampled: see below Please Use Military Time, e.g. 3:00pm = 15:00

Check Time Zone: ☐ EST ☐ CST ☒ MST ☐ PST

Client Name: Grand Island Resources

Phone Number: 303-506-1618

Fax Number: n/a

PWS ID# (if applicable): n/a

Sample ID or Source: see below

Source Type: ☐ Spring ☒ Well ☐ Municipal ☐ Surface
☒ Other: mine effluent

City & State: Nederland, CO
(If Different than Above)

Sample Collected By: Brooke Moran
(Signature)

Sample Collected By: Brooke Moran
(Please Print)

Form Completed By: Brooke Moran

SAMPLE ID'S:

CROSS PORTAL	12:15
CROSS WELL	13:00
COMPLIANCE WELL	13:30
COMPLIANCE WELL - FB	13:30
CARIBOU PORTAL	11:15
CARIBOU PORTAL - FB	11:15
CARIBOU WELL	11:30

For Laboratory Use ONLY

Lab Accounting Information:
Payment $:_____
Check #:_____

Lab Comments/Special Instructions:
Color, Order & Foaming Agents

State Forms:

Lab Sample Information:
Date Received:_____/_____/_____
Time Received:_____:_____
Received By:_____
☐ Sample receipt criteria checked & acceptable.
☐ Deviations from acceptable sample receipt criteria noted on PSA form.

Rev: SRT102120

INCOMPLETE INFORMATION MAY DELAY ANALYSIS AND/OR INVALIDATE RESULTS

APPENDIX E FIELD SHEETS

SURFACE WATER SAMPLING DATA SHEET

SWAMP Field Data Sheet (Water Chemistry & Discrete Probe) - EventType=WQ

TRQI BOARD (1-8, Jul 20 08) | Entered in dbase (mm/dd/yy): n/a | Pg 1 of 1 Pgs

*StationID: 2022-01	*Date (mm/dd/yyyy): 10/26/2022		*Group: n/a		*Agency: n/a
*Funding: n/a	ArrivalTime: 15:20	DepartureTime: 15:36	*SampleTime (1st sample): n/a		*Protocol: n/a
*Personnel: BM	*Purpose (circle all that apply): WaterChem WaterTox FieldObs FieldMeasure			*PurposeFailure: n/a	

*Location: (Bank) Thalweg Midchannel OpenWater

*GPS/DGPS	Lat (dd.ddddd)	Long (ddd.ddddd)
Target:	39.97904	-105.57585
*Actual:	39.978993	-105.575798

GPS Device: GPS Waypoints App | Datum: NAD83 | Accuracy (ft) (m): 1.20

OCCUPATION METHOD: (Walk-in) Bridge R/V _____ Other

STARTING BANK (facing downstream) (LB) / RB / NA

Point of Sample (if Integrated, then -88 in dbase)

Field Observations (SampleType = FieldObs)

WADEABILITY: Y / N / Unk: n/a

BEAUFORT SCALE (see attachment): 4

DISTANCE FROM BANK (m): n/a

STREAM WIDTH (m): n/a

WATER DEPTH (m): n/a

SITE ODOR: (None) Sulfides, Sewage, Petroleum, Mixed, Other

SKY CODE: Clear, (Partly Cloudy) Overcast, Fog

WIND DIRECTION (from):

HYDROMODIFICATION: (None) Bridge, Pipes, ConcreteChannel, GradeControl, Culvert, AerialZipline, Other n/a | LOCATION (to sample): US / DS / WI /

OTHERPRESENCE: n/a Vascular, Nonvascular, OilySheen, Foam, Trash, Other

DOMINANTSUBSTRATE: Bedrock, Concrete, (Cobble) Gravel, Sand, Mud, Unk, Other

PHOTOS (RB & LB assigned when facing downstream; RENAME to StationCode_yyyy_mm_dd_uniquecode):
1: (RB / LB / BB / US / DS / ###) OCT-2022-01-above
2: (RB / LB / BB / US / DS / ###) OCT-2022-01-west
OCT-2022-01-west2
OCT-2022-01-north
3: (RB / LB / BB / US / DS / ###) OCT-2022-01-south

WATERCLARITY: n/a Clear (see bottom), Cloudy (>4" vis), Murky (<4" vis)

PRECIPITATION: None, Fog, Drizzle, Rain, (Snow)

WATERODOR: n/a None, Sulfides, Sewage, Petroleum, Mixed, Other

PRECIPITATION (last 24 hrs): Unknown, (<1"), >1", None

WATERCOLOR: Colorless, Green, Yellow, Brown n/a

OBSERVED FLOW: NA, (Dry Waterbody Bed) No Obs Flow, Isolated Pool, Trickle (<0.1cfs), 0.1-1cfs, 1-5cfs, 5-20cfs, 20-50cfs, 50-200cfs, >200cfs

Field Measurements (SampleType = FieldMeasure; Method = Field)

N/A	DepthCollec (m)	Velocity (fps)	Air Temp (°C)	Water Temp (°C)	pH	O_2 (mg/L)	O_2 (%)	Specific Conductivity (uS/cm)	Salinity (ppt)	Turbidity (ntu)	Stage Ht (units ____)		
SUBSURF/MID/BOTTOM/REP	n/a	n/a	22°	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
SUBSURF/MID/BOTTOM/REP													
SUBSURF/MID/BOTTOM/REP													
Instrument:													
Calib. Date:													

Samples Taken (# of containers filled) - Method=Water_Grab

Field Dup YES / NO: (SampleType = Grab / Integrated; LABEL_ID = FieldQA; create collection record upon data entry

SAMPLE TYPE: Grab / Integrated | COLLECTION EQUIPMENT: Indiv bottle (by hand, by pole, by bucket); Teflon tubing; Kemmer; Pole & Beaker; Other _____

N/A	DepthCollec (m)	Inorganics	Bacteria	Chl a	TSS / SSC	TOC / DOC	Total Hg	Dissolved Mercury	Total Metals	Dissolved Metals	Organics	Toxicity	VOAs
Sub/Surface													
Sub/Surface													

COMMENTS: snow/grapple visible on dry creekbed, No flow, no sampling.

Run:									Sample Processing Date:	
Sample ID #:	PLEASE SEE ANALYTICAL REPORT									
Site Code:	FROM EUROFINS LABORATORY.									
Yellow +	# Small Wells									
	# Large Wells									
	Empty Wells									
	MPN									
Yellow + Fluorescence (+)	# Small Wells									
	# Large Wells									
	False Positives									
	MPN									
Temp/Time	Start	4Hr. Check		14 Hr. Check		18 Hr. Check		22 Hr. Check, if needed		

		FIELD DUPLICATES				LAB DUPLICATES			
	Normal Sample # / Duplicate Sample #	MPN	95% CI Lower	95% CI Upper		MPN	95% CI Lower	95% CI Upper	
TOTAL COLIFORM	Normal				Normal				
	Duplicate				Duplicate				
	Mean		Pass	Needs Review	Mean		Pass	Needs Review	
E. COLI	Normal				Normal				
	Duplicate				Duplicate				
	Mean		Pass	Needs Review	Mean		Pass	Needs Review	
BLANKS	Field Sample #		Pass	Needs Review	Lab Sample #		Pass	Needs Review	

Mean = Mean of Normal and Duplicate, which is then compared to the individual corresponding CI's to determine acceptability of data

Sampler Signature / Date / Time Arrived:	Placed in Incubator By / Date / Time:	Trays Read By:
Processor / Date / Time:	Pulled from Incubator By / Date / Time:	Entered into database:

NOTES:

Brooke Moran 10/26/22

SURFACE WATER SAMPLING DATA SHEET

SWAMP Field Data Sheet (Water Chemistry & Discrete Probe) - EventType=WQ | ERO_BOARD (1-6, July 20-08) Entered in Gdbase (mm/dd/yyyy): n/a | Pg 1 of 1 Pgs

*StationID: 2022-02 | *Date (mm/dd/yyyy): 10/26/2022 | *Group: n/a | *Agency: n/a

*Funding: n/a | ArrivalTime: 12:57 | DepartureTime: 13:33 | *SampleTime (1st sample): 13:00 | *Protocol: n/a

*Personnel: BM&TC | *Purpose (circle all that apply): (WaterChem) WaterTox (FieldObs) (FieldMeasure) | *PurposeFailure: n/a

*Location: (Bank) Thalweg Midchannel OpenWater | *GPS/DGPS | Lat (dd.ddddd) | Long (ddd.ddddd) | OCCUPATION METHOD: (Walk-in) Bridge R/V _____ Other

GPS Device: GPS WAYPOINTSAPP | Target: | 39.975787 | -105.569328 | STARTING BANK (facing downstream): LB (RB) NA

Datum: NAD83 | Accuracy (ft / (m)): 1.40 | *Actual: | 39.975873 | -105.569305 | Point of Sample (if Integrated, then -88 in dbase)

Field Observations (SampleType = FieldObs)

SITE ODOR: (None) Sulfides, Sewage, Petroleum, Mixed, Other

WADEABILITY: (Y) N / Unk | BEAUFORT SCALE (see attachment): 3 | DISTANCE FROM BANK 3.6" (ft) | STREAM WIDTH (m): 7.25" | WATER DEPTH (m): 4.40"

SKY CODE: Clear, Partly Cloudy, (Overcast), Fog

WIND DIRECTION (from): N / NW / W / SW / S / SE / E / NE | HYDROMODIFICATION: (None) Bridge, Pipes, ConcreteChannel, GradeControl, Culvert, AerialZipline, Other | LOCATION (to sample): US / DS / (WI)

OTHERPRESENCE: Vascular, (Nonvascular), OilySheen, Foam, Trash, Other____

PHOTOS (RB & LB assigned when facing ~~downstream~~; ~~RENAME to StationCode_yyyy_mm_dd_uniquecode~~): 1: (RB / LB / BB / US / DS / ###) OCT_2022-02_nw, OCT_2022-02_east

DOMINANTSUBSTRATE: Bedrock, Concrete, (Cobble), Gravel, Sand, Mud, Unk, Other_____

WATERCLARITY: (Clear) (see bottom), Cloudy (>4" vis), Murky (<4" vis) | PRECIPITATION: None, Fog, Drizzle, Rain, (Snow) | 2: (RB / LB / BB / US / DS / ###) OCT_2022-02_north

WATERODOR: (None), Sulfides, Sewage, Petroleum, Mixed, Other____ | PRECIPITATION (last 24 hrs): Unknown, <1", (>1", None)

WATERCOLOR: (Colorless), Green, Yellow, Brown | 3: (RB / LB / BB / US / DS / ###) OCT_2022-02_north2

OBSERVED FLOW: NA, Dry Waterbody Bed, No Obs Flow, Isolated Pool, Trickle (<0.1cfs), (0.1-1cfs), 1-5cfs, 5-20cfs, 20-50cfs, 50-200cfs, >200cfs

Field Measurements (SampleType = FieldMeasure; Method = Field)

	DepthCollec ~~(m)~~	Velocity (fps)	Air Temp (°C)	Water Temp (°C)	pH	O_2 (mg/L)	O_2 (%)	Specific Conductivity (uS/cm)	Salinity (ppt)	Turbidity (ntu)	Stage Ht (units ____)		
SUBSURF/MID/ BOTTOM/REP	1"	4.22	1.1	5°	8.3	n/a	n/a	0.3	n/a	n/a	n/a		
SUBSURF/MID/ BOTTOM/REP													
SUBSURF/MID/ BOTTOM/REP													
Instrument:				OAKTON	OAKTON			BLUELAB					
Calib. Date:				10/26/22	10/26/22			10/26/22					

Samples Taken (# of containers filled) - Method=Water_Grab | Field Dup YES / NO: (SampleType = Grab / Integrated; LABEL_ID = FieldQA; create collection record upon data entry

SAMPLE TYPE: (Grab) / Integrated | COLLECTION EQUIPMENT: Indiv bottle (by hand, by pole, by bucket); Teflon tubing; Kemmer; Pole & (Beaker); Other _____

	DepthCollec ~~(m)~~	Inorganics	Bacteria	Chl a	TSS / SSC	TOC / DOC	Total Hg	Dissolved Mercury	Total Metals	Dissolved Metals	Organics	Toxicity	VOAs
Sub/Surface	1"	9	n/a	n/a	1	n/a	1	2	1	1	n/a	n/a	n/a
Sub/Surface													

COMMENTS: Several bull moose seen in the morning at sampling site. FIELD BLANK, MATRIX SPIKE, DUPLICATE.

Run:										Sample Processing Date:						
Sample ID #:																
Site Code:		N/A														
	# Small Wells															
	# Large Wells															
Yellow +	Empty Wells															
	MPN															
	# Small Wells															
	# Large Wells															
Yellow + Fluorescence (+)	False Positives															
	MPN															
Temp/Time	Start		4Hr. Check			14 Hr. Check				18 Hr. Check			22 Hr. Check, if needed			

	FIELD DUPLICATES				LAB DUPLICATES			
	Normal Sample # / Duplicate Sample #	MPN	95% CI Lower	95% CI Upper	Normal Sample # / Duplicate Sample #	MPN	95% CI Lower	95% CI Upper
TOTAL COLIFORM	Normal				Normal			
	Duplicate				Duplicate			
	Mean		Pass	Needs Review	Mean		Pass	Needs Review
E. COLI	Normal				Normal			
	Duplicate				Duplicate			
	Mean		Pass	Needs Review	Mean		Pass	Needs Review
BLANKS	Field Sample #		Pass	Needs Review	Lab Sample #		Pass	Needs Review

Mean = Mean of Normal and Duplicate, which is then compared to the individual corresponding CI's to determine acceptability of data

Sampler Signature / Date / Time Arrived:	Placed in Incubator By / Date / Time:	Trays Read By:
Processor / Date / Time:	Pulled from Incubator By / Date / Time:	Entered into database:

NOTES:

Brooke Moran 10/26/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location CROSS WELL Date 10/27/22 Start Time 11:00 Stop time 12:10 Page 1 of 1 Project Number:

Sample Control Number n/a Samplers BM, TC, KL

WEATHER CONDITIONS

Ambient Air Temperature: 35° °C☐ °F☒ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☒

Precipitation: None☐ Rain☐ Snow☒ Heavy☐ Moderate☒ Light☐ Sunny☐ Partly Cloudy☒

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level 28 Total Depth 205 Top of Screen 15 Filter Pack Interval n/a Borehole Diameter(inches) 9" (0-40 ft) 5 7/8" (40-205 ft)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: 208 gallons

Well Casing ID n/a Well Casing OD * Protective Casing Stickup n/a Well Casing Stickup 1.2 Feet of Water n/a

Well purged with: WELL PUMP

FINAL WELL MEASUREMENTS

Static Water Level 28 Total Depth 205 Total Volume Purged 624 Saturated Borehole Volume (gal) 158 Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON01

Buffer 7 Measured Value 7.1 Temp. 17.3 °C

Buffer 7 Measured Value 7.0 Temp. 17.1 °C

Conductivity Meter: Meter Number CM1-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 17 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 17 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☒ Measured☐	Comments
11:00	0	7.0	0.3	9°	5	
12:00	624	7.3	0.4	6°	5	

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☒	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☒ Measured☐		
10/27/22	12:00	7.0	7.3	0.4	6°	5		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time n/a)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

Notes: sampled via port. * 6 5/8 (-1-40 ft) & 4 1/2 (15-205 ft)

Sampler's Signature Brooke Moran 10/27/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location COMPLIANCE WELL Date 10/27/22 Start Time 12:00 Stop time 12:40 Project Number: Page 1 of 1

Sample Control Number n/a Samplers BM, TC, KL

WEATHER CONDITIONS

Ambient Air Temperature: 350 °C☐ °F☒ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☒

Precipitation: None☐ Rain☐ Snow☒ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☒

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level 39 Total Depth 165 Top of Screen 65 Filter Pack Interval n/a Borehole Diameter(inches) 9" (0-50 ft) 6" (50-165 ft)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: 185 gallons

Well Casing ID n/a Well Casing OD ☒ Protective Casing Stickup n/a Well Casing Stickup 1.0 Feet of Water n/a

Well purged with: WELL PUMP

FINAL WELL MEASUREMENTS

Static Water Level 39 Total Depth 165 Total Volume Purged 554 Saturated Borehole Volume (gal) 115 Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON#1

Buffer 7 Measured Value 7.1 Temp. 17.3 °C

Buffer 7 Measured Value 7.0 Temp. 17.1 °C

Conductivity Meter: Meter Number CMI-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 17 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 17 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☒ Measured☐	Comments
12:00	0	7.3	0.4	4.6°	5	
12:35	555	7.3	0.3	4.8°	5	

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☒	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☒ Measured☐		
10/27/22	12:30	10.4	7.3	0.3	4.8°	5		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time COMPLIANCE WELL-FB)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time _____)

Notes: sampled at well, * 6 5/8 (-1-50 ft) x 4 1/2 (15-165 ft)

Sampler's Signature Brooke Moran 10/27/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location CARIBOU WELL Date 10/27/22 Start Time 10:00 Stop time 14:10 Project Number: Page 1 of 1

Sample Control Number n/a Samplers BM, TC, KL

WEATHER CONDITIONS

Ambient Air Temperature: 35° °C☐ °F☒ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☒

Precipitation: None☐ Rain☐ Snow☒ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☒

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level 52 Total Depth 165 Top of Screen 25 Filter Pack Interval n/a Borehole Diameter(inches) 9" (0-26 ft) 6" (26-165 ft)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: 16 l gallons

Well Casing ID n/a Well Casing OD * Protective Casing Stickup n/a Well Casing Stickup 2.4 Feet of Water n/a

Well purged with: WELL PUMP

FINAL WELL MEASUREMENTS

Static Water Level 52 Total Depth 165 Total Volume Purged 484 Saturated Borehole Volume (gal) 714 Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number Oakton 01

Buffer 7 Measured Value 7.1 Temp. 17.2 °C

Buffer 7 Measured Value 7.0 Temp. 17.1 °C

Conductivity Meter: Meter Number CM1-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 17 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 17 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☒ Measured☐	Comments
10:00	0	7.2	0.3	6°	5	
14:00	483	7.0	0.4	4°	5	

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☒	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☒ Measured☐		
10/27/22	14:00	2.5	7.0	0.4	4°	5		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time n/a)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

Notes: sampled via port. *6 5/8 (-1-26 ft) & 4 1/2 (15-165 ft)

Sampler's Signature Brooke Moran 10/27/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location CROSS PORTAL Date 10/27/22 Start Time 11:30 Stop time 12:00 Project Number: Page 1 of 1

Sample Control Number n/a Samplers BM, TC, KL

N/A **WEATHER CONDITIONS** N/A UNDERGROUND

Ambient Air Temperature: n/a °C☐ °F☐ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☐

Precipitation: None☐ Rain☐ Snow☐ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☐

N/A **INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)** N/A

Static Water Level n/a Total Depth n/a Top of Screen n/a Filter Pack Interval n/a Borehole Diameter(inches) n/a

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: n/a gallons

Well Casing ID n/a Well Casing OD n/a Protective Casing Stickup n/a Well Casing Stickup n/a Feet of Water n/a

Well purged with: n/a

N/A **FINAL WELL MEASUREMENTS** N/A

Static Water Level n/a Total Depth n/a Total Volume Purged n/a Saturated Borehole Volume (gal) n/a Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON01

Buffer 7.0 Measured Value 7.1 Temp. 17.3 °C

Buffer 7.0 Measured Value 7.0 Temp. 17.1 °C

Conductivity Meter: Meter Number CM1-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 17 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 17 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☒ Measured☐	Comments
11:35	n/a	7.9	0.4	4.7°	5	

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☐	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☒ Measured☐		
10/27/22	11:30	n/a	7.9	0.4	4.7°	5		

Duplicate Sample-02 (sample control number/time_____)

Field Blank-03 (sample control number/time_____)

Rinsate Sample-04 (sample control number/time_____)

Matrix Spike-MS (sample control number/time_____)

_____ (sample control number/time_____)

Notes: MINE EFFLUENT. SAMPLED AT JULIET DITCH.

Sampler's Signature Brooke Moran 10/27/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION Project Number:

Sample Location CARIBOU PORTAL Date 10/27/22 Start Time 13:00 Stop time 13:30 Page 1 of 1

Sample Control Number n/a Samplers BM, TC, KL

N/A **WEATHER CONDITIONS** N/A mine effluent

Ambient Air Temperature: n/a °C☐ °F☐ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☐

Precipitation: None☐ Rain☐ Snow☐ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☐

N/A **INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)** N/A

Static Water Level n/a Total Depth n/a Top of Screen n/a Filter Pack Interval n/a Borehole Diameter(inches) n/a

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: n/a gallons

Well Casing ID n/a Well Casing OD n/a Protective Casing Stickup n/a Well Casing Stickup n/a Feet of Water n/a

Well purged with: n/a

N/A **FINAL WELL MEASUREMENTS** N/A

Static Water Level n/a Total Depth n/a Total Volume Purged n/a Saturated Borehole Volume (gal) n/a Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON01

Buffer 7 Measured Value 7.1 Temp. 17.3°C

Buffer 7 Measured Value 7.0 Temp. 17°C

Conductivity Meter: Meter Number CM1-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 17 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 17 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☑ °F☐	Turbidity Visual Est.☑ Measured☐	Comments
13:00	n/a	8.3	0.3	5°C	5	

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☐	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☑ Measured☐		
10/27/22	13:00	n/a	8.3	0.3	5°	5		

Duplicate Sample-02 (sample control number/time _____)

Field Blank-03 (sample control number/time n/a)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

Notes: MINE EFFLUENT. SAMPLED AT POND 3A.

Sampler's Signature Brooke Moran 10/27/22

SURFACE WATER SAMPLING DATA SHEET

SWAMP Field Data Sheet (Water Chemistry & Discrete Probe) - EventType=WQ | EDD BOARD v1.6 July 20 08 | Pg 1 of 1 Pgs

*StationID: 2022-01	*Date (mm/dd/yyyy): 11 / 28 / 22		Entered in database (mm/dd/yyyy): n/a		
*Funding: n/a	ArrivalTime: 12:00	DepartureTime: 2:15	*Group: n/a	*SampleTime (1st sample): n/a	*Agency: n/a / *Protocol: n/a
*Personnel: BM, KL	*Purpose (circle all that apply): WaterChem WaterTox FieldObs FieldMeasure				*PurposeFailure: n/a

*Location: (Bank) Thalweg Midchannel OpenWater	*GPS/DGPS	Lat (dd.ddddd)	Long (ddd.ddddd)	OCCUPATION METHOD: (Walk-in) Bridge R/V _____ Other
GPS Device: GPS Waypoints App	Target:	39.97904	-105.57585	STARTING BANK (facing downstream): (LB) / RB / NA
Datum: NAD83 / Accuracy (ft / (m)): 1.20	*Actual:	39.978993	-105.575798	Point of Sample (if Integrated, then -88 in dbase)

Field Observations (SampleType = FieldObs)

SITE ODOR: (None), Sulfides, Sewage, Petroleum, Mixed, Other	WADEABILITY: Y / N / Unk	BEAUFORT SCALE (see attachment): 2	DISTANCE FROM BANK (m): n/a	STREAM WIDTH (m): n/a	
SKY CODE: Clear, Partly Cloudy, (Overcast), Fog	WIND DIRECTION (from): W		HYDROMODIFICATION: (None) Bridge, Pipes, ConcreteChannel, GradeControl, Culvert, AerialZipline, Other	WATER DEPTH (m): n/a	
OTHERPRESENCE: n/a Vascular, Nonvascular, OilySheen, Foam, Trash, Other			LOCATION (to sample): US / DS / (W)		
DOMINANTSUBSTRATE: Bedrock, Concrete, Cobble, Gravel, Sand, Mud, Unk, Other n/a			PHOTOS (RB & LB assigned when facing downstream; RENAME to ~~StationCode_yyyy_mm_dd_uniquecode~~): 1: ~~(RB / LB / BB / US / DS / ##)~~ NOV_2022-01_NW NOV_2022-01_west		
WATERCLARITY: n/a Clear (see bottom), Cloudy (>4" vis), Murky (<4" vis)	PRECIPITATION: (None), Fog, Drizzle, Rain, Snow		2: ~~(RB / LB / BB / US / DS / ##)~~ NOV_2022-01_US		
WATERODOR: n/a None, Sulfides, Sewage, Petroleum, Mixed, Other	PRECIPITATION (last 24 hrs): Unknown, <1", >1", (None)		3: ~~(RB / LB / BB / US / DS / ##)~~ NOV_2022-01_Scat		
WATERCOLOR: n/a Colorless, Green, Yellow, Brown					
OBSERVED FLOW: NA, (Dry Waterbody Bed), No Obs Flow, Isolated Pool, Trickle (<0.1cfs), 0.1-1cfs, 1-5cfs, 5-20cfs, 20-50cfs, 50-200cfs, >200cfs					

Field Measurements (SampleType = FieldMeasure; Method = Field)

	DepthCollec (m)	Velocity (fps)	Air Temp (°C) ~~°F~~	Water Temp (°C)	pH	O_2 (mg/L)	O_2 (%)	Specific Conductivity (uS/cm)	Salinity (ppt)	Turbidity (ntu)	Stage Ht (units ____)		
SUBSURF/MID/ BOTTOM/REP	n/a	n/a	28.2°	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
SUBSURF/MID/ BOTTOM/REP													
SUBSURF/MID/ BOTTOM/REP													
Instrument:			Ambient										
Calib. Date:			n/a										

Samples Taken (# of containers filled) - Method=Water_Grab

Field Dup YES / NO: (SampleType = Grab / Integrated; LABEL_ID = FieldQA; create collection record upon data entry

SAMPLE TYPE: Grab / Integrated | COLLECTION EQUIPMENT: Indiv bottle (by hand, by pole, by bucket); Teflon tubing; Kemmer; Pole & Beaker; Other _____

N/A	DepthCollec (m)	Inorganics	Bacteria	Chl a	TSS / SSC	TOC / DOC	Total Hg	Dissolved Mercury	Total Metals	Dissolved Metals	Organics	Toxicity	VOAs
Sub/Surface													
Sub/Surface													

COMMENTS:
NO WATER FLOWING. SAMPLE SITE COVERED IN SNOW. MOOSE SCAT NEARBY. NO WATER SAMPLING.

Run:										Sample Processing Date:					
Sample ID #:		N/A													
Site Code:															
Yellow +	# Small Wells														
	# Large Wells														
	Empty Wells														
	MPN														
Yellow + Fluorescence (+)	# Small Wells														
	# Large Wells														
	False Positives														
	MPN														
Temp/Time	Start	4Hr. Check		14 Hr. Check		18 Hr. Check		22 Hr. Check, if needed							

		FIELD DUPLICATES				LAB DUPLICATES			
		Normal Sample # / Duplicate Sample #				Normal Sample # / Duplicate Sample #			
		MPN	95% CI Lower	95% CI Upper		MPN	95% CI Lower	95% CI Upper	
TOTAL COLIFORM	Normal					Normal			
	Duplicate					Duplicate			
	Mean		Pass	Needs Review		Mean		Pass	Needs Review
E. COLI	Normal					Normal			
	Duplicate					Duplicate			
	Mean		Pass	Needs Review		Mean		Pass	Needs Review
BLANKS	Field Sample #		Pass	Needs Review		Lab Sample #		Pass	Needs Review

Mean = Mean of Normal and Duplicate, which is then compared to the individual corresponding CI's to determine acceptability of data

Sampler Signature / Date / Time Arrived:	Placed in Incubator By / Date / Time:	Trays Read By:
Processor / Date / Time:	Pulled from Incubator By / Date / Time:	Entered into database:

NOTES:

Brooke Moran 11/28/22

SURFACE WATER SAMPLING DATA SHEET

SWAMP Field Data Sheet (Water Chemistry & Discrete Probe) - EventType=WQ | TRQI_BOARD (1 & July 20 08) Entered in Database (m/d/yr/date): n/a | Pg 1 of 1 Pgs

*StationID: 2022-02 | *Date (mm/dd/yyyy): 11 / 28 / 2022 | *Group: n/a | *Agency: n/a

*Funding: n/a | ArrivalTime: 11:25 | DepartureTime: 11:50 | *SampleTime (1st sample): 11:30 | *Protocol: n/a

*Personnel: n/a | *Purpose (circle all that apply): (WaterChem) WaterTox (FieldObs) FieldMeasure | *PurposeFailure: n/a

*Location: Bank Thalweg Midchannel OpenWater | *GPS/DGPS | Lat (dd.ddddd) | Long (ddd.ddddd) | OCCUPATION METHOD: (Walk-in) Bridge R/V _____ Other

GPS Device: GPS WAYPOINTS APP | Target: 39.975787 | -105.569328 | STARTING BANK (facing downstream): LB / (RB) / NA

Datum: NAD83 | Accuracy (ft / m): 11.40 | *Actual: 39.975873 | -105.569305 | Point of Sample (if Integrated, then -88 in dbase)

Field Observations (SampleType = FieldObs)

WADEABILITY: Y / N / Unk | BEAUFORT SCALE (see attachment): 1 | DISTANCE FROM BANK (m): 12" | STREAM WIDTH (m): 24 in | WATER DEPTH (m): 4.25 in

SITE ODOR: (None),Sulfides,Sewage,Petroleum,Mixed,Other

SKY CODE: Clear, Partly Cloudy, (Overcast), Fog | WIND DIRECTION (from): W | HYDROMODIFICATION: (None), Bridge, Pipes, ConcreteChannel, GradeControl, Culvert, AerialZipline, Other | LOCATION (to sample): US / DS / (WI)

OTHERPRESENCE: Vascular,Nonvascular,OilySheen,Foam,Trash,Other (none)

DOMINANTSUBSTRATE: Bedrock, Concrete, Cobble, (Gravel), Sand, Mud, Unk, Other_____ | PHOTOS (RB & LB assigned when facing downstream; RENAME to StationCode_yyyy_mm_dd_uniquecode): 1: ~~(RB / LB / BB / US / DS / ##)~~ NOV_2022-02_above

WATERCLARITY: (Clear) (see bottom), Cloudy (>4" vis), Murky (<4" vis) | PRECIPITATION: (None), Fog, Drizzle, Rain, Snow | 2: ~~(RB / LB / BB / US / DS / ##)~~ NOV_2022-02above2

WATERODOR: (None) Sulfides, Sewage, Petroleum, Mixed, Other_____ | PRECIPITATION (last 24 hrs): Unknown, <1", >1", (None) | NOV_2022-02above3

WATERCOLOR: (Colorless), Green, Yellow, Brown | 3: ~~(RB / LB / BB / US / DS / ##)~~ NOV_2022-02North

OBSERVED FLOW: NA, Dry Waterbody Bed, No Obs Flow, Isolated Pool, Trickle (<0.1cfs), (0.1-1cfs), 1-5cfs, 5-20cfs, 20-50cfs, 50-200cfs, >200cfs | NOV_2022-02South

Field Measurements (SampleType = FieldMeasure; Method = Field)

	DepthCollec (m)	Velocity (fps)	Air Temp (°C) °F	Water Temp (°C)	pH	O_2 (mg/L)	O_2 (%)	Specific Conductivity (uS/cm)	Salinity (ppt)	Turbidity (ntu)	Stage Ht (units ____)		
SUBSURF/MID/ BOTTOM/REP	1"	0.53	28.4	2.6	8.5	n/a	n/a	0.3	n/a	1.3	n/a		
SUBSURF/MID/ BOTTOM/REP													
SUBSURF/MID/ BOTTOM/REP													
Instrument:	n/a	n/a	Ambient	Oakton	Oakton	n/a	n/a	Bluelab	n/a	Neutry	n/a		
Calib. Date:	n/a	n/a	n/a	11/28/22	11/28/22	n/a	n/a	n/a	n/a	n/a	n/a		

Samples Taken (# of containers filled) - Method=Water_Grab | Field Dup (YES) / NO: (SampleType = Grab / Integrated; LABEL_ID = FieldQA; create collection record upon data entry

SAMPLE TYPE: (Grab) / Integrated | COLLECTION EQUIPMENT: Indiv bottle (by hand, by pole, by bucket); Teflon tubing; Kemmer; Pole & (Beaker); Other _____

	DepthCollec (m)	Inorganics	Bacteria	Chl a	TSS / SSC	TOC / DOC	Total Hg	Dissolved Mercury	Total Metals	Dissolved Metals	Organics	Toxicity	VOAs
Sub/Surface	1"	9	n/a	n/a	1	n/a	1	2	1	1	n/a	n/a	n/a
Sub/Surface													

COMMENTS: SOME ICE & SNOW ON SURFACE, BUT PLENTY OF ROOM TO SAMPLE. COLLECTED DUPLICATES, FIELD BLANKS, AND MATRIX SPIKES.

Run: | Sample Processing Date:

Sample ID #: N/A PLEASE SEE ANALYTICAL REPORTS FROM EUROFINS.

Site Code:

Yellow +	# Small Wells												
	# Large Wells												
	Empty Wells												
	MPN												
Yellow + Fluorescence (+)	# Small Wells												
	# Large Wells												
	False Positives												
	MPN												
Temp/Time	Start		4Hr. Check		14 Hr. Check			18 Hr. Check			22 Hr. Check, if needed		

FIELD DUPLICATES

Normal Sample # / Duplicate Sample #

		MPN	95% CI Lower	95% CI Upper
TOTAL COLIFORM	Normal			
	Duplicate			
	Mean		Pass	Needs Review
E. COLI	Normal			
	Duplicate			
	Mean		Pass	Needs Review
BLANKS	Field Sample #		Pass	Needs Review

LAB DUPLICATES

Normal Sample # / Duplicate Sample #

	MPN	95% CI Lower	95% CI Upper
Normal			
Duplicate			
Mean		Pass	Needs Review
Normal			
Duplicate			
Mean		Pass	Needs Review
Lab Sample #		Pass	Needs Review

Mean = Mean of Normal and Duplicate, which is then compared to the individual corresponding CI's to determine acceptability of data

Sampler Signature / Date / Time Arrived: | Placed in Incubator By / Date / Time: | Trays Read By:

Processor / Date / Time: | Pulled from Incubator By / Date / Time: | Entered into database:

NOTES:

Brooke Moran 11/28/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location CROSS WELL Date 11/29/22 Start Time 11:00 Stop time 12:00 Page 1 of 1 Project Number: n/a

Sample Control Number n/a Samplers BM & KL

WEATHER CONDITIONS

Ambient Air Temperature: 8.4° °C☐ °F☒ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☒

Precipitation: None☐ Rain☐ Snow☒ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☒

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level -33 Total Depth 205 Top of Screen 15 Filter Pack Interval n/a Borehole Diameter(inches) 9" (0-40 ft) 5 7/8" (40-205 ft)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: 208 gallons

Well Casing ID n/a Well Casing OD * Protective Casing Stickup n/a Well Casing Stickup 1.2 Feet of Water n/a

Well purged with: WELL PUMP

FINAL WELL MEASUREMENTS

Static Water Level -33 Total Depth 205 Total Volume Purged 624 Saturated Borehole Volume (gal) 152 Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON01

Buffer 7 Measured Value 7.0 Temp. 16.2 °C

Buffer 4 Measured Value 4.0 Temp. 16.2 °C

Conductivity Meter: Meter Number CM1-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Turbidity Meter: Newtry Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☐ Measured☒	Comments
10:30	0	7.1	0.3	6.1°	1.9	
11:30	624	7.5	0.3	6.5°	1.9	

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☒	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☐ Measured☒		
11/29/22	11:30	7.0	7.5	0.3	6.5	1.9		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time n/a)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

Notes: SAMPLED VIA PORT. * 6 5/8" (-1-40 ft) & 4 1/2 (15-205 ft)

Sampler's Signature Brooke Nolan 11/29/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION Project Number: n/a

Sample Location COMPLIANCE WELL Date 11/29/22 Start Time 11:30 Stop time 12:30 Page 1 of 1

Sample Control Number n/a Samplers BM & KL

WEATHER CONDITIONS

Ambient Air Temperature: 7.3° °C☐ °F☒ Not Measured ☐ **Wind:** Heavy☐ Moderate☒ Light☐

Precipitation: None☐ Rain☐ Snow☒ Heavy☐ Moderate☒ Light☐ Sunny☐ Partly Cloudy☒

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level -39 Total Depth 165 Top of Screen 65 Filter Pack Interval n/a Borehole Diameter(inches) 9" (0-50 ft) 6" (50-165 ft)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: 185 gallons

Well Casing ID n/a Well Casing OD * Protective Casing Stickup n/a Well Casing Stickup 1.0 Feet of Water n/a

Well purged with: WELL PUMP

FINAL WELL MEASUREMENTS

Static Water Level -39 Total Depth 165 Total Volume Purged 554 Saturated Borehole Volume (gal) 115 Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON 01 **Conductivity Meter:** Meter Number CM1-2104-01479

Buffer 7 Measured Value 7.0 Temp. 16.2 °C Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Buffer 7 Measured Value 7.0 Temp. 16.2 °C Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Turbidity Meter: Newtry Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☐ Measured☒	Comments
11:30	0	7.4	0.3	4.90	1.8	FIELD FILTERED WITH
12:00	555	7.2	0.2	4.2°	1.4	PERISTALIC PUMP ①
						NITRIC- PRESERVED
						BOTTLE AND ① BOTTLE FOR
						RADIONUCLIDES.

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☒	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☐ Measured☒		
11/29/22	12:00	10.4	7.2	0.2	4.2°	1.4		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time COMPLIANCE WELL-FB)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

DUPLICATE AND MATRIX SPIKE INFO AVAILABLE IN LAB REPORT

Notes: SAMPLED AT WELL. * 6 5/8 (-1-50 ft) & 4 1/2 (15-165 ft)

Sampler's Signature Brooke Moran 11/29/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location CARIBOU WELL Date 11/29/22 Start Time 09:30 Stop time 14:00 Project Number: n/a
Page 1 of 1
Sample Control Number n/a Samplers BM & KL

WEATHER CONDITIONS

Ambient Air Temperature: 7.5° °C☐ °F☒ Not Measured ☐ **Wind:** Heavy☐ Moderate☒ Light☐
Precipitation: None☐ Rain☐ Snow☒ Heavy☐ Moderate☒ Light☐ Sunny☐ Partly Cloudy☒

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level -31 Total Depth 165 Top of Screen 25 Filter Pack Interval n/a Borehole Diameter(inches) 9" (0-26 ft) 6" (26-165 ft)
2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: 161 gallons
Well Casing ID n/a Well Casing OD ✱ Protective Casing Stickup n/a Well Casing Stickup 2.4 Feet of Water n/a
Well purged with: WELL PUMP

FINAL WELL MEASUREMENTS

Static Water Level -31 Total Depth 165 Total Volume Purged 484 Saturated Borehole Volume (gal) 111 Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON01
Buffer 7 Measured Value 7.0 Temp. 16.7 °C
Buffer 4 Measured Value 4.0 Temp. 16.2 °C

Conductivity Meter: Meter Number CM1-2104-01479
Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C
Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Turbidity Meter: Newtry Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☐ Measured☒	Comments
9:30	0	6.5	0.1	9.0	3.5	Filters from well were
13:30	483	6.7	0.3	5.4	2.1	removed yesterday, new
						ones are on order. Old
						ones were caked with
						sediment.

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☒	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☐ Measured☒		
11/29/22	13:30	2.5	6.7	0.3	5.4°	2.1		

Duplicate Sample-02 (sample control number/time n/a)
Field Blank-03 (sample control number/time n/a)
Rinsate Sample-04 (sample control number/time n/a)
Matrix Spike-MS (sample control number/time n/a)
_____ (sample control number/time n/a)

Notes: SAMPLED VIA PORT. 6 5/8 (-1-26 ft) & 4 1/2 (15-165 ft)

Sampler's Signature Brooke Moran 11/29/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location CROSS PORTAL Date 11/29/22 Start Time _____ Stop time_____ Page 1 of 1 Project Number: n/a

Sample Control Number n/a Samplers BM & KL

WEATHER CONDITIONS

Ambient Air Temperature: _____ °C☐ °F☐ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☐

Precipitation: None☐ Rain☐ Snow☐ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☐

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level____ Total Depth_____Top of Screen_____ Filter Pack Interval_____ Borehole Diameter(inches)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume:_____ gallons

N/A

Well Casing ID_____ Well Casing OD_____ Protective Casing Stickup___ Well Casing Stickup____ Feet of Water

Well purged with: n/a

FINAL WELL MEASUREMENTS

Static Water Level__ Total Depth___ Total Volume Purged__ Saturated Borehole Volume (gal)___ Max Pumping Rate

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON 01

Buffer 7 Measured Value 7.0 Temp. 16.2 °C

Buffer 4 Measured Value 4.0 Temp. 16.2 °C

Conductivity Meter: Meter Number CM1-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☐ Measured☒	Comments
11:00	n/a	8.2	0.3	4.9	1.4	

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☐	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☐ Measured☒		
11/29/22	11:00	n/a	8.2	0.3	4.90	1.4		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time n/a)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

Notes:

Sampler's Signature Brooke Moran 11/29/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location CARIBOU PORTAL Date 11/29/22 Start Time 12:30 Stop time 13:00 Project Number: n/a
Page 1 of 1
Sample Control Number n/a Samplers BM & KL

WEATHER CONDITIONS

Ambient Air Temperature: _____ °C☐ °F☐ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☐
Precipitation: None☐ Rain☐ Snow☐ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☐

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level____ Total Depth_____Top of Screen_____ Filter Pack Interval_____ Borehole Diameter(inches)
2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume:_____ gallons
Well Casing ID_____ Well Casing OD_____ Protective Casing Stickup___ Well Casing Stickup____ Feet of Water
Well purged with: _____

N/A

FINAL WELL MEASUREMENTS

Static Water Level___ Total Depth___ Total Volume Purged___ Saturated Borehole Volume (gal)___ Max Pumping Rate

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON
Buffer 7 Measured Value 7.0 Temp. 16.2 °C
Buffer 4 Measured Value 4.0 Temp. 16.2 °C
Turbidity Meter: Newly Standard n/a NTU Measured Value n/a NTU

Conductivity Meter: Meter Number CMI-2104-01479
Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C
Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C
Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☐ Measured☒	Comments
12:30	n/a	8.6	0.5	0.7°	12.3	No observed flow from Caribou Portal into Pond 3A. Ice covering the pond had to be broken up with a scaling bar in order to retrieve water under the ice. Some sediment observed mixed with the ice.

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☐	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☐ Measured☒		
11/29	12:30	n/a	8.6	0.5	0.7°	12.3		

Duplicate Sample-02 (sample control number/time n/a)
Field Blank-03 (sample control number/time CARIBOU PORTAL-FB)
Rinsate Sample-04 (sample control number/time n/a)
Matrix Spike-MS (sample control number/time n/a)
_____ (sample control number/time n/a)

DUPLICATE AND MATRIX SPIKE INFO AVAILABLE IN LAB REPORT

Notes:

Sampler's Signature Brooke Moran 11/29/22

SURFACE WATER SAMPLING DATA SHEET

SWAMP Field Data Sheet (Water Chemistry & Discrete Probe) - EventType=WQ | ~~TROI BOARD (1-6, Lvl, 20-08)~~ Entered in db base (Y/N at / date): n/a | Pg 1 of 1 Pgs

*StationID: 2022-01	*Date (mm/dd/yyyy): 12 / 19 / 2022		*Group: n/a		*Agency: n/a
*Funding: n/a	ArrivalTime: 12:51	DepartureTime: 13:02	*SampleTime (1st sample): n/a		*Protocol: n/a
*Personnel: BM	*Purpose (circle all that apply): (WaterChem) WaterTox (FieldObs) FieldMeasure			*PurposeFailure: n/a	

*Location: (Bank) Thalweg Midchannel OpenWater	*GPS/DGPS	Lat (dd.ddddd)	Long (ddd.ddddd)	OCCUPATION METHOD: (Walk-in) Bridge R/V _____ Other
GPS Device: GPS WAYPOINTS APP	Target:	39.97904	-105.57585	STARTING BANK (facing downstream): (LB) / RB / NA
Datum: NAD83 Accuracy (ft / m): (1.20)	*Actual:	39.978993	-105.57578	Point of Sample (if Integrated, then -88 in dbase)

Field Observations (SampleType = FieldObs)

SITE ODOR: (None) Sulfides, Sewage, Petroleum, Mixed, Other	WADEABILITY: Y / N / (Unk)	BEAUFORT SCALE (see attachment): 2	DISTANCE FROM BANK (m): n/a	STREAM WIDTH (m): n/a
SKY CODE: Clear, (Partly Cloudy), Overcast, Fog	WIND DIRECTION (from): W	HYDROMODIFICATION: (None) Bridge, Pipes, ConcreteChannel, GradeControl, Culvert, AerialZipline, Other n/a		WATER DEPTH (m): n/a
OTHERPRESENCE: n/a Vascular, Nonvascular, OilySheen, Foam, Trash, Other		LOCATION (to sample): US / DS / WI /		
DOMINANTSUBSTRATE: Bedrock, Concrete, Cobble, Gravel, Sand, Mud, Unk, Other n/a		PHOTOS (~~RB & LB assigned when facing downstream; RENAME to StationCode_yyyy_mm_dd_uniquecode~~): 1: (~~RB / LB / BB / US / DS / ##~~) DEC22_2022-01_A		
WATERCLARITY: n/a Clear (see bottom), Cloudy (>4" vis), Murky (<4" vis)	PRECIPITATION: (None) Fog, Drizzle, Rain, Snow			2: (~~RB / LB / BB / US / DS / ##~~) DEC22_2022-01_B DEC22_2022-01_C
WATERODOR: n/a None, Sulfides, Sewage, Petroleum, Mixed, Other	PRECIPITATION (last 24 hrs): Unknown, <1", >1" (None)			3: (~~RB / LB / BB / US / DS / ##~~) DEC22_2022-01_D
WATERCOLOR: n/a Colorless, Green, Yellow, Brown				
OBSERVED FLOW: (NA) Dry Waterbody Bed, (No Obs Flow) Isolated Pool, Trickle (<0.1cfs), 0.1-1cfs, 1-5cfs, 5-20cfs, 20-50cfs, 50-200cfs, >200cfs				

Field Measurements (SampleType = FieldMeasure; Method = Field)

	DepthCollec (m)	Velocity (fps)	Air Temp (°C) °F	Water Temp (°C)	pH	O_2 (mg/L)	O_2 (%)	Specific Conductivity (uS/cm)	Salinity (ppt)	Turbidity (ntu)	Stage Ht (units ____)		
SUBSURF/MID/ BOTTOM/REP	n/a	n/a	21.6°	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
SUBSURF/MID/ BOTTOM/REP													
SUBSURF/MID/ BOTTOM/REP													
Instrument:			Ambient										
Calib. Date:			n/a										

Samples Taken (# of containers filled) - Method=Water_Grab | **Field Dup YES / NO:** (SampleType = Grab / Integrated; LABEL_ID = FieldQA; create collection record upon data entry

SAMPLE TYPE: Grab / Integrated | COLLECTION EQUIPMENT: Indiv bottle (by hand, by pole, by bucket); Teflon tubing; Kemmer; Pole & Beaker; Other _____

N/A

	DepthCollec (m)	Inorganics	Bacteria	Chl a	TSS / SSC	TOC / DOC	Total Hg	Dissolved Mercury	Total Metals	Dissolved Metals	Organics	Toxicity	VOAs
Sub/Surface													
Sub/Surface													

COMMENTS:
NO VISIBLE FLOW - NO SAMPLES TAKEN.

Run:										Sample Processing Date:					
Sample ID #:			N/A												
Site Code:															
Yellow +	# Small Wells														
	# Large Wells														
	Empty Wells														
	MPN														
Yellow + Fluorescence (+)	# Small Wells														
	# Large Wells														
	False Positives														
	MPN														
Temp/Time	Start		4Hr. Check			14 Hr. Check			18 Hr. Check			22 Hr. Check, if needed			

	FIELD DUPLICATES				LAB DUPLICATES			
	Normal Sample # / Duplicate Sample #	MPN	95% CI Lower	95% CI Upper	Normal Sample # / Duplicate Sample #	MPN	95% CI Lower	95% CI Upper
TOTAL COLIFORM	Normal				Normal			
	Duplicate				Duplicate			
	Mean		Pass	Needs Review	Mean		Pass	Needs Review
E. COLI	Normal				Normal			
	Duplicate				Duplicate			
	Mean		Pass	Needs Review	Mean		Pass	Needs Review
BLANKS	Field Sample #		Pass	Needs Review	Lab Sample #		Pass	Needs Review

Mean = Mean of Normal and Duplicate, which is then compared to the individual corresponding CI's to determine acceptability of data

Sampler Signature / Date / Time Arrived:	Placed in Incubator By / Date / Time:	Trays Read By:
Processor / Date / Time:	Pulled from Incubator By / Date / Time:	Entered into database:

NOTES:

Brooke Moran 12/19/22

SURFACE WATER SAMPLING DATA SHEET

SWAMP Field Data Sheet (Water Chemistry & Discrete Probe) - EventType=WQ | ~~TROL BOARD (1.6, Lite, 20.08)~~ Entered in d-b a se (m/d a / date): n/a | Pg 1 of 1 Pgs

*StationID: 2022-02	*Date (mm/dd/yyyy): 12 / 19 / 2022	*Group: n/a	*Agency: n/a
*Funding: n/a	ArrivalTime: 12:35 DepartureTime: 12:46	*SampleTime (1st sample): n/a	*Protocol: n/a
*Personnel: BM	*Purpose (circle all that apply): WaterChem WaterTox FieldObs FieldMeasure	*PurposeFailure: n/a	

*Location: Bank Thalweg Midchannel OpenWater | *GPS/DGPS | Lat (dd.ddddd) | Long (ddd.ddddd) | OCCUPATION METHOD: Walk-in Bridge R/V _____ Other

GPS Device: GPS WAYPOINTS APP | Target: 39.975787 | -105.569328 | STARTING BANK (facing downstream): LB / RB / NA

Datum: NAD83 | Accuracy (ft / m): 1.40 | *Actual: 39.975873 | -105.569305 | Point of Sample (if Integrated, then -88 in dbase)

Field Observations (SampleType = FieldObs)

WADEABILITY Y / N (Unk) | BEAUFORT SCALE (see attachment): 1 | DISTANCE FROM BANK (m): n/a | STREAM WIDTH (m): n/a | WATER DEPTH (m): n/a

SITE ODOR: None, Sulfides, Sewage, Petroleum, Mixed, Other

SKY CODE: Clear, Partly Cloudy, Overcast, Fog

WIND DIRECTION (from): SW

HYDROMODIFICATION: None, Bridge, Pipes, ConcreteChannel, GradeControl, Culvert, AerialZipline, Other n/a LOCATION (to sample): US / DS / WI /

OTHERPRESENCE: n/a Vascular, Nonvascular, OilySheen, Foam, Trash, Other

DOMINANTSUBSTRATE: Bedrock, Concrete, Cobble, Gravel, Sand, Mud, Unk, Other n/a

PHOTOS (~~RB & LB assigned when facing downstream; RENAME to StationCode_yyyy_mm_dd_uniquecode~~): 1: (~~RB / LB / BB / US / DS / ##~~) DEC22_2022-02_A

WATERCLARITY: n/a Clear (see bottom), Cloudy (>4" vis), Murky (<4" vis)

PRECIPITATION: None, Fog, Drizzle, Rain, Snow

2: (~~RB / LB / BB / US / DS / ##~~) DEC22_2022-02_B DEC22_2022-02_C

WATERODOR: n/a None, Sulfides, Sewage, Petroleum, Mixed, Other

PRECIPITATION (last 24 hrs): Unknown, <1", >1", None

WATERCOLOR: n/a Colorless, Green, Yellow, Brown

3: (~~RB / LB / BB / US / DS / ##~~) DEC22_2022-02_D

OBSERVED FLOW: NA, Dry Waterbody Bed, No Obs Flow, Isolated Pool, Trickle (<0.1cfs), 0.1-1cfs, 1-5cfs, 5-20cfs, 20-50cfs, 50-200cfs, >200cfs

Field Measurements (SampleType = FieldMeasure; Method = Field)

	DepthCollec (m)	Velocity (fps)	Air Temp (~~°C~~) °F	Water Temp (°C)	pH	O_2 (mg/L)	O_2 (%)	Specific Conductivity (uS/cm)	Salinity (ppt)	Turbidity (ntu)	Stage Ht (units ____)		
SUBSURF/MID/ BOTTOM/REP	n/a	n/a	21.4°	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a		
SUBSURF/MID/ BOTTOM/REP													
SUBSURF/MID/ BOTTOM/REP													
Instrument:			Ambient										
Calib. Date:			n/a										

N/A

Samples Taken (# of containers filled) - Method=Water_Grab

Field Dup YES / NO: (SampleType = Grab / Integrated; LABEL_ID = FieldQA; create collection record upon data entry

SAMPLE TYPE: Grab / Integrated | COLLECTION EQUIPMENT: Indiv bottle (by hand, by pole, by bucket); Teflon tubing; Kemmer; Pole & Beaker; Other _____

	DepthCollec (m)	Inorganics	Bacteria	Chl a	TSS / SSC	TOC / DOC	Total Hg	Dissolved Mercury	Total Metals	Dissolved Metals	Organics	Toxicity	VOAs
Sub/Surface													
Sub/Surface													

COMMENTS:
NO VISIBLE FLOW - NO SAMPLES TAKEN.

Run:									Sample Processing Date:						
Sample ID #: Site Code:	N/A														
Yellow +	# Small Wells														
	# Large Wells														
	Empty Wells														
	MPN														
Yellow + Fluorescence (+)	# Small Wells														
	# Large Wells														
	False Positives														
	MPN														

Temp/Time	Start	4Hr. Check	14 Hr. Check	18 Hr. Check	22 Hr. Check, if needed

	FIELD DUPLICATES				LAB DUPLICATES			
	Normal Sample # / Duplicate Sample #	MPN	95% CI Lower	95% CI Upper	Normal Sample # / Duplicate Sample #	MPN	95% CI Lower	95% CI Upper
TOTAL COLIFORM	Normal				Normal			
	Duplicate				Duplicate			
	Mean		Pass	Needs Review	Mean		Pass	Needs Review
E. COLI	Normal				Normal			
	Duplicate				Duplicate			
	Mean		Pass	Needs Review	Mean		Pass	Needs Review
BLANKS	Field Sample #		Pass	Needs Review	Lab Sample #		Pass	Needs Review

Mean = Mean of Normal and Duplicate, which is then compared to the individual corresponding CI's to determine acceptability of data

Sampler Signature / Date / Time Arrived:	Placed in Incubator By / Date / Time:	Trays Read By:
Processor / Date / Time:	Pulled from Incubator By / Date / Time:	Entered into database:

NOTES:

Brooke Moran 12/19/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION Project Number: n/a

Sample Location CROSS WELL Date 12/20/22 Start Time 12:00 Stop time 3:15 Page 1 of 1

Sample Control Number n/a Samplers BM

WEATHER CONDITIONS

Ambient Air Temperature: 25.3° °C☐ °F☒ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☒

Precipitation: None☒ Rain☐ Snow☐ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☒

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level 34 Total Depth 205 Top of Screen 15 Filter Pack Interval n/a Borehole Diameter(inches) 9" (0-40 ft) 5 7/8" (40-205ft)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: 208 gallons

Well Casing ID n/a Well Casing OD * Protective Casing Stickup n/a Well Casing Stickup 6.2 Feet of Water n/a

Well purged with: WELL PUMP

FINAL WELL MEASUREMENTS

Static Water Level 34 Total Depth 205 Total Volume Purged 624 Saturated Borehole Volume (gal) 147 Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON#1

Buffer 7 Measured Value 7.0 Temp. 18.7°C

Buffer 10 Measured Value 10.0 Temp. 18.9°C

Conductivity Meter: Meter Number CMI-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☐ Measured☒	Comments
12:00	0	6.7	0.4	5.2	4.7	Field filtered:
13:00	624	6.7	0.4	5.8	2.2	①nitric-preserved bottle
						①bottle for radionuclides
						SAMPLES COLLECTED
						WITH DISPOSABLE
						CUP.

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☒	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☐ Measured☒		
12/20/22	13:00	7.0	6.7	0.4	5.8°	2.2		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time n/a)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

Notes: SAMPLED VIA PORT. * 6 5/8" (-1-40 ft) & 4 1/2" (15-205ft)

Sampler's Signature

Brooke Moran 12/20/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location COMPLIANCE WELL Date 12/20/22 Start Time 13:00 Stop time 13:45 Page 1 of 1 Project Number: n/a

Sample Control Number n/a Samplers BM

WEATHER CONDITIONS

Ambient Air Temperature: 24.8° °C☐ °F☒ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☒

Precipitation: None☒ Rain☐ Snow☐ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☒

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level 40 Total Depth 165 Top of Screen 65 Filter Pack Interval n/a Borehole Diameter(inches) 9"(0-50 ft) 6"(50-165 ft)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: 185 gallons

Well Casing ID n/a Well Casing OD * Protective Casing Stickup n/a Well Casing Stickup 1.0 Feet of Water n/a

Well purged with: WELL PUMP

FINAL WELL MEASUREMENTS

Static Water Level 40 Total Depth 165 Total Volume Purged 554 Saturated Borehole Volume (gal) 113 Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON01

Buffer 7 Measured Value 7.0 Temp. 18.7 °C

Buffer 10 Measured Value 10.0 Temp. 18.9 °C

Conductivity Meter: Meter Number CM1-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☐ Measured☒	Comments
13:00	0	7.0	0.4	5.3	3.5	Field filtered:
13:30	554	6.6	0.3	6.1	1.6	① nitric-preserved bottle & ① bottle for radionuclides
						SAMPLES COLLECTED WITH DISPOSABLE CUP.

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☒	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☐ Measured☒		
12/20/22	13:30	10.4	6.6	0.3	6.1°	1.6		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time COMPLIANCE WELL-FB)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

Duplicate and matrix spike QAQC info available in lab report.

Notes: SAMPLED AT WELL. * $6\frac{5}{8}$"(-1-50 ft) & $4\frac{1}{2}$"(15-165 ft)

Sampler's Signature

Brooke Moran 12/20/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location CARIBOU WELL Date 12/20/22 Start Time 10:30 Stop time 12:00 Page 1 of 1 Project Number: n/a

Sample Control Number n/a Samplers BM

WEATHER CONDITIONS

Ambient Air Temperature: 21.6° °C☐ °F☒ Not Measured ☐ **Wind:** Heavy☐ Moderate☒ Light☐

Precipitation: None☒ Rain☐ Snow☐ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☒

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

Static Water Level 30 Total Depth 165 Top of Screen 25 Filter Pack Interval n/a Borehole Diameter(inches) 9" (0-26 ft) 6" (26-165ft)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume: 161 gallons

Well Casing ID n/a Well Casing OD * Protective Casing Stickup n/a Well Casing Stickup 2.4 Feet of Water n/a

Well purged with: WELL PUMP

FINAL WELL MEASUREMENTS

Static Water Level 30 Total Depth 165 Total Volume Purged 484 Saturated Borehole Volume (gal) 111 Max Pumping Rate n/a

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON01

Buffer 7 Measured Value 7.0 Temp. 18.7 °C

Buffer 10 Measured Value 10.0 Temp. 18.9 °C

Conductivity Meter: Meter Number CM1-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☐ Measured☒	Comments
10:30	0	6.5	0.2	15.4	0.6	Field filtered =
11:30	483	6.3	0.3	5.6°	4.5	① nitric-preserved bottle
						① bottle for radionuclides
						SAMPLES COLLECTED
						WITH DISPOSABLE
						CUP.

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☒	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☐ Measured☒		
12/20/22	11:30	10.0	6.3	0.3	5.6°	4.5		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time n/a)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

Notes: SAMPLED VIA PORT. * $6\frac{5}{8}$"(-1-26 ft) & $4\frac{1}{2}$"(15-165 ft)

Sampler's Signature

Brooke Moran 12/20/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Project Number: n/a

Sample Location CROSS PORTAL Date 12/20/22 Start Time 12:15 Stop time 12:45 Page 1 of 1

Sample Control Number n/a Samplers BM

WEATHER CONDITIONS

Ambient Air Temperature: _____ °C☐ °F☐ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☐

Precipitation: None☐ Rain☐ Snow☐ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☐

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

N/A

Static Water Level____ Total Depth_____Top of Screen_____ Filter Pack Interval_____ Borehole Diameter(inches)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume:_____ gallons

Well Casing ID_____ Well Casing OD_____ Protective Casing Stickup___ Well Casing Stickup____ Feet of Water

Well purged with: _____

FINAL WELL MEASUREMENTS

Static Water Level__ Total Depth___ Total Volume Purged__ Saturated Borehole Volume (gal)___ Max Pumping Rate

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON01

Buffer 7 Measured Value 7.0 Temp. 18.7 °C

Buffer 10 Measured Value 10.0 Temp. 18.9 °C

Conductivity Meter: Meter Number CM1-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☐ Measured☑	Comments
12:15	n/a	8.0	0.4	4.6	1.6	Field filtered:
						①nitric-preserved bottle
						①bottle for radionuclides
						SAMPLES COLLECTED
						WITH DISPOSABLE
						CUP.

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☐	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☐ Measured☑		
12/20/22	12:15	n/a	8.0	0.4	4.6	1.6		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time n/a)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

Notes:

Sampler's Signature

Brooke Moran 12/20/22

GROUND WATER SAMPLING DATA SHEET

IDENTIFICATION

Sample Location CARIBOU PORTAL Date 12/20/22 Start Time 10:30 Stop time 11:15 Page 1 of 1 Project Number: n/a

Sample Control Number n/a Samplers BM

WEATHER CONDITIONS

Ambient Air Temperature: _____ °C☐ °F☐ Not Measured ☐ **Wind:** Heavy☐ Moderate☐ Light☐

Precipitation: None☐ Rain☐ Snow☐ Heavy☐ Moderate☐ Light☐ Sunny☐ Partly Cloudy☐

INITIAL WELL MEASUREMENTS (Measurements in feet made from top of well casing)

N/A

Static Water Level____ Total Depth_____Top of Screen_____ Filter Pack Interval_____ Borehole Diameter(inches)

2-inch = 0.1632 gal/ft 4-inch = 0.6528 gal/ft 6-inch = 1.4688 gal/ft Casing Volume:_____ gallons

Well Casing ID_____ Well Casing OD_____ Protective Casing Stickup___ Well Casing Stickup____ Feet of Water

Well purged with: _____

FINAL WELL MEASUREMENTS

Static Water Level__ Total Depth__ Total Volume Purged__ Saturated Borehole Volume (gal)___ Max Pumping Rate

INSTRUMENT CALIBRATION

pH Meter: Meter Number OAKTON01

Buffer 7 Measured Value 7.0 Temp. 18.7 °C

Buffer 10 Measured Value 10.0 Temp. 18.9 °C

Conductivity Meter: Meter Number CM1-2104-01479

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Standard 0.447 mS/cm Measured Value 0.5 mS/cm Temp. 16 °C

Turbidity Meter: n/a Standard n/a NTU Measured Value n/a NTU Standard n/a NTU Measured Value n/a NTU

FIELD PARAMETER MEASUREMENTS DURING PURGING

Time	Volume (gallons)	pH	Cond. (µS/cm)	Temp. °C☒ °F☐	Turbidity Visual Est.☐ Measured☒	Comments
11:15	n/a	8.6	0.5	2.3	2.1	Field filtered:
						① nitric-preserved bottle
						① bottle for radionuclides
						SAMPLES COLLECTED
						WITH DISPOSABLE
						CUP.

FINAL SAMPLE PARAMETERS

Sample Date	Sample Time	Discharge cfs☐ gpm☐	pH	Cond. (µS/cm)	Temp. (°C)	Turbidity Visual Est.☐ Measured☒		
12/20/22	11:15	n/a	8.6	0.5	2.3	2.1		

Duplicate Sample-02 (sample control number/time n/a)

Field Blank-03 (sample control number/time CARIBOU PORTAL-FB)

Rinsate Sample-04 (sample control number/time n/a)

Matrix Spike-MS (sample control number/time n/a)

_____ (sample control number/time n/a)

Duplicate and matrix spike QAQC info available in lab report.

Notes:

Sampler's Signature

Brooke Moran 12/20/22

APPENDIX F PHOTOGRAPHS

APPENDIX F.1 SAMPLE LOCATION 2022-01 PHOTOGRAPHS

October 2022

November 2022

December 2022

APPENDIX F.2 SAMPLE LOCATION 2022-02 PHOTOGRAPHS

October 2022

November 2022

December 2022

NO
TRESPASSING