

Analytical Report

July 17, 2018

Report to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231

cc: Ben Morin

Bill to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231

Project ID: Raymond Carter Water ACZ Project ID: L45240

Jake Wilkinson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 28, 2018. This project has been assigned to ACZ's project number, L45240. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L45240. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after August 16, 2018. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.

Max janicely

Max Janicek has reviewed and approved this report.











July 17, 2018

## Project ID: Raymond Carter Water ACZ Project ID: L45240

#### Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 6 miscellaneous samples from CRG Mining, LLC on June 28, 2018. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L45240. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

#### **Holding Times**

All analyses were performed within EPA recommended holding times.

#### Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports. The extended qualifier reports may contain footnotes qualifying specific elements due to QC failures. In addition the following has been noted with this specific project:

The Total Dissolved Solids results for L45240 been qualified with the N1 flag on the extended qualifier report. The chemist noted that the 105 C drying oven went 'out of range' during the drying period. The oven temperature was adjusted and in range before the corresponding workgroup was removed. All associated QC passed criteria, sample integrity not compromised.



Project ID:	Raymond Carter Water
Sample ID:	RM1

# Inorganic Analytical Results

ACZ Sample ID:	L45240-01
Date Sampled:	06/27/18 11:15
Date Received:	06/28/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							07/05/18 13:07	djp
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	07/05/18 17:45	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/12/18 20:40	msh
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	07/12/18 20:40	msh
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	07/05/18 17:45	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	07/12/18 20:40	msh
Cadmium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	07/12/18 20:40	msh
Calcium, dissolved	M200.7 ICP	1	16.0		mg/L	0.1	0.5	07/05/18 17:45	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/12/18 20:40	msh
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 17:45	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 17:45	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	07/05/18 17:45	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	07/12/18 20:40	msh
Magnesium, dissolved	M200.7 ICP	1	5.7		mg/L	0.2	1	07/05/18 17:45	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/05/18 17:45	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/11/18 16:20	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/05/18 17:45	dcm
Potassium, dissolved	M200.7 ICP	1	0.5	В	mg/L	0.2	1	07/05/18 17:45	dcm
Sodium, dissolved	M200.7 ICP	1	1.5		mg/L	0.2	1	07/05/18 17:45	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/05/18 17:45	dcm
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 17:45	dcm



Project ID:	Raymond Carter Water
Sample ID:	RM1

# Inorganic Analytical Results

ACZ Sample ID: L45240-01 Date Sampled: 06/27/18 11:15 Date Received: 06/28/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	64.8		*	mg/L	2	20	07/06/18 0:00	enb
Carbonate as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Hydroxide as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Total Alkalinity		1	64.8		*	mg/L	2	20	07/06/18 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			07/17/18 0:00	calc
Sum of Anions			1.4			meq/L			07/17/18 0:00	calc
Sum of Cations			1.4			meq/L			07/17/18 0:00	calc
Chloride	SM4500CI-E	1	0.7	В	*	mg/L	0.5	2	07/09/18 9:46	rbt
Conductivity @25C	SM2510B	1	136		*	umhos/cm	1	10	07/06/18 1:12	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/07/18 0:33	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		63			mg/L	0.2	5	07/17/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/06/18 10:03	s kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							07/04/18 13:00	) aeh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	07/17/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	06/28/18 22:30	) pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	06/28/18 22:30	) pjb
pH (lab)	SM4500H+ B									
рН		1	8.2	н	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.2		*	С	0.1	0.1	07/06/18 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	72		*	mg/L	10	20	07/02/18 15:57	′ kja
Sulfate	D516-02/-07 - Turbidimetric	1	4.5	В	*	mg/L	1	5	07/06/18 13:20	) wtc



Project ID:	Raymond Carter Water
Sample ID:	RM2

# Inorganic Analytical Results

ACZ Sample ID:	L45240-02
Date Sampled:	06/27/18 11:30
Date Received:	06/28/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							07/05/18 13:15	djp
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	07/05/18 17:54	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/12/18 20:42	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0085		mg/L	0.0002	0.001	07/12/18 20:42	msh
Barium, dissolved	M200.7 ICP	1	0.004	В	mg/L	0.003	0.02	07/05/18 17:54	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	07/12/18 20:42	msh
Cadmium, dissolved	M200.8 ICP-MS	1	0.0006		mg/L	0.0001	0.0005	07/12/18 20:42	msh
Calcium, dissolved	M200.7 ICP	1	14.2		mg/L	0.1	0.5	07/05/18 17:54	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/12/18 20:42	msh
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 17:54	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 17:54	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	07/05/18 17:54	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	07/12/18 20:42	msh
Magnesium, dissolved	M200.7 ICP	1	3.3		mg/L	0.2	1	07/05/18 17:54	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/05/18 17:54	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/11/18 16:21	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/05/18 17:54	dcm
Potassium, dissolved	M200.7 ICP	1	1.1		mg/L	0.2	1	07/05/18 17:54	dcm
Sodium, dissolved	M200.7 ICP	1	4.1		mg/L	0.2	1	07/05/18 17:54	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/05/18 17:54	dcm
Zinc, dissolved	M200.7 ICP	1	0.05		mg/L	0.01	0.05	07/05/18 17:54	dcm



Project ID:	Raymond Carter Water
Sample ID:	RM2

## Inorganic Analytical Results

ACZ Sample ID: L45240-02 Date Sampled: 06/27/18 11:30 Date Received: 06/28/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	43.2		*	mg/L	2	20	07/06/18 0:00	enb
Carbonate as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Hydroxide as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Total Alkalinity		1	43.2		*	mg/L	2	20	07/06/18 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.0			%			07/17/18 0:00	calc
Sum of Anions			1.3			meq/L			07/17/18 0:00	calc
Sum of Cations			1.2			meq/L			07/17/18 0:00	calc
Chloride	SM4500CI-E	1	2.6		*	mg/L	0.5	2	07/09/18 9:46	rbt
Conductivity @25C	SM2510B	1	128		*	umhos/cm	1	10	07/06/18 1:22	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/07/18 0:35	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		49.0			mg/L	0.2	5	07/17/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/06/18 10:05	i kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							07/04/18 13:00	) aeh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.04	В		mg/L	0.02	0.1	07/17/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.04	В	*	mg/L	0.02	0.1	06/28/18 22:51	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	06/28/18 22:51	pjb
pH (lab)	SM4500H+ B									
pН		1	8.0	Н	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.2		*	С	0.1	0.1	07/06/18 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	82		*	mg/L	10	20	07/02/18 15:59	) kja
Sulfate	D516-02/-07 - Turbidimetric	1	18.0		*	mg/L	1	5	07/06/18 13:20	wtc



Project ID:	Raymond Carter Water
Sample ID:	RM3

# Inorganic Analytical Results

ACZ Sample ID:	L45240-03
Date Sampled:	06/27/18 11:50
Date Received:	06/28/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							07/05/18 13:22	djp
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	07/05/18 17:57	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/12/18 20:44	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.001		mg/L	0.0002	0.001	07/12/18 20:44	msh
Barium, dissolved	M200.7 ICP	1	0.012	В	mg/L	0.003	0.02	07/05/18 17:57	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	07/12/18 20:44	msh
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	07/12/18 20:44	msh
Calcium, dissolved	M200.7 ICP	1	16.0		mg/L	0.1	0.5	07/05/18 17:57	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/12/18 20:44	msh
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 17:57	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 17:57	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	07/05/18 17:57	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	07/12/18 20:44	msh
Magnesium, dissolved	M200.7 ICP	1	5.6		mg/L	0.2	1	07/05/18 17:57	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/05/18 17:57	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/11/18 16:22	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/05/18 17:57	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	07/05/18 17:57	dcm
Sodium, dissolved	M200.7 ICP	1	1.7		mg/L	0.2	1	07/05/18 17:57	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/05/18 17:57	dcm
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 17:57	dcm



Project ID:	Raymond Carter Water
Sample ID:	RM3

## Inorganic Analytical Results

ACZ Sample ID: L45240-03 Date Sampled: 06/27/18 11:50 Date Received: 06/28/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	76.1		*	mg/L	2	20	07/06/18 0:00	enb
Carbonate as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Hydroxide as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Total Alkalinity		1	76.1		*	mg/L	2	20	07/06/18 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-9.7			%			07/17/18 0:00	calc
Sum of Anions			1.7			meq/L			07/17/18 0:00	calc
Sum of Cations			1.4			meq/L			07/17/18 0:00	calc
Chloride	SM4500CI-E	1	0.6	В	*	mg/L	0.5	2	07/09/18 9:46	rbt
Conductivity @25C	SM2510B	1	134		*	umhos/cm	1	10	07/06/18 1:31	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/07/18 0:36	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		63.0			mg/L	0.2	5	07/17/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/06/18 10:07	′ kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							07/04/18 13:00	) aeh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	07/17/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	06/28/18 22:34	l pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	06/28/18 22:34	l pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.1		*	С	0.1	0.1	07/06/18 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	88		*	mg/L	10	20	07/02/18 16:01	kja
Sulfate	D516-02/-07 - Turbidimetric	1	5.7		*	mg/L	1	5	07/06/18 14:18	8 wtc



Project ID:	Raymond Carter Water
Sample ID:	CM1

# Inorganic Analytical Results

ACZ Sample ID: L45240-04 Date Sampled: 06/27/18 12:20 Date Received: 06/28/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							07/05/18 13:30	djp
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	07/05/18 18:00	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/12/18 20:45	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.001		mg/L	0.0002	0.001	07/12/18 20:45	msh
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	07/05/18 18:00	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	07/12/18 20:45	msh
Cadmium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	07/12/18 20:45	msh
Calcium, dissolved	M200.7 ICP	1	16.2		mg/L	0.1	0.5	07/05/18 18:00	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/12/18 20:45	msh
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 18:00	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 18:00	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	07/05/18 18:00	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0001	0.0005	07/12/18 20:45	msh
Magnesium, dissolved	M200.7 ICP	1	5.7		mg/L	0.2	1	07/05/18 18:00	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/05/18 18:00	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/11/18 16:23	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/05/18 18:00	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	07/05/18 18:00	dcm
Sodium, dissolved	M200.7 ICP	1	1.7		mg/L	0.2	1	07/05/18 18:00	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/05/18 18:00	dcm
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 18:00	dcm



Project ID:	Raymond Carter Water
Sample ID:	CM1

# Inorganic Analytical Results

ACZ Sample ID: L45240-04 Date Sampled: 06/27/18 12:20 Date Received: 06/28/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	68.2		*	mg/L	2	20	07/06/18 0:00	enb
Carbonate as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Hydroxide as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Total Alkalinity		1	68.2		*	mg/L	2	20	07/06/18 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.4			%			07/17/18 0:00	calc
Sum of Anions			1.5			meq/L			07/17/18 0:00	calc
Sum of Cations			1.4			meq/L			07/17/18 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	07/09/18 9:46	rbt
Conductivity @25C	SM2510B	1	137		*	umhos/cm	1	10	07/06/18 1:39	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/07/18 0:37	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		64			mg/L	0.2	5	07/17/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/06/18 10:09	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							07/04/18 13:00	aeh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	07/17/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	06/28/18 22:41	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	06/28/18 22:41	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.1		*	С	0.1	0.1	07/06/18 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	90		*	mg/L	10	20	07/03/18 10:09	kja
Sulfate	D516-02/-07 - Turbidimetric	1	5.3		*	mg/L	1	5	07/06/18 14:18	wtc



Project ID:	Raymond Carter Water
Sample ID:	CM2

# Inorganic Analytical Results

ACZ Sample ID: L45240-05 Date Sampled: 06/27/18 12:40 Date Received: 06/28/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							07/05/18 13:37	djp
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	07/05/18 18:09	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/12/18 20:47	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0018		mg/L	0.0002	0.001	07/12/18 20:47	msh
Barium, dissolved	M200.7 ICP	1	0.012	В	mg/L	0.003	0.02	07/05/18 18:09	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	07/12/18 20:47	msh
Cadmium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	07/12/18 20:47	msh
Calcium, dissolved	M200.7 ICP	1	17.3		mg/L	0.1	0.5	07/05/18 18:09	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/12/18 20:47	msh
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 18:09	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 18:09	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	07/05/18 18:09	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	07/12/18 20:47	msh
Magnesium, dissolved	M200.7 ICP	1	3.5		mg/L	0.2	1	07/05/18 18:09	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/05/18 18:09	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/11/18 16:24	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/05/18 18:09	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	07/05/18 18:09	dcm
Sodium, dissolved	M200.7 ICP	1	6.0		mg/L	0.2	1	07/05/18 18:09	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/05/18 18:09	dcm
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/05/18 18:09	dcm



Project ID:	Raymond Carter Water
Sample ID:	CM2

## Inorganic Analytical Results

ACZ Sample ID: L45240-05 Date Sampled: 06/27/18 12:40 Date Received: 06/28/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	53.2		*	mg/L	2	20	07/06/18 0:00	enb
Carbonate as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Hydroxide as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Total Alkalinity		1	53.2		*	mg/L	2	20	07/06/18 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			07/17/18 0:00	calc
Sum of Anions			1.4			meq/L			07/17/18 0:00	calc
Sum of Cations			1.4			meq/L			07/17/18 0:00	calc
Chloride	SM4500CI-E	1	0.6	В	*	mg/L	0.5	2	07/09/18 9:47	rbt
Conductivity @25C	SM2510B	1	148		*	umhos/cm	1	10	07/06/18 1:48	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/07/18 0:38	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		58			mg/L	0.2	5	07/17/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/06/18 10:11	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							07/04/18 13:00	aeh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.04	В		mg/L	0.02	0.1	07/17/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.04	В	*	mg/L	0.02	0.1	06/28/18 22:42	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	06/28/18 22:42	pjb
pH (lab)	SM4500H+ B									
pН		1	8.1	н	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.2		*	С	0.1	0.1	07/06/18 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	106		*	mg/L	10	20	07/02/18 16:03	kja
Sulfate	D516-02/-07 - Turbidimetric	1	13.9		*	mg/L	1	5	07/06/18 14:18	wtc



Project ID:	Raymond Carter Water
Sample ID:	CM3

# Inorganic Analytical Results

ACZ Sample ID:	L45240-06
Date Sampled:	06/27/18 12:55
Date Received:	06/28/18
Sample Matrix:	Surface Water

Inorganic Prep										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								07/05/18 13:45	djp
Metals Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U		mg/L	0.03	0.2	07/05/18 18:12	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0004	0.002	07/12/18 20:49	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0011			mg/L	0.0002	0.001	07/12/18 20:49	msh
Barium, dissolved	M200.7 ICP	1	0.013	В		mg/L	0.003	0.02	07/05/18 18:12	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	07/12/18 20:49	msh
Cadmium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	07/12/18 20:49	msh
Calcium, dissolved	M200.7 ICP	1	16.4			mg/L	0.1	0.5	07/05/18 18:12	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	07/12/18 20:49	msh
Cobalt, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/05/18 18:12	dcm
Copper, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/05/18 18:12	dcm
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	07/05/18 18:12	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0002	В		mg/L	0.0001	0.0005	07/12/18 20:49	msh
Magnesium, dissolved	M200.7 ICP	1	5.5			mg/L	0.2	1	07/05/18 18:12	dcm
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	07/05/18 18:12	dcm
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	07/11/18 16:25	che
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	07/05/18 18:12	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В		mg/L	0.2	1	07/05/18 18:12	dcm
Sodium, dissolved	M200.7 ICP	1	1.9			mg/L	0.2	1	07/05/18 18:12	dcm
Vanadium, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	07/05/18 18:12	dcm
Zinc, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	07/05/18 18:12	dcm



Project ID:	Raymond Carter Water
Sample ID:	CM3

## Inorganic Analytical Results

ACZ Sample ID: L45240-06 Date Sampled: 06/27/18 12:55 Date Received: 06/28/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	64.0		*	mg/L	2	20	07/06/18 0:00	enb
Carbonate as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Hydroxide as CaCO3		1		U	*	mg/L	2	20	07/06/18 0:00	enb
Total Alkalinity		1	64.0		*	mg/L	2	20	07/06/18 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			07/17/18 0:00	calc
Sum of Anions			1.4			meq/L			07/17/18 0:00	calc
Sum of Cations			1.4			meq/L			07/17/18 0:00	calc
Chloride	SM4500CI-E	1	0.7	В	*	mg/L	0.5	2	07/09/18 9:47	rbt
Conductivity @25C	SM2510B	1	138		*	umhos/cm	1	10	07/06/18 1:57	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/07/18 0:39	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		64			mg/L	0.2	5	07/17/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/06/18 10:13	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							07/04/18 13:00	aeh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	07/17/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	06/28/18 22:43	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	06/28/18 22:43	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.2		*	С	0.1	0.1	07/06/18 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	80		*	mg/L	10	20	07/03/18 10:10	kja
Sulfate	D516-02/-07 - Turbidimetric	1	4.4	В	*	mg/L	1	5	07/06/18 13:22	wtc



Inorganic Reference

Demonst Handland	E			
Report Header				
Batch	•	s analyzed at a specific time		
Found	Value of the QC Type o			
Limit	Upper limit for RPD, in 9			
Lower	, , , , , , , , , , , , , , , , , , ,	n % (except for LCSS, mg/Kg)		
MDL		Same as Minimum Reporting Limit u	Inless omitted or e	qual to the PQL (see comment #5).
	Allows for instrument ar			
PCN/SCN	•	eagents/standards to trace to the mar		ate of analysis
PQL	Practical Quantitation L	mit. Synonymous with the EPA term	"minimum level".	
QC	True Value of the Contr	ol Sample or the amount added to the	e Spike	
Rec		ne true value or spike added, in % (ex	1 2	/Kg)
RPD	Relative Percent Differe	nce, calculation used for Duplicate Q	C Types	
Upper		n % (except for LCSS, mg/Kg)		
Sample	Value of the Sample of	interest		
QC Sample Ty	pes			
AS	Analytical Spike (Post D	ligestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post D	ligestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibration E	Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration \	/erification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate		LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank		MS	Matrix Spike
ICV	Initial Calibration Verific	ation standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction	n Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sam	iple - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Control Sam	ple - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSW	Laboratory Control Sam	iple - Water	SDL	Serial Dilution
QC Sample Ty	pe Explanations			
Blanks		Verifies that there is no or minimal c	ontamination in the	e prep method or calibration procedure.
Control Sar	nples	Verifies the accuracy of the method	, including the prep	procedure.
Duplicates		Verifies the precision of the instrume	ent and/or method.	
Spikes/For	ified Matrix	Determines sample matrix interferer	nces, if any.	
Standard		Verifies the validity of the calibration		
ACZ Qualifiers	(Qual)			

ACZ Qualif	iers (Qual)
В	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
Н	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
L	Target analyte response was below the laboratory defined negative threshold.
U	The material was analyzed for, but was not detected above the level of the associated value.
	The associated value is either the sample quantitation limit or the sample detection limit.

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Wa	ater and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inc	rganic Substances in Environmental Samples, August 1993.
(3)	EPA 600/R-94-111. Methods for the Determination of Me	tals in Environmental Samples - Supplement I, May 1994.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste.	
(5)	Standard Methods for the Examination of Water and Was	tewater.
mments		
(1)	QC results calculated from raw data. Results may vary sl	ightly if the rounded values are used in the calculations.
(2)	Soil, Sludge, and Plant matrices for Inorganic analyses ar	e reported on a dry weight basis.
(-)	Animal metrices for lastronic analyses are reported on a	n "as received" hasis
(3)	Animal matrices for Inorganic analyses are reported on ar	
	Animal matrices for morganic analyses are reported on an An asterisk in the "XQ" column indicates there is an exten	
(3)	<b>o</b> , ,	

REP001.03.15.02

# ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

## **CRG Mining, LLC**

#### ACZ Project ID: L45240

Alkalinity as CaC	O3		SM23208	3 - Titration									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451044													
WG451044PBW1	PBW	07/05/18 16:34				U	mg/L		-20	20			
WG451044LCSW3	LCSW	07/05/18 16:51	WC180629-1	820.0001		793	mg/L	97	90	110			
NG451044LCSW6	LCSW	07/05/18 19:46	WC180629-1	820.0001		795	mg/L	97	90	110			
WG451044PBW2	PBW	07/05/18 19:53				U	mg/L		-20	20			
WG451044LCSW9	LCSW	07/05/18 23:13	WC180629-1	820.0001		794	mg/L	97	90	110			
WG451044PBW3	PBW	07/05/18 23:20				U	mg/L		-20	20			
_45242-01DUP	DUP	07/06/18 2:16			302	302	mg/L				0	20	
WG451044LCSW12	LCSW	07/06/18 2:33	WC180629-1	820.0001		798	mg/L	97	90	110			
WG451044PBW4	PBW	07/06/18 2:40				U	mg/L		-20	20			
WG451044LCSW15	LCSW	07/06/18 5:45	WC180629-1	820.0001		788	mg/L	96	90	110			
Aluminum, disso	lved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	2		1.946	mg/L	97	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.09	0.09			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	1.0019		1.039	mg/L	104	85	115			
_45240-01AS	AS	07/05/18 17:48	II180704-3	1.0019	U	1.049	mg/L	105	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	1.0019	U	1.045	mg/L	104	85	115	0	20	
Antimony, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451600													
WG451600ICV	ICV	07/12/18 19:57	MS180620-2	.02		.02101	mg/L	105	90	110			
WG451600ICB	ICB	07/12/18 19:58				U	mg/L		-0.00088	0.00088			
WG451600LFB	LFB	07/12/18 20:00	MS180621-2	.01		.01066	mg/L	107	85	115			
L45231-03AS	AS	07/12/18 20:30	MS180621-2	.01	U	.01031	mg/L	103	70	130			
L45231-03ASD	ASD	07/12/18 20:31	MS180621-2	.01	U	.01042	mg/L	104	70	130	1	20	
Arsenic, dissolve	d		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451600													
WG451600ICV	ICV	07/12/18 19:57	MS180620-2	.05		.05175	mg/L	104	90	110			
WG451600ICB	ICB	07/12/18 19:58				.00170 U	mg/L		-0.00044				
WG451600LFB	LFB	07/12/18 20:00	MS180621-2	.0501		.05155	mg/L	103	85	115			
L45231-03AS	AS	07/12/18 20:30	MS180621-2	.0501	U	.04594	mg/L	92	70	130			
L45231-03ASD	ASD	07/12/18 20:31	MS180621-2	.0501	U	.04751	mg/L	95	70	130	3	20	
Barium, dissolve	d		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	2		1.9802	mg/L	99	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.009	0.009			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	.5025		.5031	mg/L	100	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	.5025	.013	.5121	mg/L	99	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	.5025	.013	.5127	mg/L	99	85	115	0	20	

# AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

## **CRG Mining, LLC**

## ACZ Project ID: L45240

Beryllium, disso	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451600													
WG451600ICV	ICV	07/12/18 19:57	MS180620-2	.05		.049696	mg/L	99	90	110			
WG451600ICB	ICB	07/12/18 19:58				.000071	mg/L		-0.00011	0.00011			
WG451600LFB	LFB	07/12/18 20:00	MS180621-2	.05035		.051698	mg/L	103	85	115			
L45231-03AS	AS	07/12/18 20:30	MS180621-2	.05035	U	.056018	mg/L	111	70	130			
L45231-03ASD	ASD	07/12/18 20:31	MS180621-2	.05035	U	.056038	mg/L	111	70	130	0	20	
Cadmium, disso	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451600													
WG451600ICV	ICV	07/12/18 19:57	MS180620-2	.05		.05322	mg/L	106	90	110			
WG451600ICB	ICB	07/12/18 19:58				U	mg/L		-0.00022	0.00022			
WG451600LFB	LFB	07/12/18 20:00	MS180621-2	.05005		.05177	mg/L	103	85	115			
L45231-03AS	AS	07/12/18 20:30	MS180621-2	.05005	U	.05177	mg/L	103	70	130			
L45231-03ASD	ASD	07/12/18 20:31	MS180621-2	.05005	U	.05226	mg/L	104	70	130	1	20	
Calcium, dissol	ved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	100		98.62	mg/L	99	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.3	0.3			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	68.22088		68.78	mg/L	101	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	68.22088	16	83.8	mg/L	99	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	68.22088	16	83.81	mg/L	99	85	115	0	20	
Chloride			SM4500	CI-E									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451232													
WG451232ICB	ICB	07/09/18 8:13				U	mg/L		-1.5	1.5			
WG451232ICV	ICV	07/09/18 8:13	WI180530-1	54.89		58	mg/L	106	90	110			
WG451232LFB1	LFB	07/09/18 9:45	WI171229-5	30.03		31.8	mg/L	106	90	110			
L45231-01AS	AS	07/09/18 9:46	WI171229-5	30.03	5.4	38.28	mg/L	109	90	110			
L45231-02DUP	DUP	07/09/18 9:46			.7	.67	mg/L				4	20	RA
WG451232LFB2	LFB	07/09/18 9:49	WI171229-5	30.03		31.97	mg/L	106	90	110			
Chromium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451600													
WG451600ICV	ICV	07/12/18 19:57	MS180620-2	.05		.05366	mg/L	107	90	110			
WG451600ICB	ICB	07/12/18 19:58				U	mg/L		-0.0011	0.0011			
		07/12/18 20:00	MS180621-2	.05005		.05091	mg/L	102	85	115			
WG451600LFB	LFB												
WG451600LFB L45231-03AS	AS	07/12/18 20:30	MS180621-2	.05005	U	.04978	mg/L	99	70	130			

#### ACZ Project ID: L45240

Cobalt, dissolved	1		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	2.002		1.94	mg/L	97	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.03	0.03			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	.501		.494	mg/L	99	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	.501	U	.486	mg/L	97	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	.501	U	.483	mg/L	96	85	115	1	20	
Conductivity @2	5C		SM2510	3									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451044													
WG451044LCSW2	LCSW	07/05/18 16:39	PCN55811	1410		1460	umhos/cm	104	90	110			
WG451044LCSW5	LCSW	07/05/18 19:34	PCN55811	1410		1440	umhos/cm	102	90	110			
WG451044LCSW8	LCSW	07/05/18 23:01	PCN55811	1410		1430	umhos/cm	101	90	110			
L45242-01DUP	DUP	07/06/18 2:16			3330	3310	umhos/cm				1	20	
WG451044LCSW11	LCSW	07/06/18 2:21	PCN55811	1410		1410	umhos/cm	100	90	110			
WG451044LCSW14	LCSW	07/06/18 5:34	PCN55811	1410		1410	umhos/cm	100	90	110			
Copper, dissolve	d		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	2		1.977	mg/L	99	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.03	0.03			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	.4975		.499	mg/L	100	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	.4975	U	.495	mg/L	99	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	.4975	U	.502	mg/L	101	85	115	1	20	
Cvanida total			M335 / -	Colorimetr	ic w/ distil	lation							
Cyanide, total ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample		Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451200	туре	Analyzeu	r on/oon	QU	Sample	Tound	Onits	Nec /0	Lower	opper		Emm	Quai
WG451200	ICV	07/07/18 0:23	WI180628-3	.3		.2887	mg/L	96	90	110			
WG451200ICV WG451200ICB	ICB	07/07/18 0:23	W1100020-3	.5		.2007 U	mg/L	90	-0.003	0.003			
							-						
WG450994LRB		07/07/18 0:26	WI180622-4	n		U .21	mg/L	105	-0.003	0.003			
WG450994LFB		07/07/18 0:26	WI180622-4 WI180622-4	.2			mg/L mg/l	105 100	90	110 110			
L45231-01LFM L45231-02DUP	LFM DUP	07/07/18 0:29 07/07/18 0:31	¥¥1100022-4	.2	U U	.2001 U	mg/L mg/L	100	90	110	0	20	RA
	DOI	0//0//10 0.01			0	0					0	20	
Iron, dissolved	-	A	M200.7 I		0	<b>F</b>	11.24	D 0/				1.1	0.1
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013		07/06/40 47:45	ll180703-2	0		1 00 4	mc/l	07	05	105			
WG451013ICV	ICV	07/05/18 17:15	1100703-2	2		1.934	mg/L	97	95	105			
WG451013ICB	ICB	07/05/18 17:21	11490704 2	4 0040		U	mg/L	101	-0.06	0.06			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	1.0018		1.011	mg/L	101	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	1.0018	U	1.009	mg/L	101	85	115	0	00	
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	1.0018	U	1.008	mg/L	101	85	115	0	20	

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## **CRG Mining, LLC**

## ACZ Project ID: L45240

Lead, dissolved			M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451600													
WG451600ICV	ICV	07/12/18 19:57	MS180620-2	.05		.05476	mg/L	110	90	110			
WG451600ICB	ICB	07/12/18 19:58				U	mg/L		-0.00022	0.00022			
WG451600LFB	LFB	07/12/18 20:00	MS180621-2	.0496		.05263	mg/L	106	85	115			
L45231-03AS	AS	07/12/18 20:30	MS180621-2	.0496	U	.053	mg/L	107	70	130			
L45231-03ASD	ASD	07/12/18 20:31	MS180621-2	.0496	U	.05386	mg/L	109	70	130	2	20	
Magnesium, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	100		99.47	mg/L	99	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.6	0.6			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	50.05667		49.19	mg/L	98	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	50.05667	5.7	54.63	mg/L	98	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	50.05667	5.7	54.52	mg/L	98	85	115	0	20	
Manganese, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	2		1.9698	mg/L	98	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.015	0.015			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	.5005		.5026	mg/L	100	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	.5005	U	.5007	mg/L	100	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	.5005	U	.5022	mg/L	100	85	115	0	20	
Mercury, total			M245.1 (	CVAA									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451331													
WG451331ICV1	ICV	07/11/18 13:40	HG180622-2	.004995		.00505	mg/L	101	95	105			
WG451331ICB	ICB	07/11/18 13:41				U	mg/L		-0.0002	0.0002			
WG451439													
WG451439LRB	LRB	07/11/18 16:10				U	mg/L		-0.00044	0.00044			
WG451439LFB	LFB	07/11/18 16:11	HG180626-3	.002002		.00182	mg/L	91	85	115			
L45231-01LFM	LFM	07/11/18 16:13	HG180626-3	.002002	U	.00188	mg/L	94	85	115			
L45231-01LFMD	LFMD	07/11/18 16:14	HG180626-3	.002002	U	.00175	mg/L	87	85	115	7	20	
L45240-06LFM	LFM	07/11/18 16:26	HG180626-3	.002002	U	.00177	mg/L	88	85	115			
L45240-06LFMD	LFMD	07/11/18 16:27	HG180626-3	.002002	U	.00182	mg/L	91	85	115	3	20	
Nickel, dissolve	d		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
	ICV	07/05/18 17:15	II180703-2	2.004		1.978	mg/L	99	95	105			
WG451013ICV									0.004	0.004			
	ICB	07/05/18 17:21				U	mg/L		-0.024	0.024			
WG451013ICV WG451013ICB WG451013LFB		07/05/18 17:21 07/05/18 17:33	II180704-3	.5015		U .5101	mg/L mg/L	102	-0.024 85	0.024 115			
WG451013ICB	ICB		II180704-3 II180704-3	.5015 .5015	U			102 99					

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## **CRG Mining, LLC**

#### ACZ Project ID: L45240

Nitrate/Nitrite as	N, disso	olved	M353.2 -	Automated	l Cadmiur	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG450621													
WG450621ICV	ICV	06/28/18 22:04	WI180602-1	2.416		2.273	mg/L	94	90	110			
WG450621ICB	ICB	06/28/18 22:05				U	mg/L		-0.02	0.02			
WG450621LFB	LFB	06/28/18 22:11	WI180103-12	2		1.85	mg/L	93	90	110			
L45175-01AS	AS	06/28/18 22:13	WI180103-12	2	.98	2.495	mg/L	76	90	110			M2
L45175-02DUP	DUP	06/28/18 22:16			1.18	1.181	mg/L				0	20	
L45240-03DUP	DUP	06/28/18 22:35			.03	.03	mg/L				0	20	RA
L45240-02AS	AS	06/28/18 22:52	WI180103-12	2	.04	1.845	mg/L	90	90	110			
Nitrite as N, disso	olved		M353.2 -	Automated	l Cadmiur	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG450621													
WG450621ICV	ICV	06/28/18 22:04	WI180602-1	.609		.593	mg/L	97	90	110			
WG450621ICB	ICB	06/28/18 22:05				U	mg/L		-0.01	0.01			
WG450621LFB	LFB	06/28/18 22:11	WI180103-12	1		.984	mg/L	98	90	110			
L45175-01AS	AS	06/28/18 22:13	WI180103-12	1	.1	.995	mg/L	90	90	110			
L45175-02DUP	DUP	06/28/18 22:16			.11	.109	mg/L				1	20	
L45240-03DUP	DUP	06/28/18 22:35			U	U	mg/L				0	20	RA
L45240-02AS	AS	06/28/18 22:52	WI180103-12	1	U	1.1	mg/L	110	90	110			
pH (lab)			SM4500I	H+ B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451044													
WG451044LCSW1	LCSW	07/05/18 16:37	PCN55475	6.01		6	units	100	5.9	6.1			
WG451044LCSW4	LCSW	07/05/18 19:32	PCN55475	6.01		6	units	100	5.9	6.1			
WG451044LCSW7	LCSW	07/05/18 22:59	PCN55475	6.01		6	units	100	5.9	6.1			
L45242-01DUP	DUP	07/06/18 2:16			8	8	units				0	20	
WG451044LCSW10	LCSW	07/06/18 2:19	PCN55475	6.01		6.1	units	101	5.9	6.1			
WG451044LCSW13	LCSW	07/06/18 5:32	PCN55475	6.01		6	units	100	5.9	6.1			
Potassium, disso	lved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	20		19.9	mg/L	100	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.6	0.6			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	99.72934		100.8	mg/L	101	85	115			
		07/05/40 47:40	11100704 2	00 70004	-				~-				
L45240-01AS	AS	07/05/18 17:48	II180704-3	99.72934	.5	101.9	mg/L	102	85	115			

#### ACZ Project ID: L45240

Residue, Filteral	ble (TDS	6) @180C	SM2540C	;									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG450799													
WG450799PBW	PBW	07/02/18 15:30				U	mg/L		-20	20			
WG450799LCSW	LCSW	07/02/18 15:31	PCN56048	260		260	mg/L	100	80	120			
L45277-02DUP	DUP	07/02/18 16:14			50	50	mg/L				0	10	RA
WG450842													
WG450842PBW	PBW	07/03/18 10:00				U	mg/L		-20	20			
WG450842LCSW	LCSW	07/03/18 10:01	PCN56047	260		260	mg/L	100	80	120			
L45257-03DUP	DUP	07/03/18 10:15			2660	2660	mg/L				0	10	
Sodium, dissolv	ed		M200.7 IC	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	100		99.98	mg/L	100	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.6	0.6			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	100.6711		102.3	mg/L	102	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	100.6711	1.5	103.9	mg/L	102	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	100.6711	1.5	103.8	mg/L	102	85	115	0	20	
Sulfate			D516-02/-	-07 - Turbi	dimetric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451167													
WG451167ICB	ICB	07/06/18 8:56				U	mg/L		-3	3			
WG451167ICV	ICV	07/06/18 8:56	WI180622-2	20		19.1	mg/L	96	90	110			
WG451167LFB	LFB	07/06/18 13:20	WI180702-1	10		10.5	mg/L	105	90	110			
L45209-02DUP	DUP	07/06/18 13:20			U	U	mg/L				0	20	RA
L45209-03AS	AS	07/06/18 13:20	WI180702-1	10	6.3	16.4	mg/L	101	90	110			
WG451167ICB1	ICB	07/06/18 14:01				U	mg/L		-3	3			
WG451167ICV1	ICV	07/06/18 14:01	WI180622-2	20		20.3	mg/L	102	90	110			
L45281-02DUP	DUP	07/06/18 14:12			2760	2920	mg/L				6	20	
L45281-01AS	AS	07/06/18 14:18	WI180702-1	10	3.9	14	mg/L	101	90	110			
Vanadium, disso	olved		M200.7 IC	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	2		2.0395	mg/L	102	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.015	0.015			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	.501		.5154	mg/L	103	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	.501	U	.5162	mg/L	103	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	.501	U	.518	mg/L	103	85	115	0	20	
Zinc, dissolved			M200.7 IC	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	2		1.992	mg/L	100	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.03	0.03			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	.4942		.538	mg/L	109	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	.4942	U	.54	mg/L	109	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	.4942	U	.527	mg/L	107	85	115	2	20	



#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L45240-01	WG451044	Bicarbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG451232	Chloride	SM4500CI-E	Q6	Sample was received above recommended temperature.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG451200	Cyanide, total	M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Hydroxide as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG450621	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG451044	pН	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG450799	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
			SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451167	Sulfate	D516-02/-07 - Turbidimetric	Q6	Sample was received above recommended temperature.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.



#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L45240-02	WG451044	Bicarbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG451232	Chloride	SM4500CI-E	Q6	Sample was received above recommended temperature.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG451200	Cyanide, total	M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Hydroxide as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG450621	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG451044	рН	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG450799	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
			SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451167	Sulfate	D516-02/-07 - Turbidimetric	Q6	Sample was received above recommended temperature.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.



#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L45240-03	WG451044	Bicarbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG451232	Chloride	SM4500CI-E	Q6	Sample was received above recommended temperature.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG451200	Cyanide, total	M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Hydroxide as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG450621	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG451044	pН	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG450799	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
			SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451167	Sulfate	D516-02/-07 - Turbidimetric	Q6	Sample was received above recommended temperature.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.



#### **CRG Mining, LLC**

Carbonate as CaCO3     SM2320B - Titration     Q6     Sample was received above recommended temperatul SM4500C1-E     Q6     Sample was received above recommended temperatul validation because the concentration of the duplicated sample is too low for accurate evaluation (<10 kmDL)       WG451044     Conductivity @25C     SM2510B     Q6     Sample was received above recommended temperatul validation because the concentration of the duplicated sample is too low for accurate evaluation (<10 kmDL)       WG451044     Conductivity @25C     SM2510B     Q6     Sample was received above recommended temperatul distillation       WG451044     Hydroxide as CaCO3     SM2320B - Titration     Q6     Sample was received above recommended temperatul validation because the concentration of the duplicated sample is too low for accurate evaluation (<10 kmDL)       WG451044     Hydroxide as CaCO3     SM2320B - Titration     Q6     Sample was received above recommended temperatul validation because the concentration of the duplicated sample is too low for accurate evaluation (<10 kmDL)       WG450621     Nitrate/Nitrite as N, dissolved     M353.2 - Automated Cadmium Reduction     Q6     Sample was received above recommended temperatul validation because the concentration of the duplicated sample is too low for accurate evaluation (<10 kmDL)       M353.2 - Automated Cadmium Reduction     Q6     Sample was received above recommended temperatul validation because the concentration of the duplicated sample is too low for accurate evaluation (<10 kmDL)       WG451044     PH     M353.2 - Automated Cadmium Reduction	ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
WG451232     Chloride     SM4500CI-E     G     Sample was received above recommended temperatures of the duplicated sample is too low for accurate evaluation (< 10x MDL)	L45240-04	WG451044	Bicarbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
WG451044       Conductivity @25C       SM2510B       Q6       Sample is too low for accurate evaluation (< 10 km DL)			Carbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
WG45104       Conductivity @25C       SM2510B       C6       Sample vas received above recommended temperatu distillation         WG451200       Cyanide, total       M335.4 - Colorimetric w/ distillation       C6       Sample was received above recommended temperatu distillation         WG45104       Hydroxide as CaCO3       SM2320B - Titration       C6       Sample was received above recommended temperatu distillation         WG450621       Hydroxide as CaCO3       SM2320B - Titration       C6       Sample was received above recommended temperatu Reduction         WG450621       Nitrate/Nitrite as N, dissolved       Rdeutcion       C6       Sample was received above recommended temperatu Reduction         M353.2 - Automated Cadmium Reduction       R0       Sample was received above recommended temperatu Reduction       R4         M353.2 - Automated Cadmium Reduction       R0       Sample was received above recommended temperatu Reduction       R4         M353.2 - Automated Cadmium Reduction       R0       Sample was received above recommended temperatu Reduction       R4         M353.2 - Automated Cadmium Reduction       R0       Sample was filtered an analyzed prior to the creation Filter workgroup.         M353.2 - Automated Cadmium Reduction       R0       Sample was filtered an analyzed prior to the creation Filter workgroup.         M353.2 - Automated Cadmium Reduction       R0       Sample was received above r		WG451232	Chloride	SM4500CI-E	Q6	Sample was received above recommended temperature.
WG451200       Cyanide, total       M335.4 - Colorimetric w/ distillation       G       Sample was received above recommended temperatures validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL)				SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
distillation       M335.4 - Colorimetric w/ distillation       RA       Relative Percent Difference (RPD) was not used for dr validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL)		WG451044	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
WG451044       Hydroxide as CaCO3       SM2320B - Titration       Q6       Sample is too low for accurate evaluation (< 10x MDL)		WG451200	Cyanide, total		Q6	Sample was received above recommended temperature.
WG450621       Nitrate/Nitrite as N, dissolved       M353.2 - Automated Cadmium Reduction       Q6       Sample was received above recommended temperatu Reduction because the concentration of the duplicated sample vas filtered and analyzed prior to the creation Filter workgroup.         Nitrite as N, dissolved       M353.2 - Automated Cadmium Reduction       Q6       Sample was received above recommended temperatu validation because the concentration of the duplicated sample vas filtered and analyzed prior to the creation Filter workgroup.         Nitrite as N, dissolved       M353.2 - Automated Cadmium Reduction       Q6       Sample was received above recommended temperatu validation because the concentration of the duplicated sample was filtered and analyzed prior to the creation Filter workgroup.         WG451044       pH pH measured at       M353.2 - Automated Cadmium Reduction       Q6       Sample was received above recommended temperatu validation because the concentration of the duplicated sample was filtered and analyzed prior to the creation Filter workgroup.         WG451044       pH pH measured at       SM4500H+ B       Q6       Sample was received above recommended temperatu validation because the concentration of the duplicated sample was filtered and analyzed prior to the creation Filter workgroup.         WG451047       pH pH measured at       SM4500H+ B       Q6       Sample was received above recommended temperatu Sample was received above recommended temperatu SM2540C         WG451167       Sulfate       <					RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
Reduction       M353.2 - Automated Cadmium       RA       Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10X MDL)		WG451044	Hydroxide as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
Reduction       validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL)		WG450621	Nitrate/Nitrite as N, dissolved		Q6	Sample was received above recommended temperature.
Reductionsample was filtered and analyzed prior to the creation Filter workgroup.Nitrite as N, dissolvedM353.2 - Automated Cadmium ReductionQ6Sample was received above recommended temperatu validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL) M353.2 - Automated Cadmium ReductionRARelative Percent Difference (RPD) was not used for da validation because the concentration of the duplicated sample was filtered and analyzed prior to the creation sample was filtered and analyzed prior to the creation filter workgroup.WG451044pHSM4500H+ BQ6Sample was received above recommended temperatu pH measured atWG450842Residue, Filterable (TDS) @180CSM2540CN1See Case Narrative.WG451167SulfateD516-02/-07 - TurbidimetricQ6Sample was received above recommended temperatu D516-02/-07 - TurbidimetricWG451167SulfateD516-02/-07 - TurbidimetricQ6Sample was received above recommended temperatu D516-02/-07 - Turbidimetric					RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
Reduction       M353.2 - Automated Cadmium Reduction       RA       Relative Percent Difference (RPD) was not used for davialidation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL)					ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
Reduction       validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL)			Nitrite as N, dissolved		Q6	Sample was received above recommended temperature.
Reduction       sample was filtered and analyzed prior to the creation Filter workgroup.         WG451044       pH       SM4500H+ B       Q6       Sample was received above recommended temperatu pH measured at         WG450842       Residue, Filterable (TDS) @180C       SM2540C       N1       See Case Narrative.         SM2540C       Q6       Sample was received above recommended temperatu SM2540C       Sample was received above recommended temperatu SM2540C         WG451167       Sulfate       D516-02/-07 - Turbidimetric       Q6       Sample was received above recommended temperatu D516-02/-07 - Turbidimetric         WG451167       Sulfate       D516-02/-07 - Turbidimetric       R6       Relative Percent Difference (RPD) was not used for data					RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
pH measured at       SM4500H+ B       Q6       Sample was received above recommended temperatu         WG450842       Residue, Filterable (TDS) @180C       SM2540C       N1       See Case Narrative.         SM2540C       Q6       Sample was received above recommended temperatu         WG451167       Sulfate       D516-02/-07 - Turbidimetric       Q6       Sample was received above recommended temperatu         D516-02/-07 - Turbidimetric       D516-02/-07 - Turbidimetric       RA       Relative Percent Difference (RPD) was not used for data					ZU	sample was filtered and analyzed prior to the creation of a
WG450842       Residue, Filterable (TDS) @180C       SM2540C       N1       See Case Narrative.         SM2540C       Q6       Sample was received above recommended temperatu         WG451167       Sulfate       D516-02/-07 - Turbidimetric       Q6       Sample was received above recommended temperatu         D516-02/-07 - Turbidimetric       D516-02/-07 - Turbidimetric       RA       Relative Percent Difference (RPD) was not used for data		WG451044	рН	SM4500H+ B	Q6	Sample was received above recommended temperature.
SM2540C     Q6     Sample was received above recommended temperatu       WG451167     Sulfate     D516-02/-07 - Turbidimetric     Q6     Sample was received above recommended temperatu       D516-02/-07 - Turbidimetric     D516-02/-07 - Turbidimetric     RA     Relative Percent Difference (RPD) was not used for data			pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
WG451167       Sulfate       D516-02/-07 - Turbidimetric       Q6       Sample was received above recommended temperatu         D516-02/-07 - Turbidimetric       RA       Relative Percent Difference (RPD) was not used for data		WG450842	Residue, Filterable (TDS) @180C	SM2540C	N1	See Case Narrative.
D516-02/-07 - Turbidimetric RA Relative Percent Difference (RPD) was not used for da				SM2540C	Q6	Sample was received above recommended temperature.
		WG451167	Sulfate	D516-02/-07 - Turbidimetric	Q6	Sample was received above recommended temperature.
				D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
WG451044 Total Alkalinity SM2320B - Titration Q6 Sample was received above recommended temperatu		WG451044	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.



#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L45240-05	WG451044	Bicarbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG451232	Chloride	SM4500CI-E	Q6	Sample was received above recommended temperature.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG451200	Cyanide, total	M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Hydroxide as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG450621	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG451044	pН	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG450799	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
			SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451167	Sulfate	D516-02/-07 - Turbidimetric	Q6	Sample was received above recommended temperature.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.



#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
45240-06	WG451044	Bicarbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG451232	Chloride	SM4500CI-E	Q6	Sample was received above recommended temperature.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG451200	Cyanide, total	M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG451044	Hydroxide as CaCO3	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG450621	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG451044	рН	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG450842	Residue, Filterable (TDS) @180C	SM2540C	N1	See Case Narrative.
			SM2540C	Q6	Sample was received above recommended temperature.
	WG451167	Sulfate	D516-02/-07 - Turbidimetric	Q6	Sample was received above recommended temperature.
	WG451044	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.



ACZ Project ID: L45240

No certification qualifiers associated with this analysis

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

CRG Mining, LLC Raymond Carter Water ACZ Project ID: L45240 Date Received: 06/28/2018 11:12 Received By: Date Printed: 6/29/2018

Х

NA indicates Not Applicable

Receipt Verification			
	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			Х
2) Is the Chain of Custody form or other directive shipping papers present?	Х		
3) Does this project require special handling procedures such as CLP protocol?		Х	
4) Are any samples NRC licensable material?			Х
5) If samples are received past hold time, proceed with requested short hold time analyses?	Х		
6) Is the Chain of Custody form complete and accurate?		Х	
The date/time was entered on the COC per the information present on the sample containers for sample(s) Sample 1 - 6 (all).			
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?		Х	
Samples/Containers			
Samples/Containers			
Samples/Containers	YES	NO	NA
8) Are all containers intact and with no leaks?	YES X	NO	NA
		NO	NA
8) Are all containers intact and with no leaks?	X	NO	NA
<ul><li>8) Are all containers intact and with no leaks?</li><li>9) Are all labels on containers and are they intact and legible?</li></ul>	X X	NO	NA
<ul><li>8) Are all containers intact and with no leaks?</li><li>9) Are all labels on containers and are they intact and legible?</li><li>10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?</li></ul>	X X X	NO	NA
<ul> <li>8) Are all containers intact and with no leaks?</li> <li>9) Are all labels on containers and are they intact and legible?</li> <li>10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?</li> <li>11) For preserved bottle types, was the pH checked and within limits? <sup>1</sup></li> </ul>	X X X X	NO	NA
<ul> <li>8) Are all containers intact and with no leaks?</li> <li>9) Are all labels on containers and are they intact and legible?</li> <li>10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?</li> <li>11) For preserved bottle types, was the pH checked and within limits? 1</li> <li>12) Is there sufficient sample volume to perform all requested work?</li> </ul>	X X X X	NO	
<ul> <li>8) Are all containers intact and with no leaks?</li> <li>9) Are all labels on containers and are they intact and legible?</li> <li>10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?</li> <li>11) For preserved bottle types, was the pH checked and within limits? 1</li> <li>12) Is there sufficient sample volume to perform all requested work?</li> <li>13) Is the custody seal intact on all containers?</li> </ul>	X X X X	NO	
<ul> <li>8) Are all containers intact and with no leaks?</li> <li>9) Are all labels on containers and are they intact and legible?</li> <li>10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?</li> <li>11) For preserved bottle types, was the pH checked and within limits? 1</li> <li>12) Is there sufficient sample volume to perform all requested work?</li> <li>13) Is the custody seal intact on all containers?</li> <li>14) Are samples that require zero headspace acceptable?</li> </ul>		NO	

18) Were all samples received within hold time?

## Chain of Custody Related Remarks

Client	Contact	Remarks
--------	---------	---------

#### **Shipping Containers**

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
2338	6.7	<=6.0	14	Yes

#### Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s) but was thawed by receipt at ACZ.

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

REPAD LPII 2012-03



CRG Mining, LLC Raymond Carter Water



ACZ Project ID: L45240 Date Received: 06/28/2018 11:12 Received By: Date Printed: 6/29/2018

<sup>1</sup> The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

2773 Downhill Drive Steam	_aboratories, I	)0) 334-5493	<u>_452</u>	10		N of CUS	
Report to:							
Name: JAKE W			Address:	510	S.Wi	sconsin	51
Company: ChG	MININGLLC	<u> </u>		unn is	on c	0 81230	2
	in the 1987@Gmi	L.(0/1	Telephone	: 170	>- 417	-3311	
Copy of Report to:							
Name: BEN Mo			E-mail:	BMO	nin (	<u><u><u>Ch</u>Gni</u></u>	Nin
Company: Ciu	MINING		Telephone				
Invoice to:							
Name: JAKE	Wilkinson		Address:	SID S	wis	(ONSIN	81
	6 Mining Ll		(	SUNN	Sal, (	0 81230	
E-mail: GOLDLin	JKS1987@Gmil.i	om	Telephone			-	
	holding time (HT), or if insu					YES	$\overline{X}$
analysis before expiration If "NO" then ACZ will contact client for fu	h, shall ACZ proceed with rec rther instruction. If neither "YES" nor "NO" i	juested short	HT analyses	s?	van if LIT / '		
Are samples for SDWA Co			Yes	quested analyses, e NO		reo, and data will be qualif	ed
lf yes, please include stat	e forms. Results will be repo		or Colorado.				
	اللازية Sampler's Site In		State CO	<b>~</b> _ip	code		
*Sampler's Signature: <u>S</u>	the second secon	I attest to the authenti ampering with the san	icity and validity of nple in anyway, is c	this sample. I unde onsidered fraud and	rstand that inter I punishable by	ntionally mislabeling the tir State Law.	ne/dat
PROJECT INFORMATIC			AN	ALYSES REQUE	STED (attach	list or use quote num.	ber)
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Bottle Order Bottle List

Account: CRG/CRG Mining, LLC

Bottle Order: BO40059

Bill to Account:Bill to ACZShip Date Requested:06/12/2018Request Placed at:06/11/2018 16:28Service Requested:UPS Ground

## Sampling supplies

PACK	Qty	ACZ ID	Туре	Description
	1	COC	Chain of Custody	Chain of Custody, 1 for 10 samples.
	2	SEAL	Custody Seal	Custody seals for cooler, two for each cooler.
	1	RETURN	Return Address	Return Address label, one for each cooler.
	50	LABELS	Sample Labels	ACZ supplied labels for sample containers

#### ACZ Coolers

PACK	Qty 1	ACZ ID 2338	Size Large	Weight 15	UPS Tracking Number 1Z8101300317197731						
Quote n Sample					2 Surface water samples quarterly, client is not field filtering ACZ is responsible for necessary sample filtering						
PACK	Qty	Туре	Size	Filter/Raw/Preserv	/e Instructions						
	1	GREEN PC	125 ML	Green pre-cleaned Filtered/Nitiric	Metals (dissolved including ICPMS) - This is a filtered sample. Completely fill container.						
	1	PURPLE	250 ML	Raw/NaOH	Cyanide - Do not overfill as there is Sodium Hydroxide in the bottle.						
	1	RAW	500 ML	Raw	Wet Chemistry (analyses that do not require preservative or filtration) - Completely fill container.						
	1	RED	250 ML	Raw/Nitric	Metals (total except ICPMS) - Do not overfill as there is Nitric Acid in the bottle.						
	1	WHITE	250 ML	Filtered	Wet chemistry (dissolved) - This is a filtered sample. Completely fill container.						

Prepared By/Date:



October 04, 2018

Report to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231 Bill to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231

Project ID: QTR32018 ACZ Project ID: L47004

Jake Wilkinson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on September 19, 2018. This project has been assigned to ACZ's project number, L47004. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L47004. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after November 03, 2018. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.

Max janicele

Max Janicek has reviewed and approved this report.







Project ID: QTR32018 Sample ID: GL1

# Inorganic Analytical Results

ACZ Sample ID: L47004-01 Date Sampled: 09/18/18 09:55 Date Received: 09/19/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							09/21/18 12:32	ttg
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	10/01/18 21:03	aeh
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/01/18 22:11	bsu
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	10/01/18 22:11	bsu
Barium, dissolved	M200.7 ICP	1	0.014	В	mg/L	0.003	0.02	10/01/18 21:03	aeh
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/01/18 22:11	bsu
Cadmium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/01/18 22:11	bsu
Calcium, dissolved	M200.7 ICP	1	14.4		mg/L	0.1	0.5	10/01/18 21:03	aeh
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/01/18 22:11	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/02/18 19:54	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:03	aeh
Iron, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.02	0.05	10/01/18 21:03	aeh
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	10/01/18 22:11	bsu
Magnesium, dissolved	M200.7 ICP	1	5.2		mg/L	0.2	1	10/01/18 21:03	aeh
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:03	aeh
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	09/27/18 14:48	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/01/18 21:03	aeh
Potassium, dissolved	M200.7 ICP	1	0.3	В	mg/L	0.2	1	10/01/18 21:03	aeh
Sodium, dissolved	M200.7 ICP	1	2.0		mg/L	0.2	1	10/01/18 21:03	aeh
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:03	aeh
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:03	aeh



Project ID: QTR32018 Sample ID: GL1

# Inorganic Analytical Results

ACZ Sample ID: L47004-01 Date Sampled: 09/18/18 09:55 Date Received: 09/19/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	64.2			mg/L	2	20	09/26/18 0:00	mh
Carbonate as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	mh
Hydroxide as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	mh
Total Alkalinity		1	64.2			mg/L	2	20	09/26/18 0:00	mh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.0			%			10/04/18 0:00	calc
Sum of Anions			1.3			meq/L			10/04/18 0:00	calc
Sum of Cations			1.2			meq/L			10/04/18 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	09/24/18 10:10	mss2
Conductivity @25C	SM2510B	1	129			umhos/cm	1	10	09/26/18 1:35	mh
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5	0.007	В	*	mg/L	0.003	0.01	09/22/18 0:30	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		57			mg/L	0.2	5	10/04/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:25	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:02	dcm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.05	В		mg/L	0.02	0.1	10/04/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.05	В	*	mg/L	0.02	0.1	09/19/18 22:04	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/19/18 22:04	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	Н		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.5			С	0.1	0.1	09/26/18 0:00	mh
Residue, Filterable (TDS) @180C	SM2540C	1	70		*	mg/L	10	20	09/21/18 14:06	kja
Sulfate	D516-02/-07 - Turbidimetric	1		U	*	mg/L	1	5	09/24/18 14:09	mss2



Project ID: QTR32018 Sample ID: GL2

# Inorganic Analytical Results

ACZ Sample ID: L47004-02 Date Sampled: 09/18/18 10:15 Date Received: 09/19/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual X	Q Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							09/21/18 12:40	ttg
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual X	Q Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	10/01/18 21:13	aeh
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/01/18 22:13	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0028		mg/L	0.0002	0.001	10/01/18 22:13	bsu
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	10/01/18 21:13	aeh
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/01/18 22:13	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00187		mg/L	0.00005	0.0003	10/01/18 22:13	bsu
Calcium, dissolved	M200.7 ICP	1	22.4		mg/L	0.1	0.5	10/01/18 21:13	aeh
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/01/18 22:13	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/02/18 20:03	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:13	aeh
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	10/01/18 21:13	aeh
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	10/01/18 22:13	bsu
Magnesium, dissolved	M200.7 ICP	1	6.7		mg/L	0.2	1	10/01/18 21:13	aeh
Manganese, dissolved	M200.7 ICP	1	0.010	В	mg/L	0.005	0.03	10/01/18 21:13	aeh
Mercury, total	M245.1 CVAA	1		U *	<sup>,</sup> mg/L	0.0002	0.001	09/27/18 14:49	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/01/18 21:13	aeh
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	10/01/18 21:13	aeh
Sodium, dissolved	M200.7 ICP	1	4.0		mg/L	0.2	1	10/01/18 21:13	aeh
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:13	aeh
Zinc, dissolved	M200.7 ICP	1	0.20		mg/L	0.01	0.05	10/01/18 21:13	aeh



Project ID: QTR32018 Sample ID: GL2

# Inorganic Analytical Results

ACZ Sample ID: L47004-02 Date Sampled: 09/18/18 10:15 Date Received: 09/19/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	74.0			mg/L	2	20	09/26/18 0:00	mh
Carbonate as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	mh
Hydroxide as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	mh
Total Alkalinity		1	74.0			mg/L	2	20	09/26/18 0:00	mh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-5.0			%			10/04/18 0:00	calc
Sum of Anions			2.1			meq/L			10/04/18 0:00	calc
Sum of Cations			1.9			meq/L			10/04/18 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	09/24/18 10:10	mss2
Conductivity @25C	SM2510B	1	195			umhos/cm	1	10	09/26/18 1:44	mh
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5	0.005	В	*	mg/L	0.003	0.01	09/22/18 0:33	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		84			mg/L	0.2	5	10/04/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:28	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:02	dcm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.05	В		mg/L	0.02	0.1	10/04/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.05	В	*	mg/L	0.02	0.1	09/19/18 22:05	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/19/18 22:05	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.4			С	0.1	0.1	09/26/18 0:00	mh
Residue, Filterable (TDS) @180C	SM2540C	1	114		*	mg/L	10	20	09/21/18 14:10	kja
Sulfate	D516-02/-07 - Turbidimetric	1	29.1		*	mg/L	1	5	09/24/18 14:09	mss2



Project ID: QTR32018 Sample ID: GL3

# Inorganic Analytical Results

ACZ Sample ID: L47004-03 Date Sampled: 09/18/18 10:35 Date Received: 09/19/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							09/21/18 12:48	ttg
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	10/01/18 21:16	aeh
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/01/18 22:15	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0002	0.001	10/01/18 22:15	bsu
Barium, dissolved	M200.7 ICP	1	0.014	В	mg/L	0.003	0.02	10/01/18 21:16	aeh
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/01/18 22:15	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00017	В	mg/L	0.00005	0.0003	10/01/18 22:15	bsu
Calcium, dissolved	M200.7 ICP	1	15.4		mg/L	0.1	0.5	10/01/18 21:16	aeh
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/01/18 22:15	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/02/18 20:07	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:16	aeh
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	10/01/18 21:16	aeh
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	10/01/18 22:15	bsu
Magnesium, dissolved	M200.7 ICP	1	5.4		mg/L	0.2	1	10/01/18 21:16	aeh
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:16	aeh
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	09/27/18 14:50	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/01/18 21:16	aeh
Potassium, dissolved	M200.7 ICP	1	0.4	В	mg/L	0.2	1	10/01/18 21:16	aeh
Sodium, dissolved	M200.7 ICP	1	2.3		mg/L	0.2	1	10/01/18 21:16	aeh
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:16	aeh
Zinc, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	10/01/18 21:16	aeh



Project ID: QTR32018 Sample ID: GL3

# Inorganic Analytical Results

ACZ Sample ID: L47004-03 Date Sampled: 09/18/18 10:35 Date Received: 09/19/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	67.6			mg/L	2	20	09/26/18 0:00	mh
Carbonate as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	mh
Hydroxide as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	mh
Total Alkalinity		1	67.6			mg/L	2	20	09/26/18 0:00	mh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.7			%			10/04/18 0:00	calc
Sum of Anions			1.4			meq/L			10/04/18 0:00	calc
Sum of Cations			1.3			meq/L			10/04/18 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	09/24/18 10:10	mss2
Conductivity @25C	SM2510B	1	135			umhos/cm	1	10	09/26/18 1:53	mh
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	09/22/18 0:34	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		61			mg/L	0.2	5	10/04/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:30	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:02	dcm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	10/04/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	09/19/18 22:07	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/19/18 22:07	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.3			С	0.1	0.1	09/26/18 0:00	mh
Residue, Filterable (TDS) @180C	SM2540C	1	68		*	mg/L	10	20	09/21/18 14:12	kja
Sulfate	D516-02/-07 - Turbidimetric	1		U	*	mg/L	1	5	09/24/18 14:09	mss2



Project ID: QTR32018 Sample ID: RM1

# Inorganic Analytical Results

ACZ Sample ID: L47004-04 Date Sampled: 09/18/18 10:55 Date Received: 09/19/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							09/21/18 12:56	ttg
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	10/01/18 21:19	aeh
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/01/18 22:24	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0002	0.001	10/01/18 22:24	bsu
Barium, dissolved	M200.7 ICP	1	0.014	В	mg/L	0.003	0.02	10/01/18 21:19	aeh
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/01/18 22:24	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00015	В	mg/L	0.00005	0.0003	10/01/18 22:24	bsu
Calcium, dissolved	M200.7 ICP	1	16.6		mg/L	0.1	0.5	10/01/18 21:19	aeh
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/01/18 22:24	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/02/18 20:10	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:19	aeh
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	10/01/18 21:19	aeh
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	10/01/18 22:24	bsu
Magnesium, dissolved	M200.7 ICP	1	5.7		mg/L	0.2	1	10/01/18 21:19	aeh
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:19	aeh
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	09/27/18 14:58	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/01/18 21:19	aeh
Potassium, dissolved	M200.7 ICP	1	0.4	В	mg/L	0.2	1	10/01/18 21:19	aeh
Sodium, dissolved	M200.7 ICP	1	2.1		mg/L	0.2	1	10/01/18 21:19	aeh
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:19	aeh
Zinc, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	10/01/18 21:19	aeh



Project ID: QTR32018 Sample ID: RM1

# Inorganic Analytical Results

ACZ Sample ID: L47004-04 Date Sampled: 09/18/18 10:55 Date Received: 09/19/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	70.2			mg/L	2	20	09/26/18 0:00	mh
Carbonate as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	mh
Hydroxide as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	mh
Total Alkalinity		1	70.2			mg/L	2	20	09/26/18 0:00	mh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			10/04/18 0:00	calc
Sum of Anions			1.4			meq/L			10/04/18 0:00	calc
Sum of Cations			1.4			meq/L			10/04/18 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	09/24/18 10:10	mss2
Conductivity @25C	SM2510B	1	142			umhos/cm	1	10	09/26/18 2:02	mh
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	09/22/18 0:34	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		65			mg/L	0.2	5	10/04/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:33	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:02	dcm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.06	В		mg/L	0.02	0.1	10/04/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.06	В	*	mg/L	0.02	0.1	09/19/18 22:10	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/19/18 22:10	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.1			С	0.1	0.1	09/26/18 0:00	mh
Residue, Filterable (TDS) @180C	SM2540C	1	84		*	mg/L	10	20	09/24/18 10:02	kja
Sulfate	D516-02/-07 - Turbidimetric	1		U	*	mg/L	1	5	09/24/18 14:12	mss2



Project ID: QTR32018 Sample ID: RM2

# Inorganic Analytical Results

ACZ Sample ID: L47004-05 Date Sampled: 09/18/18 11:20 Date Received: 09/19/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							09/21/18 13:04	ttg
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	10/01/18 21:22	aeh
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/01/18 22:26	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0079		mg/L	0.0002	0.001	10/01/18 22:26	bsu
Barium, dissolved	M200.7 ICP	1	0.004	В	mg/L	0.003	0.02	10/01/18 21:22	aeh
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/01/18 22:26	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00048		mg/L	0.00005	0.0003	10/01/18 22:26	bsu
Calcium, dissolved	M200.7 ICP	1	14.2		mg/L	0.1	0.5	10/01/18 21:22	aeh
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/01/18 22:26	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/02/18 20:13	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:22	aeh
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	10/01/18 21:22	aeh
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	10/01/18 22:26	bsu
Magnesium, dissolved	M200.7 ICP	1	3.2		mg/L	0.2	1	10/01/18 21:22	aeh
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:22	aeh
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	09/27/18 14:59	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/01/18 21:22	aeh
Potassium, dissolved	M200.7 ICP	1	0.8	В	mg/L	0.2	1	10/01/18 21:22	aeh
Sodium, dissolved	M200.7 ICP	1	4.0		mg/L	0.2	1	10/01/18 21:22	aeh
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:22	aeh
Zinc, dissolved	M200.7 ICP	1	0.05		mg/L	0.01	0.05	10/01/18 21:22	aeh



Project ID: QTR32018 Sample ID: RM2

# Inorganic Analytical Results

ACZ Sample ID: L47004-05 Date Sampled: 09/18/18 11:20 Date Received: 09/19/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	45.1			mg/L	2	20	09/26/18 0:00	mh
Carbonate as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	mh
Hydroxide as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	mh
Total Alkalinity		1	45.1			mg/L	2	20	09/26/18 0:00	mh
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.0			%			10/04/18 0:00	calc
Sum of Anions			1.3			meq/L			10/04/18 0:00	calc
Sum of Cations			1.2			meq/L			10/04/18 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	09/24/18 10:10	mss2
Conductivity @25C	SM2510B	1	125			umhos/cm	1	10	09/26/18 2:10	mh
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	09/22/18 0:35	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		49			mg/L	0.2	5	10/04/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:35	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:03	dcm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.05	В		mg/L	0.02	0.1	10/04/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.05	В	*	mg/L	0.02	0.1	09/19/18 22:16	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/19/18 22:16	pjb
pH (lab)	SM4500H+ B									
pН		1	8.1	н		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.1			С	0.1	0.1	09/26/18 0:00	mh
Residue, Filterable (TDS) @180C	SM2540C	1	74		*	mg/L	10	20	09/24/18 10:03	kja
Sulfate	D516-02/-07 - Turbidimetric	1	20.4		*	mg/L	1	5	09/24/18 14:12	mss2



Project ID: QTR32018 Sample ID: RM3

# Inorganic Analytical Results

ACZ Sample ID: L47004-06 Date Sampled: 09/18/18 11:40 Date Received: 09/19/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							09/21/18 13:12	ttg
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	10/01/18 21:26	aeh
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/01/18 22:28	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0016		mg/L	0.0002	0.001	10/01/18 22:28	bsu
Barium, dissolved	M200.7 ICP	1	0.014	В	mg/L	0.003	0.02	10/01/18 21:26	aeh
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/01/18 22:28	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00016	В	mg/L	0.00005	0.0003	10/01/18 22:28	bsu
Calcium, dissolved	M200.7 ICP	1	16.6		mg/L	0.1	0.5	10/01/18 21:26	aeh
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/01/18 22:28	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/02/18 20:16	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:26	aeh
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	10/01/18 21:26	aeh
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	10/01/18 22:28	bsu
Magnesium, dissolved	M200.7 ICP	1	5.5		mg/L	0.2	1	10/01/18 21:26	aeh
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:26	aeh
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	09/27/18 15:00	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/01/18 21:26	aeh
Potassium, dissolved	M200.7 ICP	1	0.5	В	mg/L	0.2	1	10/01/18 21:26	aeh
Sodium, dissolved	M200.7 ICP	1	2.4		mg/L	0.2	1	10/01/18 21:26	aeh
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:26	aeh
Zinc, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	10/01/18 21:26	aeh



Project ID: QTR32018 Sample ID: RM3

# Inorganic Analytical Results

ACZ Sample ID: L47004-06 Date Sampled: 09/18/18 11:40 Date Received: 09/19/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	65.4			mg/L	2	20	09/26/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	emk
Total Alkalinity		1	65.4			mg/L	2	20	09/26/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			3.7			%			10/04/18 0:00	calc
Sum of Anions			1.3			meq/L			10/04/18 0:00	calc
Sum of Cations			1.4			meq/L			10/04/18 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	09/24/18 10:10	mss2
Conductivity @25C	SM2510B	1	140			umhos/cm	1	10	09/26/18 2:27	mh
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	09/22/18 0:36	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		64			mg/L	0.2	5	10/04/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:38	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:03	dcm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.02	В		mg/L	0.02	0.1	10/04/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.02	В	*	mg/L	0.02	0.1	09/19/18 22:17	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/19/18 22:17	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	20.9			С	0.1	0.1	09/26/18 0:00	mh
Residue, Filterable (TDS) @180C	SM2540C	1	82		*	mg/L	10	20	09/24/18 10:05	kja
Sulfate	D516-02/-07 - Turbidimetric	1		U	*	mg/L	1	5	09/24/18 14:12	mss2



Project ID: QTR32018 Sample ID: CM1

# Inorganic Analytical Results

ACZ Sample ID: L47004-07 Date Sampled: 09/18/18 12:00 Date Received: 09/19/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							09/21/18 13:20	ttg
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	10/01/18 21:29	aeh
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/01/18 22:30	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0022		mg/L	0.0002	0.001	10/01/18 22:30	bsu
Barium, dissolved	M200.7 ICP	1	0.014	В	mg/L	0.003	0.02	10/01/18 21:29	aeh
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/01/18 22:30	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00013	В	mg/L	0.00005	0.0003	10/01/18 22:30	bsu
Calcium, dissolved	M200.7 ICP	1	16.9		mg/L	0.1	0.5	10/01/18 21:29	aeh
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/01/18 22:30	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/02/18 20:20	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:29	aeh
Iron, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.02	0.05	10/01/18 21:29	aeh
Lead, dissolved	M200.8 ICP-MS	1	0.0004	В	mg/L	0.0001	0.0005	10/01/18 22:30	bsu
Magnesium, dissolved	M200.7 ICP	1	5.6		mg/L	0.2	1	10/01/18 21:29	aeh
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:29	aeh
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	09/27/18 15:01	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/01/18 21:29	aeh
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	10/01/18 21:29	aeh
Sodium, dissolved	M200.7 ICP	1	2.4		mg/L	0.2	1	10/01/18 21:29	aeh
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:29	aeh
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:29	aeh



Project ID: QTR32018 Sample ID: CM1

# Inorganic Analytical Results

ACZ Sample ID: L47004-07 Date Sampled: 09/18/18 12:00 Date Received: 09/19/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	67.0			mg/L	2	20	09/26/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	emk
Total Alkalinity		1	67.0			mg/L	2	20	09/26/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			3.7			%			10/04/18 0:00	calc
Sum of Anions			1.3			meq/L			10/04/18 0:00	calc
Sum of Cations			1.4			meq/L			10/04/18 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	09/24/18 10:12	mss2
Conductivity @25C	SM2510B	1	144			umhos/cm	1	10	09/26/18 2:37	mh
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	09/22/18 0:37	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		65			mg/L	0.2	5	10/04/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:40	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:03	dcm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2			U		mg/L	0.02	0.1	10/04/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.02	0.1	09/19/18 22:18	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/19/18 22:18	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.0			С	0.1	0.1	09/26/18 0:00	mh
Residue, Filterable (TDS) @180C	SM2540C	1	86		*	mg/L	10	20	09/24/18 10:06	kja
Sulfate	D516-02/-07 - Turbidimetric	1		U	*	mg/L	1	5	09/24/18 14:12	mss2



Project ID: QTR32018 Sample ID: CM2

# Inorganic Analytical Results

ACZ Sample ID: L47004-08 Date Sampled: 09/18/18 12:15 Date Received: 09/19/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							09/24/18 11:28	ttg
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	10/01/18 21:38	aeh
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/01/18 22:32	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0016		mg/L	0.0002	0.001	10/01/18 22:32	bsu
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	10/01/18 21:38	aeh
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/01/18 22:32	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00014	В	mg/L	0.00005	0.0003	10/01/18 22:32	bsu
Calcium, dissolved	M200.7 ICP	1	17.1		mg/L	0.1	0.5	10/01/18 21:38	aeh
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/01/18 22:32	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/02/18 20:29	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:38	aeh
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	10/01/18 21:38	aeh
Lead, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0001	0.0005	10/01/18 22:32	bsu
Magnesium, dissolved	M200.7 ICP	1	3.3		mg/L	0.2	1	10/01/18 21:38	aeh
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:38	aeh
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	09/27/18 15:02	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/01/18 21:38	aeh
Potassium, dissolved	M200.7 ICP	1	0.4	В	mg/L	0.2	1	10/01/18 21:38	aeh
Sodium, dissolved	M200.7 ICP	1	5.9		mg/L	0.2	1	10/01/18 21:38	aeh
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:38	aeh
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:38	aeh



Project ID: QTR32018 Sample ID: CM2

# Inorganic Analytical Results

ACZ Sample ID: L47004-08 Date Sampled: 09/18/18 12:15 Date Received: 09/19/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	56.1			mg/L	2	20	09/26/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	emk
Total Alkalinity		1	56.1			mg/L	2	20	09/26/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.4			%			10/04/18 0:00	calc
Sum of Anions			1.5			meq/L			10/04/18 0:00	calc
Sum of Cations			1.4			meq/L			10/04/18 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	09/24/18 10:12	mss2
Conductivity @25C	SM2510B	1	145			umhos/cm	1	10	09/26/18 2:46	mh
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	09/25/18 23:54	ttg/mss
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		56			mg/L	0.2	5	10/04/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:42	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:03	dcm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.05	В		mg/L	0.02	0.1	10/04/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.05	В	*	mg/L	0.02	0.1	09/19/18 22:19	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/19/18 22:19	pjb
pH (lab)	SM4500H+ B									
pН		1	8.1	Н		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.4			С	0.1	0.1	09/26/18 0:00	mh
Residue, Filterable (TDS) @180C	SM2540C	1	86		*	mg/L	10	20	09/24/18 10:07	kja
Sulfate	D516-02/-07 - Turbidimetric	1	19.0		*	mg/L	1	5	09/25/18 10:53	wtc



Project ID: QTR32018 Sample ID: CM3

# Inorganic Analytical Results

ACZ Sample ID: L47004-09 Date Sampled: 09/18/18 12:35 Date Received: 09/19/18 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							09/24/18 11:46	ttg
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	10/01/18 21:42	aeh
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/01/18 22:34	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0022		mg/L	0.0002	0.001	10/01/18 22:34	bsu
Barium, dissolved	M200.7 ICP	1	0.014	В	mg/L	0.003	0.02	10/01/18 21:42	aeh
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/01/18 22:34	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.00005	0.0003	10/01/18 22:34	bsu
Calcium, dissolved	M200.7 ICP	1	17.1		mg/L	0.1	0.5	10/01/18 21:42	aeh
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/01/18 22:34	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/02/18 20:33	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:42	aeh
Iron, dissolved	M200.7 ICP	1	0.04	В	mg/L	0.02	0.05	10/01/18 21:42	aeh
Lead, dissolved	M200.8 ICP-MS	1	0.0004	В	mg/L	0.0001	0.0005	10/01/18 22:34	bsu
Magnesium, dissolved	M200.7 ICP	1	5.4		mg/L	0.2	1	10/01/18 21:42	aeh
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:42	aeh
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	09/27/18 15:07	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/01/18 21:42	aeh
Potassium, dissolved	M200.7 ICP	1	0.5	В	mg/L	0.2	1	10/01/18 21:42	aeh
Sodium, dissolved	M200.7 ICP	1	2.8		mg/L	0.2	1	10/01/18 21:42	aeh
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/01/18 21:42	aeh
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/01/18 21:42	aeh



Project ID: QTR32018 Sample ID: CM3

# Inorganic Analytical Results

ACZ Sample ID: L47004-09 Date Sampled: 09/18/18 12:35 Date Received: 09/19/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	68.6			mg/L	2	20	09/26/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	09/26/18 0:00	emk
Total Alkalinity		1	68.6			mg/L	2	20	09/26/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			10/04/18 0:00	calc
Sum of Anions			1.4			meq/L			10/04/18 0:00	calc
Sum of Cations			1.4			meq/L			10/04/18 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	09/24/18 10:12	mss2
Conductivity @25C	SM2510B	1	145			umhos/cm	1	10	09/26/18 2:55	mh
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5	0.086		*	mg/L	0.003	0.01	09/25/18 23:56	ttg/mss
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		65			mg/L	0.2	5	10/04/18 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/21/18 16:45	kja
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A	1							09/27/18 15:03	dcm
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2			U		mg/L	0.02	0.1	10/04/18 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.02	0.1	09/19/18 22:21	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/19/18 22:21	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.7			С	0.1	0.1	09/26/18 0:00	mh
Residue, Filterable (TDS) @180C	SM2540C	1	70		*	mg/L	10	20	09/24/18 10:09	kja
Sulfate	D516-02/-07 - Turbidimetric	1		U	*	mg/L	1	5	09/25/18 10:53	wtc



Inorganic Reference

Report Header	r Explanations			
Batch	A distinct set of sa	amples analyzed at a specific time		
Found	Value of the QC	Type of interest		
Limit	Upper limit for RF	PD, in %.		
Lower	Lower Recovery	Limit, in % (except for LCSS, mg/Kg)		
MDL	Method Detection	Limit. Same as Minimum Reporting Limit un	nless omitted or ea	qual to the PQL (see comment #5).
	Allows for instrum	ent and annual fluctuations.		
PCN/SCN	A number assign	ed to reagents/standards to trace to the man	ufacturer's certifica	ate of analysis
PQL	Practical Quantita	tion Limit. Synonymous with the EPA term "	'minimum level".	
QC	True Value of the	Control Sample or the amount added to the	Spike	
Rec	Recovered amou	nt of the true value or spike added, in % (exc	cept for LCSS, mg	/Kg)
RPD	Relative Percent	Difference, calculation used for Duplicate QC	C Types	
Upper	Upper Recovery	Limit, in % (except for LCSS, mg/Kg)		
Sample	Value of the Sam	ple of interest		
QC Sample Ty	vpes			
AS	Analytical Spike (	Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (	Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibr	ation Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibr	ation Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate		LRB	Laboratory Reagent Blank
ICB	Initial Calibration	Blank	MS	Matrix Spike
ICV	Initial Calibration	Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Cor	rection Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Contro	ol Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Contro	ol Sample - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSW	Laboratory Contro	ol Sample - Water	SDL	Serial Dilution
QC Sample Ty	vpe Explanations			
Blanks		Verifies that there is no or minimal co	ontamination in the	prep method or calibration procedure.
Control Sa	mples	Verifies the accuracy of the method,	including the prep	procedure.
Duplicates		Verifies the precision of the instrume	ent and/or method.	
Spikes/For	tified Matrix	Determines sample matrix interferen	ces, if any.	
Standard		Verifies the validity of the calibration.		
ACZ Qualifiers	s (Qual)			
В	Analyte concentra	ation detected at a value between MDL and I	PQL. The associat	ed value is an estimated quantity.
Н	Analysis exceede	d method hold time. pH is a field test with an	n immediate hold t	ime.
L	Target analyte rea	sponse was below the laboratory defined neg	gative threshold.	
U	The material was	analyzed for, but was not detected above th	e level of the asso	ciated value.
	The associated v	alue is either the sample quantitation limit or	the sample detect	ion limit.
Method Refere	ences			
(1)	EPA 600/4-83-02	0. Methods for Chemical Analysis of Water	and Wastes, Marc	h 1983.

EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.

EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.

QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.

If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier

Animal matrices for Inorganic analyses are reported on an "as received" basis.

EPA SW-846. Test Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastewater.

associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click:

http://www.acz.com/public/extquallist.pdf

L47004-1810041014

REP001.03.15.02

(2) (3)

(4)

(5) Comments

> (1) (2)

> (3)

(4)

(5)

### CRG Mining, LLC

#### ACZ Project ID: L47004

Wed57113         Wed57113         U         rmpL         -20         20           Wed57113         DSW         D025718 17.35         We18897.37         B20.0001         B13         mpA         99         90         110           Wed57113         DSW         DSW         D025718 20.33         We18897.37         B20.0001         B13         mpA         100         90         110           Wed57113         DSW	Alkalinity as CaC	03		SM23208	B - Titration									
WG457113PBW1 WG457113LCSW3PBW 0922518127.3092251817.3 WG180915-7WG180915-7 820.0001820 813mpL mpL mpL999090110 10050110 50<	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
NG457113LCSW         LCSW         0925/18 17.35         WC180913-7         820.001         813         mpL         100         90         110           WC457113LCSW         DWS         0025/18 20.33         WC180913-7         820.001         803         mpL         100         90         110         JUN         200         200         200         200         200         100         MC45711310CSW         0025/18 20.33         WC180913-7         820.0001         850         mpL         104         900         100         200         200         100         MC45711310CSW         0025/18 21.33         WC180913-7         820.0001         833         mpL         102         90         110         WC45711310CSW         0025/18 17.33         WC180913-7         820.0001         833         mpL         102         90         110         WC45711310CSW         WC45711312SW         WC180913-7         820.0001         820         mpL         100         90         110         WC45711312SW         WC180913-7         820.0001         820         mpL         100         90         110         WC45711312SW         WC180913-7         820.0001         820         mpL         100         90         110         WC45711012WW         WC180913-7         8	WG457113													
NG457113LCSW6         LGSW         0925/18 20:33         WC180913-7         820.0001         821         mpl.         100         90         110           WG457113CSW6         LGSW         0925/18 20:39         WC180913-7         820.0001         B21         mpl.         104         90         110         IN           VG457113CSW6         LGSW         0925/18 2.19         WC180913-7         820.0001         B31         mpl.         104         90         110         IN         1         20         100         90         110         IN         1         20         100         90         110         IN         100         90         110         IN         100         90         110         IN         100         90         110         IN         100         10	WG457113PBW1	PBW	09/25/18 17:19				U	mg/L		-20	20			
NG457113EPBW2         PBW         0925/18 2038         VC160913-7         B20,001         M         M         M         D         mpl         D <thd< th="">         D         <thd< th="">         D</thd<></thd<>	WG457113LCSW3	LCSW	09/25/18 17:35	WC180913-7	820.0001		813	mg/L	99	90	110			
NG457113LCSW         LCSW         09/26/18 0:07         WC169013-7         820.0001         B50         mgl.         104         90         110           WC457113PBWX         PEW         09/26/18 0:19         WC169013-7         820.0001         B33         mgl.         99         90         110         20         20           WG457113LCSW12         LCSW         09/26/18 0:13         WC169013-7         820.0001         B33         mgl.         99         90         110         1         20         1         20         1         1         20         1         1         20         100         90         90         110         1         1         20         1         1         20         100         90         100         90         100         90         110         1	WG457113LCSW6	LCSW	09/25/18 20:33	WC180913-7	820.0001		821	mg/L	100	90	110			
WG457113PBW3         PBW         09/26/18 2:13         WE180913-7         820.0001         45.1         45.6         mgL         -20         20         1         20           WG457113LCSW12         UCSW         09/26/18 4:18         WE180913-7         820.0001         833         mgL         102         90         100         90         100           WG457113LCSW12         UCSW         09/26/18 7.38         WE180913-7         820.0001         833         mgL         102         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         100         90         110         90         100         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         910	WG457113PBW2	PBW	09/25/18 20:38				U	mg/L		-20	20			
L47004-05DUP WG4S7113LCSW12DUP 0928/18 2:19OVER09124 WE189713WE189137 WE189713B25.0001B75.1 B73.0001 </td <td>WG457113LCSW9</td> <td>LCSW</td> <td>09/26/18 0:07</td> <td>WC180913-7</td> <td>820.0001</td> <td></td> <td>850</td> <td>mg/L</td> <td>104</td> <td>90</td> <td>110</td> <td></td> <td></td> <td></td>	WG457113LCSW9	LCSW	09/26/18 0:07	WC180913-7	820.0001		850	mg/L	104	90	110			
WG457113LCSW12         LCSW         09/26/18         90/27/18         90/27/18	WG457113PBW3	PBW	09/26/18 0:13				U	mg/L		-20	20			
WG457113PBW4       PBW       09/26/18 14:8       WC180913-7       820.001       B33       melL       102       90       101       I <thi< th="">       I       I</thi<>	L47004-05DUP	DUP	09/26/18 2:19			45.1	45.6	mg/L				1	20	
WG457113LCSW15LCS09/26/18 7:3WC180913-7820.0001833mg/L10290110WG457210WC09/26/18 16:51WC180913-7820.000125.925.8mg/L1009011002020WG457210DUP09/26/18 16:51WC180913-7820.0001822mg/L1009011002020WG457210FSW2PSW09/26/18 16:35WC180913-7820.0001824mg/L10090110020WG457210FSW3LCSW09/26/18 21:43WC180913-7820.0001824mg/L101901101009011010090110100901101009011010090110100901101009011010090110100 <t< td=""><td>WG457113LCSW12</td><td>LCSW</td><td>09/26/18 4:12</td><td>WC180913-7</td><td>820.0001</td><td></td><td>813</td><td>mg/L</td><td>99</td><td>90</td><td>110</td><td></td><td></td><td></td></t<>	WG457113LCSW12	LCSW	09/26/18 4:12	WC180913-7	820.0001		813	mg/L	99	90	110			
WG457210PSW1         PBW         09/26/18 14-53         VC180913-7         82.0001         25.9         26.8         mgl.         100         90         110         0         20         20           VG457210LSW1         LSW         09/26/18 15:11         VC180913-7         82.0001         25.9         26.8         mgl.         100         90         110         0         20         20           VG457210LSW1         LSW         09/26/18 18:40         WC180913-7         82.0001         82.2         mgl.         100         90         110         VC         20         20           WG457210LSW1         LSW         09/26/18 21:33         WC180913-7         82.0001         82.5         mgl.         101         90         110         VC         20         20         VC         VG457210F8W1         PSW         09/2718 0:20         U         mgl.         -20         20         VC         VC         VG457210F8W1         PSW         09/2718 0:20         VC         VC         U         mgl.         -20         20         VC         VC         VG         900         110         VC         20         VC         VC         VC         VC         20         VC         VC         VC	WG457113PBW4	PBW	09/26/18 4:18				U	mg/L		-20	20			
WG457210PBW1       PBW       09/26/18 14:53       WC180913-7       820.001       820       mg/L       -20       20       100       90       110       -20       20       20         L47016-01DUP       09/26/18 15:11       WC180913-7       820.0001       820       mg/L       100       90       110       0	WG457113LCSW15	LCSW	09/26/18 7:38	WC180913-7	820.0001		833	mg/L	102	90	110			
NMC457210LCSW3       LCSW       09/26/18 15:11       WC180913-7       820.001       820       mg/L       100       90       110       0       20         L47016.01DUP       09/26/18 16:40       WC180913-7       820.0001       822       mg/L       100       90       110       0       20         WG457210LCSW9       LCSW       09/26/18 18:35       WC180913-7       820.0001       844       mg/L       100       90       110	WG457210													
L47016-01DUP       DUP       09/26/18 18:40       VC180913-7       820.0001       822.       mg/L       100       90       110       V         WG45721DLCSW0       LCSW       09/26/18 18:40       WC180913-7       820.0001       822.       mg/L       100       90       110       V	WG457210PBW1	PBW	09/26/18 14:53				U	mg/L		-20	20			
WG4572101CSW6       LCSW       09/26/18       18:83       WC180913-7       820.0001       822       mg/L       100       90       110         WG4572101CSW9       LCSW       09/26/18       12:3       mg/L       103       90       110         WG4572101CSW9       LCSW       09/26/18       21:3       WC180913-7       820.0001       844       mg/L       103       90       110         WG4572101CSW12       LCSW       09/27/18       WC180913-7       820.0001       825       mg/L       101       90       110         WG4572101CSW12       LCSW       09/27/18       WC180913-7       820.0001       832       mg/L       101       90       110         WG4572101CSW12       LCSW       09/27/18       WC180913-7       820.0001       832       mg/L       101       90       110         Attrimun, dissource       09/27/18       WC180913-7       820.0001       832       mg/L       101       90       110       WC180913-7       820.0001       832       mg/L       101       90       110       WC180913-7       820.0001       100       mg/L       100       10       100       100       100       100       100       100       100	WG457210LCSW3	LCSW	09/26/18 15:11	WC180913-7	820.0001		820	mg/L	100	90	110			
WG457210PBW2         PBW         09/26/18         18.40         2.3         mg/L         -20         20           WG457210PBW3         PBW         09/26/18         21.38         WC180913-7         820.0001         844         mg/L         103         90         110           WG457210PBW3         PBW         09/26/18         21.33         WC180913-7         820.0001         825         mg/L         -20         20         VIII         VIIII         VIIII         VIIII         90         110         90         110         VIIII         VIIIII         VIIIII         VIIIIII         VIIIIIIIII         VIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	L47016-01DUP	DUP	09/26/18 16:40			25.9	25.8	mg/L				0	20	
WG457210LCSW9       LCSW       09/26/18 21:38       WC180913-7       820.0001       844       mg/L       103       90       110         WG457210LCSW12       LCSW       09/26/18 21:43       WC180913-7       820.0001       825       mg/L       101       90       110         WG457210LCSW12       LCSW       09/27/18 0:20       WC180913-7       820.0001       822       mg/L       101       90       110         WG457210LCSW15       LCSW       09/27/18 0:20       WC180913-7       820.0001       832       mg/L       101       90       101         WG457210LCSW15       LCSW       09/27/18 0:20       WC180913-7       820.0001       832       mg/L       101       90       101         WG457210LCSW15       LCSW       09/27/18 0:20       WC180913-7       820.0001       832       mg/L       101       90       101       80       101       80       101       80       101       80       101       80       101       80       101       80       101       80       101       80       101       80       101       80       101       101       80       101       101       80       101       101       80       115	WG457210LCSW6	LCSW	09/26/18 18:35	WC180913-7	820.0001		822	mg/L	100	90	110			
WG457210PBW3 WG457210LCSW12 WG457210LCSW12 LCSW       09/26718 0:14 09/27178 0:20       WC160913-7 WC160913-7       820.0001       B25 820       mg/L       101       90       110         WG457210PBW4 WG457210LCSW15       LCSW       09/27178 0:20 09/27178 3:34       WC160913-7       820.0001       832       mg/L       101       90       110	WG457210PBW2	PBW	09/26/18 18:40				2.3	mg/L		-20	20			
WG457210LCSW12       LCSW       09/27/18 0:01       WC180913-7       820.0001       825       mg/L       101       90       110       -20       20         WG457210LCSW15       LCSW       09/27/18 0:20       WC180913-7       820.0001       832       mg/L       101       90       110       -20       20         Aluminum, diss-ver       M200.7 I/CSV       820.0001       832       mg/L       101       90       110       90       110       90       110         Aluminum, diss-ver       M200.7 I/CSV       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG457544ICV       ICV       10/01/18 20:51       II180914-1       2       1.981       mg/L       99       95       105       V       V       V       V       Mit       Qual         WG457544ICV       ICV       10/01/18 20:34       II180926-3       1.0019       U       mg/L       100       85       115       1       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       20       <	WG457210LCSW9	LCSW	09/26/18 21:38	WC180913-7	820.0001		844	mg/L	103	90	110			
Michaely Michael	WG457210PBW3	PBW	09/26/18 21:43				U	mg/L		-20	20			
WG457210LCSW15       LCSW       09/27/18       WC180913-7       820.0001       832       mg/L       101       90       110         Aluminum, diss-ved       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG4575441CV       ICV       10/01/18       20:31       II180914-1       2       1.981       mg/L       99       95       105       -       -       VIS         WG4575441CV       ICV       10/01/18       20:34       II180914-1       2       1.981       mg/L       99       95       105       -       -       VIS	WG457210LCSW12	LCSW	09/27/18 0:14	WC180913-7	820.0001		825	mg/L	101	90	110			
Aluminum, dissibility         M200.7 ICP           AC2 ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG457544         V         III80914-1         2         1.981         mg/L         99         95         105         V	WG457210PBW4	PBW	09/27/18 0:20				U	mg/L		-20	20			
ACZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG457544          10/01/18 20:15         II180914-1         2         1.981         mg/L         99         95         105                   0.09         0.09                 0.01         85         115  <	WG457210LCSW15	LCSW	09/27/18 3:34	WC180913-7	820.0001		832	mg/L	101	90	110			
WG457544         WG457544         U         Mg457544         Mg457544         U         mg/L         99         95         105         U         Mg457544           WG457544         ICB         10/01/18 20:15         II180914-1         2         1.981         mg/L         99         95         105         U         -0.09         0.09           WG457544         ICB         10/01/18 20:34         II180926-3         1.0019         9985         mg/L         100         85         115         1         20           L46991-03AS         AS         10/01/18 20:47         II180926-3         1.0019         U         .985         mg/L         97         85         115         1         20           L46991-03ASD         ASD         10/01/18 20:50         II180926-3         1.0019         U         .976         mg/L         97         85         115         1         20         1.47004-07AS         AS         10/01/18 21:32         II180926-3         1.0019         U         .997         mg/L         100         85         115         1         20         1.47004-07ASD         ASD         10/01/18 21:35         II180926-3         1.0019         U         .997         mg/L         100	Aluminum, disso	lved		M200.7 I	СР									
WG457544ICV       ICV       10/01/18 20:15       III80914-1       2       1.981       mg/L       99       95       105         WG457544ICB       ICB       10/01/18 20:21       II       II       1001       1180926-3       1.0019       U       mg/L       90       95       105         WG457544LFB       LFB       10/01/18 20:34       III80926-3       1.0019       U       985       mg/L       98       85       115         L46991-03AS       AS       10/01/18 20:50       III80926-3       1.0019       U       985       mg/L       97       85       115       1       20         L46991-03ASD       ASD       10/01/18 20:50       III80926-3       1.0019       U       976       mg/L       97       85       115       1       20         L47004-07AS       ASD       10/01/18 21:32       III80926-3       1.0019       U       1.01       mg/L       100       85       115       1       20         L47004-07ASD       ASD       10/01/18 21:32       III80926-3       1.0019       U       97       mg/L       100       85       115       1       20         ACZ ID       Ype       Analyzed       PCN/SCN	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544ICB       ICB       10/01/18 20:21       U       mg/L       -0.09       0.09         WG457544LFB       LFB       10/01/18 20:34       II180926-3       1.0019       .998       mg/L       100       85       115         L46991-03AS       AS       10/01/18 20:37       II180926-3       1.0019       U       .985       mg/L       98       85       115       1       20         L46991-03ASD       ASD       10/01/18 20:30       II180926-3       1.0019       U       .976       mg/L       97       85       115       1       20       147004-07AS         L47004-07AS       ASD       10/01/18 21:32       II180926-3       1.0019       U       .976       mg/L       100       85       115       1       20       147004-07AS         ASD       10/01/18 21:32       II180926-3       1.0019       U       .997       mg/L       100       85       115       1       20       1         Artimony, dissoved       MS200.8 ICP-MS       M200.8 ICP-MS       MS       MS180914-2       .02       MS180914-2       .02       .02042       mg/L       102       90       110       MS180       U       MS180914-2       .02       .02042	WG457544													
WG457544LFB       LFB       10/01/18 20:34       II180926-3       1.0019       .998       mg/L       100       85       115         L46991-03AS       AS       10/01/18 20:47       II180926-3       1.0019       U       .985       mg/L       98       85       115       1       20         L46991-03ASD       ASD       10/01/18 20:50       II180926-3       1.0019       U       .985       mg/L       98       85       115       1       20         L47004-07AS       ASD       10/01/18 21:32       II180926-3       1.0019       U       1.01       mg/L       101       85       115       1       20       1.47004-07ASD       ASD       10/01/18 21:32       II180926-3       1.0019       U       1.01       mg/L       100       85       115       1       20       20       20       114       20       2	WG457544ICV	ICV	10/01/18 20:15	II180914-1	2		1.981	mg/L	99	95	105			
L46991-03AS       AS       10/01/18 20:47       II180926-3       1.0019       U       .985       mg/L       98       85       115       1       20         L46991-03ASD       ASD       10/01/18 20:50       II180926-3       1.0019       U       .976       mg/L       97       85       115       1       20         L47004-07AS       AS       10/01/18 21:32       II180926-3       1.0019       U       .976       mg/L       97       85       115       1       20         L47004-07AS       ASD       10/01/18 21:32       II180926-3       1.0019       U       .997       mg/L       100       85       115       1       20         AASD       10/01/18 21:35       II180926-3       1.0019       U       .997       mg/L       100       85       115       1       20         Antimony, dissolved       M200.8 ICP-MS       M200.8 ICP-MS       M200.8 ICP-MS       Limit       Qual         WG457555ICV       ICV       10/01/18 21:38       MS180914-2       .02       .02042       mg/L       102       90       110	WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.09	0.09			
L46991-03ASD L47004-07AS       ASD       10/01/18 20:50       II180926-3       1.0019       U       .976       mg/L       97       85       115       1       20         L47004-07AS L47004-07ASD       ASD       10/01/18 21:32       II180926-3       1.0019       U       1.01       mg/L       101       85       115       1       20         Antimony, dissolved       M200.8 ICP-MS         M200.8 ICP-MS         VG457555ICV       ICV       10/01/18 21:38       MS180914-2       .02       .02042       mg/L       102       90       110       Version 1000088       Version 1000188       Version 1000188       Version 1000188       Version 1000188       .02042       mg/L       102       90       110       Version 1000188       Version 1000188       Version 1000188       .00088       .00088       .0000088       .000088       .000088	WG457544LFB	LFB	10/01/18 20:34	II180926-3	1.0019		.998	mg/L	100	85	115			
Laton rote       Laton rote <td>L46991-03AS</td> <td>AS</td> <td>10/01/18 20:47</td> <td>II180926-3</td> <td>1.0019</td> <td>U</td> <td>.985</td> <td>mg/L</td> <td>98</td> <td>85</td> <td>115</td> <td></td> <td></td> <td></td>	L46991-03AS	AS	10/01/18 20:47	II180926-3	1.0019	U	.985	mg/L	98	85	115			
L47004-07ASD       ASD       10/01/18 21:35       II180926-3       1.0019       U       .997       mg/L       100       85       115       1       20         Antimony, dissolved       M200.8 ICP-MS         ACZ ID       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG457555ICV       ICV       10/01/18 21:38       MS180914-2       .02       .02042       mg/L       102       90       110       V	L46991-03ASD	ASD	10/01/18 20:50	II180926-3	1.0019	U	.976	mg/L	97	85	115	1	20	
Antimony, dissolved       M200.8 ICP-MS         AcZ ID       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG4575555       WG457555ICV       ICV       10/01/18 21:38       MS180914-2       .02       .02042       mg/L       102       90       110       -0.00088       0.00088       WG457555ICB       ICB       10/01/18 21:40       U       mg/L       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       0.00088       -0.00088       -0.00088       0.00088       -0.00088       -0.00088       0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088       -0.00088	L47004-07AS	AS	10/01/18 21:32	II180926-3	1.0019	U	1.01	mg/L	101	85	115			
ACZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG457555         WG457555ICV         ICV         10/01/18 21:38         MS180914-2         .02         .02042         mg/L         102         90         110           WG457555ICB         ICB         10/01/18 21:40         U         mg/L         -0.00088         0.00088           WG457555LFB         LFB         10/01/18 21:42         MS180830-2         .01         .00973         mg/L         97         85         115           L47004-03AS         AS         10/01/18 22:17         MS180830-2         .01         U         .00763         mg/L         76         70         130	L47004-07ASD	ASD	10/01/18 21:35	II180926-3	1.0019	U	.997	mg/L	100	85	115	1	20	
WG457555         WG4575555         WG457555         WG4575555         WG457555         WG457555         WG457555         WG457555         U       mg/L         -0.00088         0.00973         mg/L       97         85       115         L47004-03AS       AS         10/01/18 22:17       MS180830-2         .01       U       .00763         mg/L       76       70         130	Antimony, dissol	ved		M200.8 I	CP-MS									
WG457555ICV         ICV         10/01/18 21:38         MS180914-2         .02         .02042         mg/L         102         90         110           WG457555ICB         ICB         10/01/18 21:40         U         mg/L         102         90         110           WG457555LFB         ICB         10/01/18 21:42         MS180830-2         .01         .00973         mg/L         97         85         115           L47004-03AS         AS         10/01/18 22:17         MS180830-2         .01         U         .00763         mg/L         76         70         130	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457555ICB         ICB         10/01/18 21:40         U         mg/L         -0.00088         0.00088           WG457555LFB         LFB         10/01/18 21:42         MS180830-2         .01         .00973         mg/L         97         85         115           L47004-03AS         AS         10/01/18 22:17         MS180830-2         .01         U         .00763         mg/L         76         70         130	WG457555													
WG457555ICB         ICB         10/01/18 21:40         U         mg/L         -0.00088         0.00088           WG457555LFB         LFB         10/01/18 21:42         MS180830-2         .01         .00973         mg/L         97         85         115           L47004-03AS         AS         10/01/18 22:17         MS180830-2         .01         U         .00763         mg/L         76         70         130	WG457555ICV	ICV	10/01/18 21:38	MS180914-2	.02		.02042	mg/L	102	90	110			
WG457555LFB         LFB         10/01/18 21:42         MS180830-2         .01         .00973         mg/L         97         85         115           L47004-03AS         AS         10/01/18 22:17         MS180830-2         .01         U         .00973         mg/L         97         85         115	WG457555ICB							-						
L47004-03AS AS 10/01/18 22:17 MS180830-2 .01 U .00763 mg/L 76 70 130	WG457555LFB			MS180830-2	.01			-	97					
	L47004-03AS					U		-						
	L47004-03ASD			MS180830-2				-				0	20	

### **CRG Mining, LLC**

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Arsenic, dissolv	ved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457555													
WG457555ICV	ICV	10/01/18 21:38	MS180914-2	.05		.04879	mg/L	98	90	110			
WG457555ICB	ICB	10/01/18 21:40				U	mg/L		-0.00044	0.00044			
WG457555LFB	LFB	10/01/18 21:42	MS180830-2	.0501		.04876	mg/L	97	85	115			
L47004-03AS	AS	10/01/18 22:17	MS180830-2	.0501	.0002	.04488	mg/L	89	70	130			
L47004-03ASD	ASD	10/01/18 22:23	MS180830-2	.0501	.0002	.04596	mg/L	91	70	130	2	20	
Barium, dissolv	ved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	2		1.939	mg/L	97	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.009	0.009			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	.5025		.4958	mg/L	99	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	.5025	U	.4879	mg/L	97	85	115			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	.5025	U	.486	mg/L	97	85	115	0	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	.5025	.014	.5102	mg/L	99	85	115			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	.5025	.014	.507	mg/L	98	85	115	1	20	
Beryllium, disse	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457555													
WG457555ICV	ICV	10/01/18 21:38	MS180914-2	.05		.046803	mg/L	94	90	110			
WG457555ICB	ICB	10/01/18 21:40				U	mg/L		-0.00011	0.00011			
WG457555LFB	LFB	10/01/18 21:42	MS180830-2	.05035		.047871	mg/L	95	85	115			
L47004-03AS	AS	10/01/18 22:17	MS180830-2	.05035	U	.043076	mg/L	86	70	130			
L47004-03ASD	ASD	10/01/18 22:23	MS180830-2	.05035	U	.044497	mg/L	88	70	130	3	20	
Cadmium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457555													
WG457555ICV	ICV	10/01/18 21:38	MS180914-2	.05		.048347	mg/L	97	90	110			
WG457555ICB	ICB	10/01/18 21:40				U	mg/L		-0.00011	0.00011			
WG457555LFB	LFB	10/01/18 21:42	MS180830-2	.05005		.047795	mg/L	95	85	115			
L47004-03AS	AS	10/01/18 22:17	MS180830-2	.05005	.00017	.043236	mg/L	86	70	130			
L47004-03ASD	ASD	10/01/18 22:23	MS180830-2	.05005	.00017	.044225	mg/L	88	70	130	2	20	
Calcium, dissol	ved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	100		97.98	mg/L	98	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.3	0.3			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	67.92974		67.56	mg/L	99	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	67.92974	U	66.1	mg/L	97	85	115			
			II180926-3	67.92974	U	66.15	mg/L	97	85	115	0	20	
	ASD	10/01/18 20:50	11100320-3	01.02014	0	00.15	g, L						
L46991-03ASD L47004-07AS	ASD AS	10/01/18 20:50	ll180926-3	67.92974	16.9	83.42	mg/L	98	85	115	Ū.		

### CRG Mining, LLC

#### ACZ Project ID: L47004

NG458966         ICB         09/24/18 8.51         U         mg/L         -1.5         1.5           WG458966         ICB         09/24/18 8.51         W110030-1         54.89         55.27         mg/L         101         00         100         0         20         RA           WG458966         UU         00/24/18 8.51         W110030-1         54.89         55.27         mg/L         101         00         100         0         20         RA           WG458966         LFB         00/24/18 10-10         W1171229-5         30.03         32.42         mg/L         109         90         110         M1           WG458966LFB2         LFB         00/24/18 10-45         W1171229-5         30.03         32.1         59.09         mg/L         109         90         110         M1         M16         M1         <	Chloride			SM45000	CI-E									
NK-04589661C8         ICB         092/4/18 8.51         NH 000000         54.89         U         mg/L         1.15         1.5         NH         NM 2459661C4           NC0459661C4         ICV         092/4/18 10:10         W1171229-5         30.03         U         33.7         mg/L         112         90         110         NH         NH           NC4596661C8         LEB         092/4/18 10:10         W1171229-5         30.03         U         33.7         mg/L         108         90         110         NH         NH           NC4596661C9         LEB         092/4/18 10:45         W1171229-5         30.03         22.42         mg/L         109         90         110         N         NH         NH </th <th>ACZ ID</th> <th>Туре</th> <th>Analyzed</th> <th>PCN/SCN</th> <th>QC</th> <th>Sample</th> <th>Found</th> <th>Units</th> <th>Rec%</th> <th>Lower</th> <th>Upper</th> <th>RPD</th> <th>Limit</th> <th>Qual</th>	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
NAG458966/CV         ICV         09/24/18 8:51         W19030-1         54.89         55.27         mg/L         101         90         110	WG456966													
L47004-03DUP         DUP         09/24/18 10:10         UI         UI         mgL         U         U         U         mgL         U         U         mgL         U         U         mgL         U         U         U         U         U         U         U         U         U         U         U         U         U	WG456966ICB	ICB	09/24/18 8:51				U	mg/L		-1.5	1.5			
L47004-04AS         AS         09/24/18 10:10         W1171229-5         30.03         U         33.7         mg/L         112         90         110         M1           WC468666LF62         LFB         09/24/18 10.45         W1171229-5         30.03         52.75         mg/L         109         90         110         J         20 <td>WG456966ICV</td> <td>ICV</td> <td>09/24/18 8:51</td> <td>WI180530-1</td> <td>54.89</td> <td></td> <td>55.27</td> <td>mg/L</td> <td>101</td> <td>90</td> <td>110</td> <td></td> <td></td> <td></td>	WG456966ICV	ICV	09/24/18 8:51	WI180530-1	54.89		55.27	mg/L	101	90	110			
NNA658966LFB2         LFB         09/24/18 10:12         NI/17128-5         30.03         32.42         rm/L         108         90         110         No         No </td <td>L47004-03DUP</td> <td>DUP</td> <td>09/24/18 10:10</td> <td></td> <td></td> <td>U</td> <td>U</td> <td>mg/L</td> <td></td> <td></td> <td></td> <td>0</td> <td>20</td> <td>RA</td>	L47004-03DUP	DUP	09/24/18 10:10			U	U	mg/L				0	20	RA
WG459896LFB1         LFB         09/24/18 10-45         WII71229-5         30.03         32.75         mg/L         109         90         110         0         20           L46007-01DUP         DUP         09/24/18 10-45         WII71229-5         30.03         32.1         50.09         mg/L         90         90         90         10         0         20           Chromium, dissequence         M200.8 ICP-MS         M200.8 ICP-MS         M200.8 ICP-MS         M200.8 ICP-MS         M200.8 ICP-MS           WG457555         Type         Analyzed         PCNISCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Linit         Qual           WG45755510K         ICV         10/01/18 21:43         MS180830-2         05005         U         0.468         mg/L         92         70         130         2         20         147004-03AS         AS         10/01/18 21:43         MS180830-2         05005         U         0.468         mg/L         92         70         130         2         20         20         147004-03AS         AS         10/01/18 21:43         MS180830-2         05005         U         0.4687         mg/L         96	L47004-04AS	AS	09/24/18 10:10	WI171229-5	30.03	U	33.7	mg/L	112	90	110			M1
L48807-01DUP L48907-02AS         DUP AS         09/24/18 10.45 09/24/18 10.45 00/24/27 00/24/24 00/24/27 00/24/27 00/24/27 00/24/27 00/24/24 00/	WG456966LFB2	LFB	09/24/18 10:12	WI171229-5	30.03		32.42	mg/L	108	90	110			
L48907-02AS       AS       9/9/24/18 10-45       W117129-5       30.03       32.1       59.09       mg/L       9/0       9.01       110       VIII       VIIII       Chromiun, Give       M200.8 ICP-MS       VIIII       M200.8 ICP-MS       None       Mayor       M204       PCN/SCN       QC       Sample       Found       Intell       Rec?       Lower       Upper       RPD       Linit       Quad         WG457555       UK       100/1/18 21:48       MS18091-2       0.5       0.5012       mg/L       0.0       0.011       0.0011       0.0011       0.0011       0.0011       0.0011       0.00111       0.00111       0.001118       0.00118       0.00118       0.00118       0.0000       0.6005       0.4043       mg/L       0.20       7.0       1.00       2.0       2.0       1.001118       2.00       0.00118       0.00118       2.00       0.003       0.01       2.00       1.00       0.003       2.0       0.001118       2.00       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       0.00118       <	WG456966LFB1	LFB	09/24/18 10:45	WI171229-5	30.03		32.75	mg/L	109	90	110			
AC2 ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG457555         WG457555         UCV         10/01/18 21:38         MS180914-2         .05         .05124         mg/L         10/2         90         110	L46907-01DUP	DUP	09/24/18 10:45			36.4	36.43	mg/L				0	20	
ACZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Quad           WG4575555         UC         10/01/18 21:38         MS180914-2         .05         .05124         mgl.         102         90         110	L46907-02AS	AS	09/24/18 10:45	WI171229-5	30.03	32.1	59.09	mg/L	90	90	110			
WG457555           WG457555         ICV         10/01/18 21:38         MS180914-2         .05         .05124         mg/L         .00         .0011         0.0011         .0011           WG457555ICB         ICB         10/01/18 21:40         MS180830-2         .05005         .0483         mg/L         90         110	Chromium, disso	lved		M200.8 I	CP-MS									
WG4575551CF         ICV         10/01/18 21:38         MS180914-2         .05         .05124         mg/L         102         90         110           WG4575551CB         ICB         10/01/18 21:40         MS180830-2         .05005         .0483         mg/L         97         85         115	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457555ICB       ICB       10/01/18 21:40       MS180830-2       .05005       U       .0483       mpL       97       85       115       115         L47004-03AS       AS       10/01/18 22:27       MS180830-2       .05005       U       .0483       mgL       97       85       115       115       115         L47004-03AS       AS       10/01/18 22:27       MS180830-2       .05005       U       .04687       mgL       92       70       130       2       20         Cobalt, dissolve:       M200.71CP         M200.71CP         MG45764102       I002/18 19:25       II180914-1       2.002       1.92       mgL       98       95       105       Umit       Qualt         WG4576411CP       ICB       10/02/18 19:25       II180914-1       2.002       1.92       mgL       98       85       115       Umit       469       115       Umit       400       mgL       90       0.033       Umit       118       118       20       116       Umit       118       116       116       Umit       116       116       116       Umit       116       116       Umit       116       Umit	WG457555													
WG457555LFB       LFB       10/01/18 21:42       MS1808030-2       05005       U       0.483       mg/L       97       85       115       115         L47004-03AS       AS       10/01/18 22:27       MS180830-2       0.5005       U       0.4687       mg/L       92       70       130       2       20         Cobalt, dissolve       MS180830-2       0.5005       U       0.4687       mg/L       94       70       130       2       20         Cobalt, dissolve       MS180830-2       0.5005       U       0.4687       mg/L       94       70       130       2       20         Cobalt, dissolve       MS180830-2       0.5005       U       0.4687       mg/L       94       70       130       2       20         Cobalt, dissolve       MS180830-2       0.5005       U       0.4687       mg/L       94       70       130       2       20         WG457641LFB       LFB       10/02/18 19:25       I1180926-3       .501       U       489       mg/L       96       95       105       15       4         L46991-03ASD       ASD       10/02/18 19:26       I180926-3       .501       U       483       mg/L	WG457555ICV	ICV	10/01/18 21:38	MS180914-2	.05		.05124	mg/L	102	90	110			
L47004-03AS L47004-03ASD       AS ASD       10/01/18 22:17 10/01/18 22:23       MS1808030-2 MS1808030-2       05005       U       .04687 .04687       mg/L       92       70       130       2       20         Cobalt, dissolve:       M200.7 ICP         M200.7 IR 19:02       III III III III III III III III III II	WG457555ICB	ICB	10/01/18 21:40				U	mg/L		-0.0011	0.0011			
L47004-03ASD       ASD       10/01/18 22:23       MS18080-2       .05005       U       .04687       mg/L       94       70       130       2       20         Cobalt, dissolvet       M200.7 ICP         AC2 ID       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG457641ICV       ICV       10/02/18 19:05       Il180914-1       2.002       1.92       mg/L       96       95       105       V       V         WG457641ICB       ICV       10/02/18 19:25       Il180926-3       .501       .489       mg/L       98       85       115       .       .       .       .       .       .       .003       .0.03	WG457555LFB	LFB	10/01/18 21:42	MS180830-2	.05005		.0483	mg/L	97	85	115			
Cobalt, dissolved         M200.7 ICP           AC2 ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG457641         WG457641ICV         ICV         10/02/18 19:05         II180914-1         2.002         1.92         mg/L         96         95         105         V         V         44697641IC8         ICB         10/02/18 19:25         II180926-3         .501         U         mg/L         -0.03         0.03         V         V         V         V         446910.30.3         85         115         V <td>L47004-03AS</td> <td>AS</td> <td>10/01/18 22:17</td> <td>MS180830-2</td> <td>.05005</td> <td>U</td> <td>.0458</td> <td>mg/L</td> <td>92</td> <td>70</td> <td>130</td> <td></td> <td></td> <td></td>	L47004-03AS	AS	10/01/18 22:17	MS180830-2	.05005	U	.0458	mg/L	92	70	130			
ACC2 ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG457641                                 Qual          Qual            Lower         Upper         RPD         Limit         Qual	L47004-03ASD	ASD	10/01/18 22:23	MS180830-2	.05005	U	.04687	mg/L	94	70	130	2	20	
WG457641           WG457641         ICV         10/02/18         19:05         II180914-1         2.002         1.92         mg/L         96         95         105           WG457641ICB         ICB         10/02/18         19:25         II180926-3         .501         .489         mg/L         96         95         105	Cobalt, dissolved	ł		M200.7 I	СР									
WG457641ICV         ICV         10/02/18 19:05         II 180914-1         2.002         1.92         mg/L         96         95         105           WG457641ICB         ICB         10/02/18 19:12         II         II         mg/L         98         85         115           WG457641IFB         LFB         10/02/18 19:25         II 180926-3         .501         U         .489         mg/L         98         85         115           L46991-03AS         AS         10/02/18 19:21         II 180926-3         .501         U         .489         mg/L         98         85         115           20           L46991-03ASD         ASD         10/02/18 19:41         II 180926-3         .501         U         .487         mg/L         98         85         115          20           L47004-07AS         AS         10/02/18 20:26         II 180926-3         .501         U         .483         mg/L         96         85         115         1         20           Conductivit@25         SM25108         S         II 180926-3         .501         U         .483         mg/L         96         85         115         1         20	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG4576411CB       ICB       10/02/18 19:12       II 180926-3       .501       .489       mg/L       98       85       115       .501       .6499         L46991-03AS       AS       10/02/18 19:38       II 180926-3       .501       U       .489       mg/L       98       .85       .115       .501       U       .489       mg/L       98       .55       .115       .501       .501       U       .489       mg/L       98       .55       .115       .501       .501       U       .487       mg/L       97       .85       .115       .501       .501       U       .483       mg/L       96       .51       .15       .501       .501       U       .483       mg/L       .66       .501 <td>WG457641</td> <td></td>	WG457641													
WG457641LFB       LFB       10/02/18 19:25       II 80926-3       .501       .489       mg/L       98       85       115	WG457641ICV	ICV	10/02/18 19:05	II180914-1	2.002		1.92	mg/L	96	95	105			
L46991-03AS       AS       10/02/18 19:38       II180926-3       .501       U       .489       mg/L       98       85       115       0       20         L46991-03ASD       ASD       10/02/18 19:41       II180926-3       .501       U       .491       mg/L       98       85       115       0       20         L47004-07AS       ASD       10/02/18 20:23       II180926-3       .501       U       .487       mg/L       96       85       115       1       20         Conductivity @257       ASD       10/02/18 20:26       II180926-3       .501       U       .483       mg/L       96       85       115       1       20         Conductivity @257       ASD       10/02/18 20:26       II180926-3       .501       U       .483       mg/L       96       85       115       1       20         Conductivity @257       SM2510B       S       S       S       116       Q       Q       S       No	WG457641ICB	ICB	10/02/18 19:12				U	mg/L		-0.03	0.03			
L46991-03ASD       ASD       10/02/18 19:41       II180926-3       .501       U       .491       mg/L       98       85       115       0       20         L47004-07AS       AS       10/02/18 20:23       II180926-3       .501       U       .487       mg/L       97       85       115       0       20         L47004-07AS       ASD       10/02/18 20:26       II180926-3       .501       U       .483       mg/L       96       85       115       1       20         Conductivity @25       SM2510B         K450457113       CSw       Limit       Qual         WG457113LCSW2       LCSW       09/25/18 17:24       PCN56415       1410       1410       umhos/cm       99       90       110       400       400       umhos/cm       99       90       110       400       umhos/cm       99       90       110       400       400       umhos/cm       99       90       11	WG457641LFB	LFB	10/02/18 19:25	II180926-3	.501		.489	mg/L	98	85	115			
L47004-07AS L47004-07ASD       AS ASD       10/02/18 20:23       II180926-3       .501       U       .487       mg/L       97       85       115       1       20         Conductivity @25C       SM2510B       SM2510B       SM2510B       V       Acz ID       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG457113LCSW2       LCSW       09/25/18 17:24       PCN56415       1410       1400       umhos/cm       99       90       110       V <td< td=""><td>L46991-03AS</td><td>AS</td><td>10/02/18 19:38</td><td>II180926-3</td><td>.501</td><td>U</td><td>.489</td><td>mg/L</td><td>98</td><td>85</td><td>115</td><td></td><td></td><td></td></td<>	L46991-03AS	AS	10/02/18 19:38	II180926-3	.501	U	.489	mg/L	98	85	115			
L47004-07ASD       ASD       10/02/18 20:26       II180926-3       .501       U       .483       mg/L       96       85       115       1       20         Conductivity@25C       SM2510B       SM2510B       SM2510B       V       SM2510B       V       Lower       Upper       RPD       Limit       Qual         WG457113L       Type       Analyzed       PCN56415       1410       1410       umhos/cm       100       90       110       V       V       V       V       V       V       Qual         WG457113L       LCSW       09/25/18 17:24       PCN56415       1410       1410       umhos/cm       99       90       110       V	L46991-03ASD	ASD	10/02/18 19:41	II180926-3	.501	U	.491	mg/L	98	85	115	0	20	
SM2510B           Ac2 ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG457113L         CSW         09/25/18 17:24         PCN56415         1410         1410         umhos/cm         100         90         110	L47004-07AS	AS	10/02/18 20:23	II180926-3	.501	U	.487	mg/L	97	85	115			
ACZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG457113           WG457113LCSW2         LCSW         09/25/18 17:24         PCN56415         1410         1410         umhos/cm         100         90         110         400         400         umhos/cm         99         90         110         400         400         umhos/cm         99         90         110         400	L47004-07ASD	ASD	10/02/18 20:26	II180926-3	.501	U	.483	mg/L	96	85	115	1	20	
WG457113       USA       VICASCAL       VICA	Conductivity @2	5C		SM2510E	3									
WG457113LCSW2       LCSW       09/25/18 17:24       PCN56415       1410       1410       umhos/cm       100       90       110         WG457113LCSW5       LCSW       09/25/18 20:21       PCN56415       1410       1400       umhos/cm       99       90       110         WG457113LCSW5       LCSW       09/25/18 20:21       PCN56415       1410       1400       umhos/cm       99       90       110         WG457113LCSW8       LCSW       09/25/18 23:55       PCN56415       1410       1400       umhos/cm       99       90       110         L47004-05DUP       DUP       09/26/18 2:19       125       125       umhos/cm       99       90       110         L47016-01DUP       DUP       09/26/18 3:56       119       117       umhos/cm       99       90       110         WG457113LCSW11       LCSW       09/26/18 4:01       PCN56415       1410       1390       umhos/cm       99       90       110	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457113LCSW5       LCSW       09/25/18 20:21       PCN56415       1410       1400       umhos/cm       99       90       110         WG457113LCSW8       LCSW       09/25/18 23:55       PCN56415       1410       1400       umhos/cm       99       90       110         L47004-05DUP       DUP       09/26/18 2:19       125       125       umhos/cm       99       90       110         L47016-01DUP       DUP       09/26/18 3:56       119       117       umhos/cm       99       90       100         WG457113LCSW11       LCSW       09/26/18 4:01       PCN56415       1410       1390       umhos/cm       99       90       110	WG457113													
WG457113LCSW8       LCSW       09/25/18 23:55       PCN56415       1410       1400       umhos/cm       99       90       110         L47004-05DUP       DUP       09/26/18 2:19       125       125       125       umhos/cm       99       90       110         L47016-01DUP       DUP       09/26/18 3:56       119       117       umhos/cm       99       90       110         WG457113LCSW11       LCSW       09/26/18 4:01       PCN56415       1410       1390       umhos/cm       99       90       110	WG457113LCSW2	LCSW	09/25/18 17:24	PCN56415	1410		1410	umhos/cm	100	90	110			
L47004-05DUP         DUP         09/26/18 2:19         125         125         umhos/cm         0         20           L47016-01DUP         DUP         09/26/18 3:56         119         117         umhos/cm         2         20           WG457113LCSW11         LCSW         09/26/18 4:01         PCN56415         1410         1390         umhos/cm         99         90         110	WG457113LCSW5	LCSW	09/25/18 20:21	PCN56415	1410		1400	umhos/cm	99	90	110			
L47016-01DUP         DUP         09/26/18 3:56         119         117         umhos/cm         2         20           WG457113LCSW11         LCSW         09/26/18 4:01         PCN56415         1410         1390         umhos/cm         99         90         110	WG457113LCSW8	LCSW	09/25/18 23:55	PCN56415	1410		1400	umhos/cm	99	90	110			
WG457113LCSW11 LCSW 09/26/18 4:01 PCN56415 1410 1390 umhos/cm 99 90 110	L47004-05DUP	DUP	09/26/18 2:19			125	125	umhos/cm				0	20	
	L47016-01DUP	DUP	09/26/18 3:56			119	117	umhos/cm				2	20	
WG457113LCSW14 LCSW 09/26/18 7:26 PCN56415 1410 1390 umhos/cm 99 90 110	WG457113LCSW11	LCSW	09/26/18 4:01	PCN56415	1410		1390	umhos/cm	99	90	110			
	WG457113LCSW14	LCSW	09/26/18 7:26	PCN56415	1410		1390	umhos/cm	99	90	110			

#### **CRG Mining, LLC**

#### ACZ Project ID: L47004

Copper, dissolv	ved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	2		1.946	mg/L	97	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.03	0.03			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	.501		.486	mg/L	97	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	.501	U	.476	mg/L	95	85	115			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	.501	U	.479	mg/L	96	85	115	1	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	.501	U	.482	mg/L	96	85	115			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	.501	U	.481	mg/L	96	85	115	0	20	
Cyanide, total			M335.4 -	Colorimet	ric w/ distil	lation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG456941													
WG456941ICV	ICV	09/22/18 0:10	WI180912-5	.3		.3022	mg/L	101	90	110			
WG456941ICB	ICB	09/22/18 0:11				U	mg/L		-0.003	0.003			
WG456882LRB	LRB	09/22/18 0:12				U	mg/L		-0.003	0.003			
WG456882LFB	LFB	09/22/18 0:13	WI180912-2	.2		.1884	mg/L	94	90	110			
L46985-04DUP	DUP	09/22/18 0:26			U	.0109	mg/L				200	20	RA
L46985-05LFM	LFM	09/22/18 0:28	WI180912-2	.2	.063	.2	mg/L	69	90	110			M2
WG457135													
WG457135ICV	ICV	09/25/18 23:50	WI180925-5	.3		.306	mg/L	102	90	110			
WG457135ICB	ICB	09/25/18 23:51				U	mg/L		-0.003	0.003			
WG456960LRB	LRB	09/25/18 23:52				U	mg/L		-0.003	0.003			
WG456960LFB	LFB	09/25/18 23:53	WI180912-2	.2		.1927	mg/L	96	90	110			
L47004-08DUP	DUP	09/25/18 23:55			U	U	mg/L				0	20	RA
L47004-09LFM	LFM	09/25/18 23:57	WI180912-2	.2	.086	.2254	mg/L	70	90	110			M2
Iron, dissolved			M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	2		1.918	mg/L	96	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.06	0.06			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	1.0018		.998	mg/L	100	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	1.0018	.02	.978	mg/L	96	85	115			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	1.0018	.02	.974	mg/L	95	85	115	0	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	1.0018	.02	1.017	mg/L	100	85	115			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	1.0018	.02	1.009	mg/L	99	85	115	1	20	
Lead, dissolved	t		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457555													
WG457555ICV	ICV	10/01/18 21:38	MS180914-2	.05		.04948	mg/L	99	90	110			
WG457555ICB	ICB	10/01/18 21:40				U	mg/L		-0.00022	0.00022			
WG457555LFB	LFB	10/01/18 21:42	MS180830-2	.0496		.04871	mg/L	98	85	115			
L47004-03AS	AS	10/01/18 22:17	MS180830-2	.0496	.0001	.04387	mg/L	88	70	130			
L47004-03ASD	ASD	10/01/18 22:23	MS180830-2	.0496	.0001	.04576	mg/L	92	70	130	4	20	
			-										

### **CRG Mining, LLC**

#### ACZ Project ID: L47004

Magnesium, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	100		99.8	mg/L	100	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.6	0.6			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	50.04094		48.64	mg/L	97	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	50.04094	U	47.69	mg/L	95	85	115			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	50.04094	U	47.93	mg/L	96	85	115	1	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	50.04094	5.6	54.06	mg/L	97	85	115			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	50.04094	5.6	53.6	mg/L	96	85	115	1	20	
Manganese, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	2		1.9225	mg/L	96	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.015	0.015			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	.5005		.4961	mg/L	99	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	.5005	.016	.4867	mg/L	94	85	115			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	.5005	.016	.4852	mg/L	94	85	115	0	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	.5005	U	.5019	mg/L	100	85	115			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	.5005	U	.4985	mg/L	100	85	115	1	20	
Mercury, total			M245.1 (	CVAA									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457167													
WG457167ICV	ICV	09/27/18 13:28	HG180822-3	.004995		.00512	mg/L	103	95	105			
WG457167ICB	ICB	09/27/18 13:29				U	mg/L		-0.0002	0.0002			
WG457187													
WG457187LRB	LRB	09/27/18 14:05				U	mg/L		-0.00044	0.00044			
WG457187LFB	LFB	09/27/18 14:06	HG180917-3	.002002		.00198	mg/L	99	85	115			
L46997-14LFM	LFM	09/27/18 14:21	HG180822-3	.004995	U	.0003	mg/L	6	85	115			M2
L46997-14LFMD	LFMD	09/27/18 14:22	HG180822-3	.004995	U	.00027	mg/L	5	85	115	11	20	M2
WG457188													
WG457188LRB	LRB	09/27/18 14:57				U	mg/L		-0.00044	0.00044			
WG457188LFB	LFB	09/27/18 14:57	HG180917-3	.002002		.00199	mg/L	99	85	115			
L47004-08LFM	LFM	09/27/18 15:03	HG180917-3	.002002	U	.00202	mg/L	101	85	115			
L47004-08LFMD	LFMD	09/27/18 15:04	HG180917-3	.002002	U	.00202	mg/L	101	85	115	0	20	
Nickel, dissolve	d		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	2.004		1.9725	mg/L	98	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.024	0.024			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	.5		.5053	mg/L	101	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	.5	U	.4973	mg/L	99	85	115			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	.5	U	.4985	mg/L	100	85	115	0	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	.5	U	.5089	mg/L	102	85	115			

### **CRG Mining, LLC**

#### ACZ Project ID: L47004

Nitrate/Nitrite as	N, diss	olved	M353.2 -	Automated	l Cadmiun	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG456750													
WG456750ICV	ICV	09/19/18 21:39	WI180905-11	2.416		2.386	mg/L	99	90	110			
WG456750ICB	ICB	09/19/18 21:41				U	mg/L		-0.02	0.02			
WG456750LFB	LFB	09/19/18 21:44	WI180703-7	2		1.976	mg/L	99	90	110			
L46965-01AS	AS	09/19/18 21:47	WI180703-7	2	1.42	3.296	mg/L	94	90	110			
L46965-02DUP	DUP	09/19/18 21:49			1.41	1.41	mg/L				0	20	
L47004-02AS	AS	09/19/18 22:06	WI180703-7	2	.05	2.014	mg/L	98	90	110			
L47004-03DUP	DUP	09/19/18 22:09			.03	.036	mg/L				18	20	RA
Nitrite as N, disso	olved		M353.2 -	Automated	l Cadmiur	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG456750													
WG456750ICV	ICV	09/19/18 21:39	WI180905-11	.609		.609	mg/L	100	90	110			
WG456750ICB	ICB	09/19/18 21:41				U	mg/L		-0.01	0.01			
WG456750LFB	LFB	09/19/18 21:44	WI180703-7	1		1.013	mg/L	101	90	110			
L46965-01AS	AS	09/19/18 21:47	WI180703-7	1	.05	1.065	mg/L	102	90	110			
L46965-02DUP	DUP	09/19/18 21:49			.07	.068	mg/L				3	20	RA
L47004-02AS	AS	09/19/18 22:06	WI180703-7	1	U	.999	mg/L	100	90	110			
L47004-03DUP	DUP	09/19/18 22:09			U	U	mg/L				0	20	RA
pH (lab)			SM4500H	Н+ В									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457113													
WG457113LCSW1	LCSW	09/25/18 17:22	PCN55475	6.01		6.1	units	101	5.9	6.1			
WG457113LCSW4	LCSW	09/25/18 20:19	PCN55475	6.01		6	units	100	5.9	6.1			
WG457113LCSW7	LCSW	09/25/18 23:53	PCN55475	6.01		6.1	units	101	5.9	6.1			
L47004-05DUP	DUP	09/26/18 2:19			8.1	8.1	units				0	20	
L47016-01DUP	DUP	09/26/18 3:56			7.3	7.3	units				0	20	
WG457113LCSW10	LCSW	09/26/18 3:59	PCN55475	6.01		6.1	units	101	5.9	6.1			
WG457113LCSW13	LCSW	09/26/18 7:24	PCN55475	6.01		6	units	100	5.9	6.1			
Potassium, disso	olved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	20		19.64	mg/L	98	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.6	0.6			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	100.7068		98.35	mg/L	98	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	100.7068	U	96.87	mg/L	96	85	115			
	ASD	10/01/18 20:50	II180926-3	100.7068	U	96.46	mg/L	96	85	115	0	20	
L46991-03ASD	AOD	10/01/10 20:00											
L46991-03ASD L47004-07AS	AS	10/01/18 21:32	II180926-3	100.7068	.6	99.91	mg/L	99	85	115			

#### ACZ Project ID: L47004

Residue, Filteral		) @180C	SM25400	;									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG456908													
WG456908PBW	PBW	09/21/18 13:45				10	mg/L		-20	20			
WG456908LCSW	LCSW	09/21/18 13:46	PCN56349	260		262	mg/L	101	80	120			
L47004-01DUP	DUP	09/21/18 14:08			70	66	mg/L				6	10	RA
L47055-01DUP	DUP	09/21/18 14:29			U	U	mg/L				0	10	RA
WG456974													
WG456974PBW	PBW	09/24/18 10:00				U	mg/L		-20	20			
WG456974LCSW	LCSW	09/24/18 10:01	PCN56349	260		254	mg/L	98	80	120			
L47020-04DUP	DUP	09/24/18 10:15			98	102	mg/L				4	10	RA
Sodium, dissolv	ed		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	100		99.92	mg/L	100	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.6	0.6			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	100.0849		99.42	mg/L	99	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	100.0849	U	97.94	mg/L	98	85	115			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	100.0849	U	98.11	mg/L	98	85	115	0	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	100.0849	2.4	102	mg/L	100	85	115			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	100.0849	2.4	101.7	mg/L	99	85	115	0	20	
Sulfate			D516-02/	-07 - Turbio	limetric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457008													
WG457008ICB	ICB	09/24/18 12:31				U	mg/L		-3	3			
WG457008ICV	ICV	09/24/18 12:31	WI180919-3	20		19.7	mg/L	99	90	110			
WG457008LFB	LFB	09/24/18 14:09	WI180919-5	10.03		10	mg/L	100	90	110			
L47001-06DUP	DUP	09/24/18 14:17			172	176	mg/L				2	20	
L47027-01DUP	DUP	09/24/18 14:25			852	868	mg/L				2	20	
L47027-02AS	AS	09/24/18 14:25	SO4TURB50X	10	795	791	mg/L	-40	90	110			M3
L47001-07AS	AS	09/24/18 14:38	SO4TURB20X	10	331	346	mg/L	150	90	110			M3
WG457070													
WG457070ICB	ICB	09/25/18 10:27				U	mg/L		-3	3			
WG457070ICV	ICV	09/25/18 10:27	WI180919-3	20		20.1	mg/L	101	90	110			
WG457070LFB	LFB	09/25/18 10:51	WI180919-5	10.03		10.3	mg/L	103	90	110			
L47125-02AS	AS	09/25/18 10:54	WI180919-5	10.03	U	15.6	mg/L	156	90	110			M1
L47125-03DUP	DUP	09/25/18 10:54			U	U	mg/L				0	20	RA
Vanadium, disso	olved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	2		1.997	mg/L	100	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.015	0.015			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	.502		.5003	mg/L	100	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	.502	U	.4902	mg/L	98	85	115			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	.502	U	.49	mg/L	98	85	115	0	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	.502	U	.4996	mg/L	100	85	115			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	.502	U	.4974	mg/L	99	85	115	0	20	

### **CRG Mining, LLC**

#### ACZ Project ID: L47004

Zinc, dissolved			M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	2		1.974	mg/L	99	95	105			
WG457544ICB	ICB	10/01/18 20:21				U	mg/L		-0.03	0.03			
WG457544LFB	LFB	10/01/18 20:34	II180926-3	.4942		.517	mg/L	105	85	115			
L46991-03AS	AS	10/01/18 20:47	II180926-3	.4942	U	.509	mg/L	103	85	115			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	.4942	U	.514	mg/L	104	85	115	1	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	.4942	U	.531	mg/L	107	85	115			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	.4942	U	.518	mg/L	105	85	115	2	20	

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47004-01	WG456941	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457187	Mercury, total	M245.1 CVAA	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG456750	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L47004-02	WG456966	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456941	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457187	Mercury, total	M245.1 CVAA	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG456750	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

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### Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47004-03	WG456966	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456941	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457187	Mercury, total	M245.1 CVAA	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG456750	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG456908	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L47004-04	WG456966	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456941	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456750	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG456974	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

(800) 334-5493

### Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47004-05	WG456966	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456941	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456750	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG456974	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L47004-06	WG456966	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456941	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456750	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG456974	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

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### Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47004-07	WG456966	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456941	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456750	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG456974	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457008	Sulfate	D516-02/-07 - Turbidimetric	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L47004-08	WG456966	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457135	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456750	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG456974	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457070	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47004-09	WG456966	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457135	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG456750	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG456974	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG457070	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



ACZ Project ID: L47004

No certification qualifiers associated with this analysis

ACZ Laboratories, Inc.	
2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493	

# Sample Receipt

1) Is a foreign soil permit included for applicable samples?	/2018 11:42 9/20/2018 O NA X
Date Printed:         Date Printed:         YES N         1) Is a foreign soil permit included for applicable samples?       X         2) Is the Chain of Custody form or other directive shipping papers present?       X         3) Does this project require special handling procedures such as CLP protocol?       X         4) Are any samples NRC licensable material?       Image: Container of Custody form complete and accurate?         5) If samples are received past hold time, proceed with requested short hold time analyses?       X         6) Is the Chain of Custody form complete and accurate?       X         7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?       Z         Samples/Containers	O NA
Receipt Verification       YES       N         1) Is a foreign soil permit included for applicable samples?	O NA
YES       N         1) Is a foreign soil permit included for applicable samples?	
1) Is a foreign soil permit included for applicable samples?       Image: Containers         2) Is the Chain of Custody form or other directive shipping papers present?       X         3) Does this project require special handling procedures such as CLP protocol?       X         4) Are any samples NRC licensable material?       Image: Containers         5) If samples are received past hold time, proceed with requested short hold time analyses?       X         6) Is the Chain of Custody form complete and accurate?       X         7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?       X         Samples/Containers       YES	
2) Is the Chain of Custody form or other directive shipping papers present?       X         3) Does this project require special handling procedures such as CLP protocol?       X         4) Are any samples NRC licensable material?       Image: Container state in the chain of Custody form complete and accurate?         5) If samples are received past hold time, proceed with requested short hold time analyses?       X         6) Is the Chain of Custody form complete and accurate?       X         7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?       X         Samples/Containers       YES	
<ul> <li>3) Does this project require special handling procedures such as CLP protocol?</li> <li>4) Are any samples NRC licensable material?</li> <li>5) If samples are received past hold time, proceed with requested short hold time analyses?</li> <li>6) Is the Chain of Custody form complete and accurate?</li> <li>7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?</li> <li>Samples/Containers</li> </ul>	
<ul> <li>4) Are any samples NRC licensable material?</li> <li>5) If samples are received past hold time, proceed with requested short hold time analyses?</li> <li>6) Is the Chain of Custody form complete and accurate?</li> <li>7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?</li> <li>Samples/Containers</li> </ul>	
5) If samples are received past hold time, proceed with requested short hold time analyses?       X         6) Is the Chain of Custody form complete and accurate?       X         7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?       X         Samples/Containers       YES	<
6) Is the Chain of Custody form complete and accurate?          7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?       X         Samples/Containers       YES	Х
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?	
Samples/Containers YES N	
YES N	<
8) Are all containers intact and with no leaks? X	O NA
9) Are all labels on containers and are they intact and legible?	
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	
11) For preserved bottle types, was the pH checked and within limits? 1	
12) Is there sufficient sample volume to perform all requested work?	
13) Is the custody seal intact on all containers?	Х
14) Are samples that require zero headspace acceptable?	Х
15) Are all sample containers appropriate for analytical requirements?	
16) Is there an Hg-1631 trip blank present?	
17) Is there a VOA trip blank present?	Х
18) Were all samples received within hold time? X	X X
NA indicates N	

#### Chain of Custody Related Remarks

**Client Contact Remarks** 

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
5141	2.4	<=6.0	16	Yes

#### Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

ACZ Project ID: L47004 Date Received: 09/19/2018 11:42 Received By: Date Printed: 9/20/2018

<sup>1</sup> The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

	Laboratories, Inc.		-004	C	HAIN	l of C	USIC
Report to:	mboat Springs, CO 80487 (800) 334-	5493					
Name: JAKE Wi	(Kinson)	Addro	2 :000		1.15	(aC.).	1
	Mining LLL	Adun		<u>10 S.</u> ison,			
	KS1987@GMAil, com	Tolor	phone: C	1700	17-7	(2)	
					<u> </u>	>>11	
Copy of Report to:							
Name:		E-ma					
Company:		Telep	phone:				
Invoice to:							
Name:		Addre	ess:				
Company: Chb							
	KS1987e GANIL. COM		phone:				
	st holding time (HT), or if insufficient		-	te			
	n, shall ACZ proceed with requested further instruction. If neither "YES" nor "NO" is indicated			analyses, even	if HT is expire		VO
Are samples for SDWA C	Compliance Monitoring?	Yes		No			
	te forms. Results will be reported to				<u></u>		
	vilkingun) Sampler's Site Informat	ion State he authenticity and v			nd that intenti		me Zone
*Sampler's Signature:		with the sample in an	nyway, is conside	red fraud and pu	nishable by S	tate Law.	-
PROJECT INFORMATI	ON		ANALYS	ES REQUESTE	ED <u>(</u> attach li	ist or use quo	ote numbei
Quote #:	0						
PO#: QAM3201	<u>, , , , , , , , , , , , , , , , , , , </u>	# of Containers					
Reporting state for complia		5					
	Ide NRC licensed material?						
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DLL		SW 5	+ +		ŀ		
613	9/18/18/0:151M		+++		+		
GLS BM1	9/18/18 10:35AN		+ + + + + + + + + + + + + + + + + + +	Place		-Sh-1	
PIN 1			+	- giste	LINE	<u>-&gt;h-(</u>	Coffer L
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		Sw 5	+		+		
		Sw S	+ $+$				
		Sw S Sw S	+ + +		-		
CM3	9/18/18 12:35pm!	<u>×v   \$</u>	┼╾┽		1.		
Matrix SW (Surface Wa					00 (0-1)		
REMARKS	ater) · GW (Ground Water) · WW (Waste Wa		king water)	SL (Sludge)	50 (501)		Jther (Sp
· · · ·							
						•	
	ease refer to ACZ's terms & condit			21 21		COC.	
			RE	CEIVED B			DATE
RELINQUISH				\$74) 1	77C	.  9	1-19-18
- Sin Ellinguist	¥ 18/18 2:00	эм					
- Sweether		э <b>М</b>					

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ACZ 2773 Downhill Driv	ve Steamboat S	Springs, CO	80487 (800) 334-5	5495		Bottle List
Account: Bottle Order:	CRG/CRG I BO40683	Mining, L	LC		Bill to Account: Ship Date Requested: Request Placed at: Service Requested:	Bill to ACZ 09/07/2018 09/06/2018 15:31 UPS Ground
Sampling sup	plies					
PACK Qty 1 2	ACZ ID COC SEAL		Type Chain of Custody Custody Seal	Ch	scription ain of Custody, 1 for 10 samples. Istody seals for cooler, two for each	cooler.
1 30	RETURN		Return Address Sample Labels		turn Address label, one for each co Z supplied labels for sample conta	
ACZ Coolers						
PACK Qty 1	ACZ ID 5141	Size Large	Weight 13		PS Tracking Number 8101300317211287	
					0101300317211207	
Quote numbei	r: BASE	LINE-SW	-QTRLY	2 Surfa	ace water samples quarterly, client	is not field filtering
Sample Quant	tity: 6			ACZ is	ace water samples quarterly, client responsible for necessary sample	-
Sample Quant	tity: 6 Type GREEN PC	Size 125 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric	ACZ is /e Ins Me Co	ace water samples quarterly, client responsible for necessary sample structions tals (dissolved including ICPMS) - mpletely fill container.	filtering This is a filtered sample.
Sample Quant           PACK         Qty           1         1           1         1           1         1	tity: 6 Type GREEN PC PURPLE RAW	Size 125 ML 250 ML 500 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric Raw/NaOH Raw	ACZ is /e Ins Me Co Cy We filt	ace water samples quarterly, client responsible for necessary sample structions etals (dissolved including ICPMS) - mpletely fill container. anide - Do not overfill as there is So et Chemistry (analyses that do not in ration) - Completely fill container.	filtering This is a filtered sample. odium Hydroxide in the bottle require preservative or
Sample Quant PACK Qty 1 1 1	tity: 6 Type GREEN PC PURPLE	Size 125 ML 250 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric Raw/NaOH	ACZ is ACZ is Me Co Cy We filtr Me in t We	ace water samples quarterly, client responsible for necessary sample structions etals (dissolved including ICPMS) - mpletely fill container. anide - Do not overfill as there is So et Chemistry (analyses that do not in ration) - Completely fill container. etals (total except ICPMS) - Do not the bottle. et chemistry (dissolved) - This is a f	filtering This is a filtered sample. Ddium Hydroxide in the bottl require preservative or overfill as there is Nitric Acid
Sample Quant           PACK         Qty           1         1           1         1           1         1           1         1	tity: 6 Type GREEN PC PURPLE RAW RED	Size 125 ML 250 ML 500 ML 250 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric Raw/NaOH Raw Raw/Nitric	ACZ is ACZ is Me Co Cy We filtr Me in t We	ace water samples quarterly, client responsible for necessary sample structions etals (dissolved including ICPMS) - mpletely fill container. anide - Do not overfill as there is So et Chemistry (analyses that do not in ration) - Completely fill container. etals (total except ICPMS) - Do not of the bottle.	filtering This is a filtered sample. Ddium Hydroxide in the bottl require preservative or overfill as there is Nitric Acid
Sample Quant           PACK         Qty           1         1           1         1           1         1           1         1	tity: 6 Type GREEN PC PURPLE RAW RED	Size 125 ML 250 ML 500 ML 250 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric Raw/NaOH Raw Raw/Nitric	ACZ is ACZ is Me Co Cy We filtr Me in t We	ace water samples quarterly, client responsible for necessary sample structions etals (dissolved including ICPMS) - mpletely fill container. anide - Do not overfill as there is So et Chemistry (analyses that do not in ration) - Completely fill container. etals (total except ICPMS) - Do not the bottle. et chemistry (dissolved) - This is a f	filtering This is a filtered sample. Ddium Hydroxide in the bottle require preservative or overfill as there is Nitric Acid
Sample Quant           PACK         Qty           1         1           1         1           1         1           1         1	tity: 6 Type GREEN PC PURPLE RAW RED	Size 125 ML 250 ML 500 ML 250 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric Raw/NaOH Raw Raw/Nitric	ACZ is ACZ is Me Co Cy We filtr Me in t We	ace water samples quarterly, client responsible for necessary sample structions etals (dissolved including ICPMS) - mpletely fill container. anide - Do not overfill as there is So et Chemistry (analyses that do not in ration) - Completely fill container. etals (total except ICPMS) - Do not the bottle. et chemistry (dissolved) - This is a f	filtering This is a filtered sample. Ddium Hydroxide in the bottle require preservative or overfill as there is Nitric Acid
	tity: 6 Type GREEN PC PURPLE RAW RED	Size 125 ML 250 ML 500 ML 250 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric Raw/NaOH Raw Raw/Nitric	ACZ is ACZ is Me Co Cy We filtr Me in t We	ace water samples quarterly, client responsible for necessary sample structions etals (dissolved including ICPMS) - mpletely fill container. anide - Do not overfill as there is So et Chemistry (analyses that do not in ration) - Completely fill container. etals (total except ICPMS) - Do not the bottle. et chemistry (dissolved) - This is a f	filtering This is a filtered sample. Ddium Hydroxide in the bottle require preservative or overfill as there is Nitric Acid
Sample Quant           PACK         Qty           1         1           1         1           1         1           1         1	tity: 6 Type GREEN PC PURPLE RAW RED	Size 125 ML 250 ML 500 ML 250 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric Raw/NaOH Raw Raw/Nitric	ACZ is ACZ is Me Co Cy We filtr Me in t We	ace water samples quarterly, client responsible for necessary sample structions etals (dissolved including ICPMS) - mpletely fill container. anide - Do not overfill as there is So et Chemistry (analyses that do not in ration) - Completely fill container. etals (total except ICPMS) - Do not the bottle. et chemistry (dissolved) - This is a f	filtering This is a filtered sample. Ddium Hydroxide in the bottle require preservative or overfill as there is Nitric Acid
Sample Quant           PACK         Qty           1         1           1         1           1         1           1         1	tity: 6 Type GREEN PC PURPLE RAW RED	Size 125 ML 250 ML 500 ML 250 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric Raw/NaOH Raw Raw/Nitric	ACZ is ACZ is Me Co Cy We filtr Me in t We	ace water samples quarterly, client responsible for necessary sample structions etals (dissolved including ICPMS) - mpletely fill container. anide - Do not overfill as there is So et Chemistry (analyses that do not in ration) - Completely fill container. etals (total except ICPMS) - Do not the bottle. et chemistry (dissolved) - This is a f	filtering This is a filtered sample. Ddium Hydroxide in the bottle require preservative or overfill as there is Nitric Acid
Sample Quant           PACK         Qty           1         1           1         1           1         1           1         1	tity: 6 Type GREEN PC PURPLE RAW RED	Size 125 ML 250 ML 500 ML 250 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric Raw/NaOH Raw Raw/Nitric	ACZ is ACZ is Me Co Cy We filtr Me in t We	ace water samples quarterly, client responsible for necessary sample structions etals (dissolved including ICPMS) - mpletely fill container. anide - Do not overfill as there is So et Chemistry (analyses that do not in ration) - Completely fill container. etals (total except ICPMS) - Do not the bottle. et chemistry (dissolved) - This is a f	filtering This is a filtered sample. Ddium Hydroxide in the bottle require preservative or overfill as there is Nitric Acid
Sample Quant           PACK         Qty           1         1           1         1           1         1           1         1	tity: 6 Type GREEN PC PURPLE RAW RED	Size 125 ML 250 ML 500 ML 250 ML	Filter/Raw/Preserv Green pre-cleaned Filtered/Nitiric Raw/NaOH Raw Raw/Nitric	ACZ is ACZ is Me Co Cy We filtr Me in t We	ace water samples quarterly, client responsible for necessary sample structions etals (dissolved including ICPMS) - mpletely fill container. anide - Do not overfill as there is So et Chemistry (analyses that do not in ration) - Completely fill container. etals (total except ICPMS) - Do not the bottle. et chemistry (dissolved) - This is a f	filtering This is a filtered sample. Odium Hydroxide in the bottle require preservative or overfill as there is Nitric Acid

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January 09, 2019

Report to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231 Bill to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231

Project ID: ACZ Project ID: L49006

Jake Wilkinson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 21, 2018. This project has been assigned to ACZ's project number, L49006. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L49006. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after February 08, 2019. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.

Max janicely

Max Janicek has reviewed and approved this report.





Project ID: Sample ID: GL 1

ACZ Sample ID:	L49006-01
Date Sampled:	12/20/18 10:55
Date Received:	12/21/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/28/18 14:36	ttg
Lab Filtration (0.45um)	M200.7/200.8/3005A							01/03/19 15:00	vg4638
& Acidification									6
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.03	В	mg/L	0.03	0.2	01/07/19 20:40	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/04/19 16:19	mfm
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	01/04/19 16:19	mfm
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	01/08/19 14:32	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	01/04/19 16:19	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	01/04/19 16:19	mfm
Calcium, dissolved	M200.7 ICP	1	14.0		mg/L	0.1	0.5	01/07/19 20:40	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/04/19 16:19	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:40	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:40	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	01/07/19 20:40	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	01/04/19 16:19	mfm
Magnesium, dissolved	M200.7 ICP	1	5.1		mg/L	0.2	1	01/07/19 20:40	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 20:40	dcm
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	01/04/19 15:55	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/07/19 20:40	dcm
Potassium, dissolved	M200.7 ICP	1	0.5	В	mg/L	0.2	1	01/07/19 20:40	dcm
Sodium, dissolved	M200.7 ICP	1	2.3		mg/L	0.2	1	01/07/19 20:40	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 20:40	dcm
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:40	dcm



Project ID: Sample ID: GL 1

## Inorganic Analytical Results

ACZ Sample ID: **L49006-01** Date Sampled: 12/20/18 10:55 Date Received: 12/21/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	61.2			mg/L	2	20	12/28/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	12/28/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	12/28/18 0:00	emk
Total Alkalinity		1	61.2			mg/L	2	20	12/28/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.0			%			01/09/19 0:00	calc
Sum of Anions			1.3			meq/L			01/09/19 0:00	calc
Sum of Cations			1.2			meq/L			01/09/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	12/27/18 15:12	wtc
Conductivity @25C	SM2510B	1	125			umhos/cm	1	10	12/28/18 23:48	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5 <sup>ו</sup>		U	*	mg/L	0.003	0.01	12/28/18 20:53	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		56.0			mg/L	0.2	5	01/09/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/27/18 12:24	emk
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.14			mg/L	0.02	0.1	01/09/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.14		*	mg/L	0.02	0.1	12/21/18 21:02	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	12/21/18 21:02	pjb
pH (lab)	SM4500H+ B									
pН		1	8.3	Н		units	0.1	0.1	12/28/18 0:00	emk
pH measured at		1	24.0			С	0.1	0.1	12/28/18 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	80			mg/L	10	20	12/21/18 19:34	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	3.8	В	*	mg/L	1	5	12/28/18 14:19	wtc



Project ID: Sample ID: GL 2

ACZ Sample ID:	L49006-02
Date Sampled:	12/20/18 11:00
Date Received:	12/21/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/28/18 14:58	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/03/19 15:00	vg4638 6
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.04	В	mg/L	0.03	0.2	01/07/19 20:44	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/04/19 16:21	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0035		mg/L	0.0002	0.001	01/04/19 16:21	mfm
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	01/08/19 14:35	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	01/04/19 16:21	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00228		mg/L	0.00005	0.0003	01/04/19 16:21	mfm
Calcium, dissolved	M200.7 ICP	1	23.6		mg/L	0.1	0.5	01/07/19 20:44	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/04/19 16:21	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:44	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:44	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	01/07/19 20:44	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0001	0.0005	01/04/19 16:21	mfm
Magnesium, dissolved	M200.7 ICP	1	7.2		mg/L	0.2	1	01/07/19 20:44	dcm
Manganese, dissolved	M200.7 ICP	1	0.032		mg/L	0.005	0.03	01/07/19 20:44	dcm
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	01/04/19 15:57	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/07/19 20:44	dcm
Potassium, dissolved	M200.7 ICP	1	0.8	В	mg/L	0.2	1	01/07/19 20:44	dcm
Sodium, dissolved	M200.7 ICP	1	4.3		mg/L	0.2	1	01/07/19 20:44	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 20:44	dcm
Zinc, dissolved	M200.7 ICP	1	0.23		mg/L	0.01	0.05	01/07/19 20:44	dcm



Project ID: Sample ID: GL 2

## Inorganic Analytical Results

ACZ Sample ID: L49006-02 Date Sampled: 12/20/18 11:00 Date Received: 12/21/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	71.7			mg/L	2	20	12/28/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	12/28/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	12/28/18 0:00	emk
Total Alkalinity		1	72.9			mg/L	2	20	12/28/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-2.4			%			01/09/19 0:00	calc
Sum of Anions			2.1			meq/L			01/09/19 0:00	calc
Sum of Cations			2			meq/L			01/09/19 0:00	calc
Chloride	SM4500CI-E	1	2.2			mg/L	0.5	2	12/27/18 15:12	wtc
Conductivity @25C	SM2510B	1	203			umhos/cm	1	10	12/28/18 23:58	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/28/18 20:55	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		89			mg/L	0.2	5	01/09/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/27/18 12:27	emk
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.04	В		mg/L	0.02	0.1	01/09/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.04	В	*	mg/L	0.02	0.1	12/21/18 21:03	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	12/21/18 21:03	pjb
pH (lab)	SM4500H+ B									
pН		1	8.3	Н		units	0.1	0.1	12/28/18 0:00	emk
pH measured at		1	23.5			С	0.1	0.1	12/28/18 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	132			mg/L	10	20	12/21/18 19:37	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	28.3		*	mg/L	1	5	01/02/19 12:21	mss2



Project ID: Sample ID: GL 3

ACZ Sample ID:	L49006-03
Date Sampled:	12/20/18 11:15
Date Received:	12/21/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/28/18 15:20	ttg
Lab Filtration (0.45um)	M200.7/200.8/3005A							01/03/19 15:00	vg4638
& Acidification									6
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	01/07/19 20:47	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/04/19 16:23	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0004	В	mg/L	0.0002	0.001	01/04/19 16:23	mfm
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	01/08/19 14:38	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	01/04/19 16:23	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.00005	0.0003	01/04/19 16:23	mfm
Calcium, dissolved	M200.7 ICP	1	15.2		mg/L	0.1	0.5	01/07/19 20:47	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/04/19 16:23	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:47	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:47	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	01/07/19 20:47	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	01/04/19 16:23	mfm
Magnesium, dissolved	M200.7 ICP	1	5.3		mg/L	0.2	1	01/07/19 20:47	dcm
Manganese, dissolved	M200.7 ICP	1	0.006	В	mg/L	0.005	0.03	01/07/19 20:47	dcm
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	01/04/19 15:58	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/07/19 20:47	dcm
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	01/07/19 20:47	dcm
Sodium, dissolved	M200.7 ICP	1	2.5		mg/L	0.2	1	01/07/19 20:47	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 20:47	dcm
Zinc, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	01/07/19 20:47	dcm



Project ID: Sample ID: GL 3

## Inorganic Analytical Results

ACZ Sample ID: **L49006-03** Date Sampled: 12/20/18 11:15 Date Received: 12/21/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	65.3			mg/L	2	20	12/29/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Total Alkalinity		1	65.3			mg/L	2	20	12/29/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-7.1			%			01/09/19 0:00	calc
Sum of Anions			1.5			meq/L			01/09/19 0:00	calc
Sum of Cations			1.3			meq/L			01/09/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	12/27/18 15:12	wtc
Conductivity @25C	SM2510B	1	134			umhos/cm	1	10	12/29/18 0:08	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/28/18 20:56	j pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		60			mg/L	0.2	5	01/09/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/27/18 12:29	emk
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.12			mg/L	0.02	0.1	01/09/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.12		*	mg/L	0.02	0.1	12/21/18 21:04	. pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	12/21/18 21:04	. pjb
pH (lab)	SM4500H+ B									
рН		1	8.3	Н		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.4			С	0.1	0.1	12/29/18 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	92			mg/L	10	20	12/21/18 19:39	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	6.8		*	mg/L	1	5	01/02/19 12:21	mss2



Project ID: Sample ID: RM 1

ACZ Sample ID:	L49006-04
Date Sampled:	12/20/18 11:21
Date Received:	12/21/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/28/18 15:31	ttg
Lab Filtration (0.45um)	M200.7/200.8/3005A							01/03/19 15:00	vg4638
& Acidification									6
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.03	В	mg/L	0.03	0.2	01/07/19 20:50	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/04/19 16:24	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	В	mg/L	0.0002	0.001	01/04/19 16:24	mfm
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	01/08/19 14:41	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	01/04/19 16:24	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00016	В	mg/L	0.00005	0.0003	01/04/19 16:24	mfm
Calcium, dissolved	M200.7 ICP	1	16.2		mg/L	0.1	0.5	01/07/19 20:50	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/04/19 16:24	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:50	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:50	dcm
Iron, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.02	0.05	01/07/19 20:50	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	01/04/19 16:24	mfm
Magnesium, dissolved	M200.7 ICP	1	5.5		mg/L	0.2	1	01/07/19 20:50	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 20:50	dcm
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	01/04/19 15:59	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/07/19 20:50	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	01/07/19 20:50	dcm
Sodium, dissolved	M200.7 ICP	1	2.3		mg/L	0.2	1	01/07/19 20:50	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 20:50	dcm
Zinc, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	01/07/19 20:50	dcm



Project ID: Sample ID: RM 1

## Inorganic Analytical Results

ACZ Sample ID: L49006-04 Date Sampled: 12/20/18 11:21 Date Received: 12/21/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	66.4			mg/L	2	20	12/29/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Total Alkalinity		1	66.4			mg/L	2	20	12/29/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.4			%			01/09/19 0:00	calc
Sum of Anions			1.5			meq/L			01/09/19 0:00	calc
Sum of Cations			1.4			meq/L			01/09/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	12/27/18 15:12	wtc
Conductivity @25C	SM2510B	1	140			umhos/cm	1	10	12/29/18 0:17	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/28/18 20:57	, pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		63			mg/L	0.2	5	01/09/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/27/18 12:32	emk
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.12			mg/L	0.02	0.1	01/09/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.12		*	mg/L	0.02	0.1	12/21/18 21:06	j pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	12/21/18 21:06	j pjb
pH (lab)	SM4500H+ B									
pН		1	8.3	н		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.3			С	0.1	0.1	12/29/18 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	90			mg/L	10	20	12/21/18 19:42	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	6.9		*	mg/L	1	5	01/02/19 12:22	mss2

REPIN.02.06.05.01



Project ID: Sample ID: RM 2

ACZ Sample ID:	L49006-05
Date Sampled:	12/20/18 11:45
Date Received:	12/21/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/28/18 15:42	ttg
Lab Filtration (0.45um)	M200.7/200.8/3005A							01/03/19 15:00	vg4638
& Acidification									6
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.03	В	mg/L	0.03	0.2	01/07/19 20:53	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/04/19 16:26	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0088		mg/L	0.0002	0.001	01/04/19 16:26	mfm
Barium, dissolved	M200.7 ICP	1	0.004	В	mg/L	0.003	0.02	01/08/19 14:44	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	01/04/19 16:26	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0005		mg/L	0.00005	0.0003	01/04/19 16:26	mfm
Calcium, dissolved	M200.7 ICP	1	13.9		mg/L	0.1	0.5	01/07/19 20:53	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/04/19 16:26	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:53	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:53	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	01/07/19 20:53	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	01/04/19 16:26	mfm
Magnesium, dissolved	M200.7 ICP	1	3.2		mg/L	0.2	1	01/07/19 20:53	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 20:53	dcm
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	01/04/19 16:00	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/07/19 20:53	dcm
Potassium, dissolved	M200.7 ICP	1	1.0		mg/L	0.2	1	01/07/19 20:53	dcm
Sodium, dissolved	M200.7 ICP	1	4.1		mg/L	0.2	1	01/07/19 20:53	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 20:53	dcm
Zinc, dissolved	M200.7 ICP	1	0.05		mg/L	0.01	0.05	01/07/19 20:53	dcm



Project ID: Sample ID: RM 2

## Inorganic Analytical Results

ACZ Sample ID: L49006-05 Date Sampled: 12/20/18 11:45 Date Received: 12/21/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	45.8			mg/L	2	20	12/29/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Total Alkalinity		1	45.8			mg/L	2	20	12/29/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.0			%			01/09/19 0:00	calc
Sum of Anions			1.3			meq/L			01/09/19 0:00	calc
Sum of Cations			1.2			meq/L			01/09/19 0:00	calc
Chloride	SM4500CI-E	1	0.8	В		mg/L	0.5	2	12/27/18 15:12	wtc
Conductivity @25C	SM2510B	1	127			umhos/cm	1	10	12/29/18 0:27	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5 <sup>י</sup>		U	*	mg/L	0.003	0.01	12/28/18 20:58	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		48			mg/L	0.2	5	01/09/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/27/18 12:34	emk
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	01/09/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	12/21/18 21:08	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	12/21/18 21:08	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.1			С	0.1	0.1	12/29/18 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	92			mg/L	10	20	12/21/18 19:44	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	18.9		*	mg/L	1	5	01/02/19 12:22	mss2

REPIN.02.06.05.01

\* Please refer to Qualifier Reports for details.



Project ID: Sample ID: RM 3

ACZ Sample ID:	L49006-06
Date Sampled:	12/20/18 11:50
Date Received:	12/21/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/28/18 15:53	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/03/19 15:00	vg4638 6
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.04	В	mg/L	0.03	0.2	01/07/19 20:56	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/04/19 16:28	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0018		mg/L	0.0002	0.001	01/04/19 16:28	mfm
Barium, dissolved	M200.7 ICP	1	0.012	В	mg/L	0.003	0.02	01/08/19 14:47	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	01/04/19 16:28	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00018	В	mg/L	0.00005	0.0003	01/04/19 16:28	mfm
Calcium, dissolved	M200.7 ICP	1	16.0		mg/L	0.1	0.5	01/07/19 20:56	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/04/19 16:28	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:56	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 20:56	dcm
Iron, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.02	0.05	01/07/19 20:56	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	01/04/19 16:28	mfm
Magnesium, dissolved	M200.7 ICP	1	5.3		mg/L	0.2	1	01/07/19 20:56	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 20:56	dcm
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	01/04/19 16:03	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/07/19 20:56	dcm
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	01/07/19 20:56	dcm
Sodium, dissolved	M200.7 ICP	1	2.5		mg/L	0.2	1	01/07/19 20:56	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 20:56	dcm
Zinc, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	01/07/19 20:56	dcm



Project ID: Sample ID: RM 3

## Inorganic Analytical Results

ACZ Sample ID: L49006-06 Date Sampled: 12/20/18 11:50 Date Received: 12/21/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	64.4			mg/L	2	20	12/29/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Total Alkalinity		1	64.4			mg/L	2	20	12/29/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.4			%			01/09/19 0:00	calc
Sum of Anions			1.5			meq/L			01/09/19 0:00	calc
Sum of Cations			1.4			meq/L			01/09/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	12/27/18 15:12	wtc
Conductivity @25C	SM2510B	1	139			umhos/cm	1	10	12/29/18 0:46	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/28/18 20:59	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		62			mg/L	0.2	5	01/09/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/27/18 12:37	emk
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.11			mg/L	0.02	0.1	01/09/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.11		*	mg/L	0.02	0.1	12/21/18 21:11	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	12/21/18 21:11	pjb
pH (lab)	SM4500H+ B									
pН		1	8.3	н		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.7			С	0.1	0.1	12/29/18 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	104			mg/L	10	20	12/23/18 20:06	kja
Sulfate	D516-02/-07 - Turbidimetric	1	7.8		*	mg/L	1	5	01/02/19 12:22	mss2

REPIN.02.06.05.01

\* Please refer to Qualifier Reports for details.



Project ID: Sample ID: CM 1

ACZ Sample ID:	L49006-07
Date Sampled:	12/20/18 12:05
Date Received:	12/21/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/28/18 16:04	ttg
Lab Filtration (0.45um)	M200.7/200.8/3005A							01/03/19 15:00	vg4638
& Acidification									6
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	01/07/19 21:05	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/04/19 16:33	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0019		mg/L	0.0002	0.001	01/04/19 16:33	mfm
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	01/08/19 14:50	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	01/04/19 16:33	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00014	В	mg/L	0.00005	0.0003	01/04/19 16:33	mfm
Calcium, dissolved	M200.7 ICP	1	16.3		mg/L	0.1	0.5	01/07/19 21:05	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/04/19 16:33	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 21:05	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 21:05	dcm
Iron, dissolved	M200.7 ICP	1	0.03	В	mg/L	0.02	0.05	01/07/19 21:05	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0001	0.0005	01/04/19 16:33	mfm
Magnesium, dissolved	M200.7 ICP	1	5.4		mg/L	0.2	1	01/07/19 21:05	dcm
Manganese, dissolved	M200.7 ICP	1	0.006	В	mg/L	0.005	0.03	01/07/19 21:05	dcm
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	01/04/19 16:04	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/07/19 21:05	dcm
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	01/07/19 21:05	dcm
Sodium, dissolved	M200.7 ICP	1	2.5		mg/L	0.2	1	01/07/19 21:05	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 21:05	dcm
Zinc, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	01/07/19 21:05	dcm



Project ID: Sample ID: CM 1

## Inorganic Analytical Results

ACZ Sample ID: L49006-07 Date Sampled: 12/20/18 12:05 Date Received: 12/21/18 Sample Matrix: Surface Water

Wet Chemistry									
Parameter	EPA Method	Dilution	Result	Qual X	Q Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration								
Bicarbonate as CaCO3		1	65.6		mg/L	2	20	12/29/18 0:00	emk
Carbonate as CaCO3		1		U	mg/L	2	20	12/29/18 0:00	emk
Hydroxide as CaCO3		1		U	mg/L	2	20	12/29/18 0:00	emk
Total Alkalinity		1	65.6		mg/L	2	20	12/29/18 0:00	emk
Cation-Anion Balance	Calculation								
Cation-Anion Balance			-3.4		%			01/09/19 0:00	calc
Sum of Anions			1.5		meq/L			01/09/19 0:00	calc
Sum of Cations			1.4		meq/L			01/09/19 0:00	calc
Chloride	SM4500CI-E	1		U	mg/L	0.5	2	12/27/18 15:18	wtc
Conductivity @25C	SM2510B	1	143		umhos/cm	1	10	12/29/18 0:56	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	* mg/L	0.003	0.01	12/28/18 21:02	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		63		mg/L	0.2	5	01/09/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1						12/27/18 12:40	emk
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.10		mg/L	0.02	0.1	01/09/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.10		* mg/L	0.02	0.1	12/21/18 21:16	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	* mg/L	0.01	0.05	12/21/18 21:16	pjb
pH (lab)	SM4500H+ B								
pН		1	8.3	Н	units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	22.4		С	0.1	0.1	12/29/18 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	94		mg/L	10	20	12/23/18 20:08	kja
Sulfate	D516-02/-07 - Turbidimetric	1	8.0		* mg/L	1	5	01/02/19 12:24	mss2

REPIN.02.06.05.01



Project ID: Sample ID: CM 2

ACZ Sample ID:	L49006-08
Date Sampled:	12/20/18 12:12
Date Received:	12/21/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/28/18 16:15	ttg
Lab Filtration (0.45um)	M200.7/200.8/3005A							01/03/19 15:00	vg4638
& Acidification									6
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	01/07/19 21:14	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/04/19 16:39	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0023		mg/L	0.0002	0.001	01/04/19 16:39	mfm
Barium, dissolved	M200.7 ICP	1	0.011	В	mg/L	0.003	0.02	01/08/19 15:05	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	01/04/19 16:39	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00008	В	mg/L	0.00005	0.0003	01/04/19 16:39	mfm
Calcium, dissolved	M200.7 ICP	1	17.0		mg/L	0.1	0.5	01/07/19 21:14	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/04/19 16:39	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 21:14	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 21:14	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	01/07/19 21:14	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	01/04/19 16:39	mfm
Magnesium, dissolved	M200.7 ICP	1	3.3		mg/L	0.2	1	01/07/19 21:14	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 21:14	dcm
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	01/04/19 16:05	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/07/19 21:14	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	01/07/19 21:14	dcm
Sodium, dissolved	M200.7 ICP	1	6.1		mg/L	0.2	1	01/07/19 21:14	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 21:14	dcm
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 21:14	dcm



Project ID: Sample ID: CM 2

## Inorganic Analytical Results

ACZ Sample ID: L49006-08 Date Sampled: 12/20/18 12:12 Date Received: 12/21/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	54.8			mg/L	2	20	12/29/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Total Alkalinity		1	54.8			mg/L	2	20	12/29/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			01/09/19 0:00	calc
Sum of Anions			1.4			meq/L			01/09/19 0:00	calc
Sum of Cations			1.4			meq/L			01/09/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	12/27/18 15:18	wtc
Conductivity @25C	SM2510B	1	145			umhos/cm	1	10	12/29/18 1:05	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/28/18 21:02	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		56.0			mg/L	0.2	5	01/09/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/27/18 12:42	emk
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.02	В		mg/L	0.02	0.1	01/09/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.02	В	*	mg/L	0.02	0.1	12/21/18 21:18	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	12/21/18 21:18	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.3			С	0.1	0.1	12/29/18 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	104			mg/L	10	20	12/23/18 20:10	kja
Sulfate	D516-02/-07 - Turbidimetric	1	13.2		*	mg/L	1	5	01/02/19 12:24	mss2

REPIN.02.06.05.01



Project ID: Sample ID: CM 3

ACZ Sample ID:	L49006-09
Date Sampled:	12/20/18 12:32
Date Received:	12/21/18
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/28/18 16:26	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/03/19 15:00	vg4638 6
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	01/07/19 21:17	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/04/19 16:41	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.002		mg/L	0.0002	0.001	01/04/19 16:41	mfm
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	01/08/19 15:08	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	01/04/19 16:41	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00013	В	mg/L	0.00005	0.0003	01/04/19 16:41	mfm
Calcium, dissolved	M200.7 ICP	1	16.3		mg/L	0.1	0.5	01/07/19 21:17	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/04/19 16:41	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 21:17	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/07/19 21:17	dcm
Iron, dissolved	M200.7 ICP	1	0.03	В	mg/L	0.02	0.05	01/07/19 21:17	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	01/04/19 16:41	mfm
Magnesium, dissolved	M200.7 ICP	1	5.2		mg/L	0.2	1	01/07/19 21:17	dcm
Manganese, dissolved	M200.7 ICP	1	0.009	В	mg/L	0.005	0.03	01/07/19 21:17	dcm
Mercury, total	M245.1 CVAA	1		U *	mg/L	0.0002	0.001	01/04/19 16:06	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/07/19 21:17	dcm
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	01/07/19 21:17	dcm
Sodium, dissolved	M200.7 ICP	1	2.8		mg/L	0.2	1	01/07/19 21:17	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/07/19 21:17	dcm
Zinc, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	01/07/19 21:17	dcm



Project ID: Sample ID: CM 3

## Inorganic Analytical Results

ACZ Sample ID: **L49006-09** Date Sampled: 12/20/18 12:32 Date Received: 12/21/18 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	63.8			mg/L	2	20	12/29/18 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	12/29/18 0:00	emk
Total Alkalinity		1	63.8			mg/L	2	20	12/29/18 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.4			%			01/09/19 0:00	calc
Sum of Anions			1.5			meq/L			01/09/19 0:00	calc
Sum of Cations			1.4			meq/L			01/09/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	12/27/18 15:18	wtc
Conductivity @25C	SM2510B	1	144			umhos/cm	1	10	12/29/18 1:15	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/28/18 21:03	pjb
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		62			mg/L	0.2	5	01/09/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/27/18 12:45	emk
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.09	В		mg/L	0.02	0.1	01/09/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.09	В	*	mg/L	0.02	0.1	12/21/18 21:19	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	12/21/18 21:19	pjb
pH (lab)	SM4500H+ B									
pН		1	8.3	Н		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.6			С	0.1	0.1	12/29/18 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	96			mg/L	10	20	12/23/18 20:11	kja
Sulfate	D516-02/-07 - Turbidimetric	1	8.7		*	mg/L	1	5	01/02/19 12:24	mss2

REPIN.02.06.05.01

\* Please refer to Qualifier Reports for details.



Inorganic Reference

Report Header	r Explanations			
Batch	A distinct set of sa	amples analyzed at a specific time		
Found	Value of the QC	Type of interest		
Limit	Upper limit for RF	PD, in %.		
Lower	Lower Recovery	Limit, in % (except for LCSS, mg/Kg)		
MDL	Method Detection	Limit. Same as Minimum Reporting Limit un	nless omitted or ea	qual to the PQL (see comment #5).
	Allows for instrum	ent and annual fluctuations.		
PCN/SCN	A number assign	ed to reagents/standards to trace to the man	ufacturer's certifica	ate of analysis
PQL	Practical Quantita	tion Limit. Synonymous with the EPA term "	'minimum level".	
QC	True Value of the	Control Sample or the amount added to the	Spike	
Rec	Recovered amou	nt of the true value or spike added, in % (exc	cept for LCSS, mg	/Kg)
RPD	Relative Percent	Difference, calculation used for Duplicate QC	C Types	
Upper	Upper Recovery	Limit, in % (except for LCSS, mg/Kg)		
Sample	Value of the Sam	ple of interest		
QC Sample Ty	vpes			
AS	Analytical Spike (	Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (	Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
CCB	Continuing Calibr	ation Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibr	ation Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate		LRB	Laboratory Reagent Blank
ICB	Initial Calibration	Blank	MS	Matrix Spike
ICV	Initial Calibration	Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Cor	rection Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Contro	ol Sample - Soil	PBW	Prep Blank - Water
LCSSD	Laboratory Contro	ol Sample - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSW	Laboratory Contro	ol Sample - Water	SDL	Serial Dilution
QC Sample Ty	vpe Explanations			
Blanks		Verifies that there is no or minimal co	ontamination in the	prep method or calibration procedure.
Control Sa	mples	Verifies the accuracy of the method,	including the prep	procedure.
Duplicates		Verifies the precision of the instrume	ent and/or method.	
Spikes/For	tified Matrix	Determines sample matrix interferen	ces, if any.	
Standard		Verifies the validity of the calibration.		
ACZ Qualifiers	s (Qual)			
В	Analyte concentra	ation detected at a value between MDL and I	PQL. The associat	ed value is an estimated quantity.
Н	Analysis exceede	d method hold time. pH is a field test with an	n immediate hold t	ime.
L	Target analyte rea	sponse was below the laboratory defined neg	gative threshold.	
U	The material was	analyzed for, but was not detected above th	e level of the asso	ciated value.
	The associated v	alue is either the sample quantitation limit or	the sample detect	ion limit.
Method Refere	ences			
(1)	EPA 600/4-83-02	0. Methods for Chemical Analysis of Water	and Wastes, Marc	h 1983.

(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.

- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

#### Comments

(2)

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.

- (2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
- (3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

http://www.acz.com/public/extquallist.pdf

REP001.03.15.02

#### CRG Mining, LLC

#### ACZ Project ID: L49006

Alkalinity as CaC	O3		SM23208	3 - Titration									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463612													
WG463612PBW1	PBW	12/28/18 15:06				U	mg/L		-20	20			
WG463612LCSW3	LCSW	12/28/18 15:24	WC181217-8	820.0001		784	mg/L	96	90	110			
NG463612LCSW6	LCSW	12/28/18 18:06	WC181217-8	820.0001		799	mg/L	97	90	110			
WG463612PBW2	PBW	12/28/18 18:12				U	mg/L		-20	20			
WG463612LCSW9	LCSW	12/28/18 21:41	WC181228-2	820.0001		813	mg/L	99	90	110			
WG463612PBW3	PBW	12/28/18 21:47				2.1	mg/L		-20	20			
_49006-05DUP	DUP	12/29/18 0:36			45.8	45.1	mg/L				2	20	
_49034-02DUP	DUP	12/29/18 2:09			U	U	mg/L				0	20	RA
WG463612LCSW12		12/29/18 2:26	WC181228-2	820.0001		792	mg/L	97	90	110			
WG463612PBW4	PBW	12/29/18 2:32				U	mg/L		-20	20			
WG463612LCSW15		12/29/18 6:14	WC181228-2	820.0001		821	mg/L	100	90	110			
Aluminum, disso	lved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
NG464006ICV	ICV	01/07/19 19:34	II181211-1	2		1.971	mg/L	99	95	105			
VG464006ICB	ICB	01/07/19 19:40		-		U	mg/L		-0.09	0.09			
VG464006LFB	LFB	01/07/19 19:52	II181219-2	1.0006		1.074	mg/L	107	85	115			
_49006-07AS	AS	01/07/19 21:08	II181219-2	1.0006	U	1.055	mg/L	105	85	115			
_49006-07ASD	ASD	01/07/19 21:11	II181219-2	1.0006	U	1.039	mg/L	100	85	115	2	20	
Antimony, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463930	<b>31</b> **												
		04/04/40 45:50	M6101010 0	00		00057	ma/l	100	00	110			
NG463930ICV	ICV	01/04/19 15:52	MS181210-2	.02		.02057	mg/L	103	90	110			
NG463930ICB	ICB	01/04/19 15:54	MC101000 0	0.4		U	mg/L	0.1	-0.00088	0.00088			
VG463930LFB	LFB	01/04/19 15:56	MS181208-2	.01		.00907	mg/L	91	85	115			
48885-03AS	AS	01/04/19 16:03	MS181208-2	.01	U	.00904	mg/L	90	70	130	-	00	
_48885-03ASD	ASD	01/04/19 16:05	MS181208-2	.01	U	.00952	mg/L	95	70	130	5	20	
L49006-06AS L49006-06ASD	AS ASD	01/04/19 16:30 01/04/19 16:32	MS181208-2 MS181208-2	.01 .01	U U	.00861 .00932	mg/L mg/L	86 93	70 70	130 130	8	20	
		01101101002				.00002			10	100	0	20	
Arsenic, dissolve ACZ ID		Analyzad	M200.8 I PCN/SCN		Comple	Found	Unite	Dec <sup>0</sup> /	Lower	llener		Lineit	Qual
WG463930	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
		04/04/40 45 50	M6101010 0	~-		04055	pa = //	<u> </u>	60	440			
VG463930ICV	ICV	01/04/19 15:52	MS181210-2	.05		.04955	mg/L	99	90	110			
NG463930ICB	ICB	01/04/19 15:54	MC101000 0	05005		U	mg/L	07	-0.00044	0.00044			
NG463930LFB	LFB	01/04/19 15:56	MS181208-2	.05005	0000	.04865	mg/L	97	85	115			
_48885-03AS	AS	01/04/19 16:03	MS181208-2	.05005	.0003	.04849	mg/L	96	70	130	,	00	
_48885-03ASD	ASD	01/04/19 16:05	MS181208-2	.05005	.0003	.04816	mg/L	96	70	130	1	20	
_49006-06AS	AS	01/04/19 16:30	MS181208-2	.05005	.0018	.05315	mg/L	103	70	130			
_49006-06ASD	ASD	01/04/19 16:32	MS181208-2	.05005	.0018	.05376	mg/L	104	70	130	1	20	

### **CRG Mining, LLC**

### ACZ Project ID: L49006

Barium, dissolv	ed		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464048													
WG464048ICV	ICV	01/08/19 13:35	II181211-1	2		2.016	mg/L	101	95	105			
WG464048ICB	ICB	01/08/19 13:41				U	mg/L		-0.009	0.009			
WG464048LFB	LFB	01/08/19 13:53	II181219-2	.4995		.5034	mg/L	101	85	115			
L48904-02AS	AS	01/08/19 14:11	II181219-2	.4995	U	.5131	mg/L	103	85	115			
L48904-02ASD	ASD	01/08/19 14:14	II181219-2	.4995	U	.5081	mg/L	102	85	115	1	20	
L49006-07AS	AS	01/08/19 14:53	II181219-2	.4995	.013	.5369	mg/L	105	85	115			
L49006-07ASD	ASD	01/08/19 14:56	ll181219-2	.4995	.013	.5205	mg/L	102	85	115	3	20	
Beryllium, disso	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463930													
WG463930ICV	ICV	01/04/19 15:52	MS181210-2	.05		.047412	mg/L	95	90	110			
WG463930ICB	ICB	01/04/19 15:54				U	mg/L		-0.00011	0.00011			
WG463930LFB	LFB	01/04/19 15:56	MS181208-2	.05005		.047539	mg/L	95	85	115			
L48885-03AS	AS	01/04/19 16:03	MS181208-2	.05005	U	.046336	mg/L	93	70	130			
L48885-03ASD	ASD	01/04/19 16:05	MS181208-2	.05005	U	.046129	mg/L	92	70	130	0	20	
L49006-06AS	AS	01/04/19 16:30	MS181208-2	.05005	U	.050144	mg/L	100	70	130			
L49006-06ASD	ASD	01/04/19 16:32	MS181208-2	.05005	U	.050383	mg/L	101	70	130	0	20	
Cadmium, disso	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463930													
WG463930ICV	ICV	01/04/19 15:52	MS181210-2	.05		.049093	mg/L	98	90	110			
WG463930ICB	ICB	01/04/19 15:54				U	mg/L		-0.00011	0.00011			
WG463930LFB	LFB	01/04/19 15:56	MS181208-2	.05005		.048533	mg/L	97	85	115			
L48885-03AS	AS	01/04/19 16:03	MS181208-2	.05005	U	.047119	mg/L	94	70	130			
L48885-03ASD	ASD	01/04/19 16:05	MS181208-2	.05005	U	.047155	mg/L	94	70	130	0	20	
L49006-06AS	AS	01/04/19 16:30	MS181208-2	.05005	.00018	.048766	mg/L	97	70	130			
L49006-06ASD	ASD	01/04/19 16:32	MS181208-2	.05005	.00018	.049744	mg/L	99	70	130	2	20	
Calcium, dissol	ved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	100		95.44	mg/L	95	95	105			
WG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.3	0.3			
WG464006LFB	LFB	01/07/19 19:52	II181219-2	68.44277		69.14	mg/L	101	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	68.44277	16.3	83.4	mg/L	98	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	68.44277	16.3	82.41	mg/L	97	85	115	1	20	

#### CRG Mining, LLC

#### ACZ Project ID: L49006

Chloride			SM45000	CI-E									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463501													
WG463501ICB	ICB	12/27/18 8:50				U	mg/L		-1.5	1.5			
WG463501ICV	ICV	12/27/18 8:50	WI180530-1	54.89		53.94	mg/L	98	90	110			
WG463501LFB1	LFB	12/27/18 15:08	WI171229-5	30.03		30.43	mg/L	101	90	110			
_49000-04DUP	DUP	12/27/18 15:10			6.3	6.42	mg/L				2	20	
_49000-05AS	AS	12/27/18 15:10	WI171229-5	30.03	4.6	35.21	mg/L	102	90	110			
WG463501LFB2	LFB	12/27/18 15:12	WI171229-5	30.03		31.18	mg/L	104	90	110			
L49035-01AS	AS	12/27/18 15:18	WI171229-5	30.03	16.9	45.16	mg/L	94	90	110			
_49039-01DUP	DUP	12/27/18 15:18			33.7	32.7	mg/L				3	20	
Chromium, disso	lved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463930													
WG463930ICV	ICV	01/04/19 15:52	MS181210-2	.05		.05133	mg/L	103	90	110			
WG463930ICB	ICB	01/04/19 15:54				U	mg/L		-0.0011	0.0011			
WG463930LFB	LFB	01/04/19 15:56	MS181208-2	.05005		.0499	mg/L	100	85	115			
_48885-03AS	AS	01/04/19 16:03	MS181208-2	.05005	U	.04688	mg/L	94	70	130			
_48885-03ASD	ASD	01/04/19 16:05	MS181208-2	.05005	U	.0465	mg/L	93	70	130	1	20	
_49006-06AS	AS	01/04/19 16:30	MS181208-2	.05005	U	.04803	mg/L	96	70	130			
_49006-06ASD	ASD	01/04/19 16:32	MS181208-2	.05005	U	.04841	mg/L	97	70	130	1	20	
Cobalt, dissolved	ł		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	2.002		1.951	mg/L	97	95	105			
NG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.03	0.03			
NG464006LFB	LFB	01/07/19 19:52	II181219-2	.501		.498	mg/L	99	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	.501	U	.501	mg/L	100	85	115			
_49006-07ASD	ASD	01/07/19 21:11	II181219-2	.501	U	.485	mg/L	97	85	115	3	20	
Conductivity @2	5C		SM2510E	3									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463612													
NG463612LCSW2	LCSW	12/28/18 15:12	PCN57191	1410		1460	umhos/cm	104	90	110			
WG463612LCSW5			PCN57191	1410		1440	umhos/cm	102	90	110			
NG463612LCSW8	LCSW	12/28/18 21:28	PCN57191	1410		1430	umhos/cm	101	90	110			
_49006-05DUP	DUP	12/29/18 0:36			127	126	umhos/cm				1	20	
_49034-02DUP	DUP	12/29/18 2:09			1	1	umhos/cm				0	20	RA
WG463612LCSW11		12/29/18 2:14	PCN57191	1410		1430	umhos/cm	101	90	110			
WG463612LCSW14	LCSW	12/29/18 6:01	PCN57191	1410		1420	umhos/cm	101	90	110			
Copper, dissolve	d		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	2		1.928	mg/L	96	95	105			
WG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.03	0.03			
		01/07/19 19:52	II181219-2	.5015		.496	mg/L	99	85	115			
WG464006LFB	LFB	01/07/19 19.52	1110121012			.400							
WG464006LFB L49006-07AS	LFB AS	01/07/19 19:52	II181219-2	.5015	U	.504	mg/L	100	85	115			

#### **CRG Mining, LLC**

#### ACZ Project ID: L49006

Cyanide, total			M335.4 -	Colorimetr	ic w/ distil	lation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463634													
WG463634ICV	ICV	12/28/18 20:49	WI181226-3	.3		.2881	mg/L	96	90	110			
WG463634ICB	ICB	12/28/18 20:50				U	mg/L		-0.003	0.003			
NG463605LRB	LRB	12/28/18 20:51				U	mg/L		-0.003	0.003			
WG463605LFB	LFB	12/28/18 20:52	WI181226-5	.2		.1886	mg/L	94	90	110			
L49006-01DUP	DUP	12/28/18 20:54			U	U	mg/L				0	20	RA
_49006-02LFM	LFM	12/28/18 20:56	WI181226-5	.2	U	.1991	mg/L	100	90	110			
lron, dissolved			M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
NG464006ICV	ICV	01/07/19 19:34	II181211-1	2		1.946	mg/L	97	95	105			
WG464006ICB	ICB	01/07/19 19:40		-		U	mg/L		-0.06	0.06			
WG464006LFB	LFB	01/07/19 19:52	II181219-2	1.0018		1.051	mg/L	105	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	1.0018	.03	1.067	mg/L	104	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	1.0018	.00	1.048	mg/L	101	85	115	2	20	
							Ū						
Lead, dissolved			M200.8 I										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463930													
WG463930ICV	ICV	01/04/19 15:52	MS181210-2	.05		.04809	mg/L	96	90	110			
NG463930ICB	ICB	01/04/19 15:54				U	mg/L		-0.00022	0.00022			
WG463930LFB	LFB	01/04/19 15:56	MS181208-2	.0496		.04744	mg/L	96	85	115			
_48885-03AS	AS	01/04/19 16:03	MS181208-2	.0496	U	.04932	mg/L	99	70	130			
L48885-03ASD	ASD	01/04/19 16:05	MS181208-2	.0496	U	.04917	mg/L	99	70	130	0	20	
L49006-06AS	AS	01/04/19 16:30	MS181208-2	.0496	U	.04693	mg/L	95	70	130			
L49006-06ASD	ASD	01/04/19 16:32	MS181208-2	.0496	U	.04705	mg/L	95	70	130	0	20	
Aagnesium, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
NG464006ICV	ICV	01/07/19 19:34	II181211-1	100		96.02	mg/L	96	95	105			
NG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.6	0.6			
NG464006LFB	LFB	01/07/19 19:52	II181219-2	51.06117		51.62	mg/L	101	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	51.06117	5.4	55.96	mg/L	99	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	51.06117	5.4	55.35	mg/L	98	85	115	1	20	
Manganese, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	2		1.9312	mg/L	97	95	105			
	ICB	01/07/19 19:40		-		U	mg/L		-0.015	0.015			
WG464006ICB	100		11404040.0	1005			-	101	85				
	I FR	01/07/19 19:52	11181219-2	<u>d</u> uus		5051							
WG464006ICB WG464006LFB L49006-07AS	LFB AS	01/07/19 19:52 01/07/19 21:08	II181219-2 II181219-2	.4995 .4995	.006	.5051 .5072	mg/L mg/L	101 100	85 85	115 115			

#### **CRG Mining, LLC**

#### ACZ Project ID: L49006

Mercury, total			M245.1 C	VAA									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463819													
WG463819ICV	ICV	01/04/19 15:50	HG181126-2	.004995		.00491	mg/L	98	95	105			
WG463819ICB	ICB	01/04/19 15:51				U	mg/L		-0.0002	0.0002			
WG463819LRB	LRB	01/04/19 15:53				U	mg/L		-0.00044	0.00044			
WG463819LFB	LFB	01/04/19 15:54	HG181231-3	.002002		.00235	mg/L	117	85	115			LA
L49006-01LFM	LFM	01/04/19 15:56	HG181231-3	.002002	U	.00257	mg/L	128	85	115			M1
L49006-01LFMD	LFMD	01/04/19 15:57	HG181231-3	.002002	U	.0025	mg/L	125	85	115	3	20	M1
Nickel, dissolved	I		M200.7 IC	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	2.004		1.9532	mg/L	97	95	105			
WG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.024	0.024			
WG464006LFB	LFB	01/07/19 19:52	II181219-2	.5		.5088	mg/L	102	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	.5	U	.5014	mg/L	100	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	.5	U	.4877	mg/L	98	85	115	3	20	
Nitrate/Nitrite as	N, diss	olved	M353.2 -	Automated	d Cadmiur	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463313													
WG463313ICV	ICV	12/21/18 20:40	WI181206-5	2.416		2.448	mg/L	101	90	110			
WG463313ICB	ICB	12/21/18 20:41				U	mg/L		-0.02	0.02			
WG463313LFB	LFB	12/21/18 20:45	WI181204-13	2		2.023	mg/L	101	90	110			
L49002-01AS	AS	12/21/18 20:48	WI181221-1	20	U	20.07	mg/L	100	90	110			
L49002-02DUP	DUP	12/21/18 20:50			U	U	mg/L				0	20	RA
L49006-04AS	AS	12/21/18 21:07	WI181221-1	2	.12	2.165	mg/L	102	90	110			
L49006-05DUP	DUP	12/21/18 21:10			.03	.028	mg/L				7	20	RA
Nitrite as N, diss	olved		M353.2 -	Automated	d Cadmiur	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463313													
WG463313ICV	ICV	12/21/18 20:40	WI181206-5	.609		.616	mg/L	101	90	110			
WG463313ICB	ICB	12/21/18 20:41		.000		U	mg/L	101	-0.01	0.01			
WG463313LFB	LFB	12/21/18 20:45	WI181204-13	1		1.016	mg/L	102	90	110			
L49002-01AS	AS	12/21/18 20:48	WI181221-1	10	U	9.72	mg/L	97	90	110			
L49002-02DUP	DUP	12/21/18 20:50			U	U	mg/L				0	20	RA
L49006-04AS	AS	12/21/18 21:07	WI181221-1	1	U	1.004	mg/L	100	90	110			
L49006-05DUP	DUP	12/21/18 21:10			U	U	mg/L				0	20	RA
pH (lab)			SM4500F	l+ B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463612													
WG463612LCSW1	LCSW	12/28/18 15:10	PCN56769	6		6	units	100	5.9	6.1			
WG463612LCSW4	LCSW	12/28/18 17:52	PCN56769	6		6	units	100	5.9	6.1			
WG463612LCSW7	LCSW	12/28/18 21:26	PCN56769	6		6	units	100	5.9	6.1			
L49006-05DUP	DUP	12/29/18 0:36			8.2	8.1	units				1	20	
L49034-02DUP	DUP	12/29/18 2:09			6.4	6.2	units				3	20	
WG463612LCSW10	LCSW	12/29/18 2:12	PCN56769	6		6	units	100	5.9	6.1			
	LCSW	12/29/18 5:59	PCN56769	6		6	units	100	5.9	6.1			

#### **CRG Mining, LLC**

#### ACZ Project ID: L49006

Potassium, diss	olved		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	20		19.74	mg/L	99	95	105			
WG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.6	0.6			
WG464006LFB	LFB	01/07/19 19:52	II181219-2	101.8983		105.2	mg/L	103	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	101.8983	.7	105.1	mg/L	102	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	101.8983	.7	103.5	mg/L	101	85	115	2	20	
Residue, Filteral	ole (TDS	) @180C	SM2540	С									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463312													
WG463312PBW	PBW	12/21/18 18:50				U	mg/L		-20	20			
WG463312LCSW	LCSW	12/21/18 18:52	PCN57521	260		256	mg/L	98	80	120			
L49009-01DUP	DUP	12/21/18 19:50			248	244	mg/L				2	10	
WG463333													
WG463333PBW	PBW	12/23/18 19:45				14	mg/L		-20	20			
WG463333LCSW	LCSW	12/23/18 19:46	PCN57521	260		272	mg/L	105	80	120			
L49021-01DUP	DUP	12/23/18 20:15			196	200	mg/L				2	10	
Sodium, dissolv	ed		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	100		98.17	mg/L	98	95	105			
WG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.6	0.6			
WG464006LFB	LFB	01/07/19 19:52	II181219-2	100.3634		103.1	mg/L	103	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	100.3634	2.5	104.5	mg/L	102	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	100.3634	2.5	102.9	mg/L	100	85	115	2	20	
Sulfate			D516-02	/-07 - Turbio	dimetric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463603													
WG463603ICB	ICB	12/28/18 10:17				U	mg/L		-3	3			
WG463603ICV	ICV	12/28/18 10:17	WI181219-2	20		18.5	mg/L	93	90	110			
WG463603LFB	LFB	12/28/18 14:15	WI181024-4	10.03		10.4	mg/L	104	90	110			
L49002-02AS	AS	12/28/18 14:19	WI181024-4	100.3	145	250	mg/L	105	90	110			
L49006-01DUP	DUP	12/28/18 14:19			3.8	4.5	mg/L				17	20	RA
WG463757													
WG463757ICB	ICB	01/02/19 10:22				U	mg/L		-3	3			
WG463757ICV	ICV	01/02/19 10:22	WI181219-2	20		19.2	mg/L	96	90	110			
WG463757LFB	LFB	01/02/19 12:21	WI181024-4	10.03		10.1	mg/L	101	90	110			
L48886-01DUP	DUP	01/02/19 12:21			14.1	13	mg/L				8	20	
L48886-02AS	AS	01/02/19 12:21	WI181024-4	10.03	19.7	31.6	mg/L	119	90	110			M1

#### **CRG Mining, LLC**

#### ACZ Project ID: L49006

Vanadium, diss	olved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	2		1.9872	mg/L	99	95	105			
WG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.015	0.015			
WG464006LFB	LFB	01/07/19 19:52	II181219-2	.502		.5203	mg/L	104	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	.502	U	.5201	mg/L	104	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	.502	U	.5096	mg/L	102	85	115	2	20	
Zinc, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	2		1.89	mg/L	95	95	105			
WG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.03	0.03			
WG464006LFB	LFB	01/07/19 19:52	II181219-2	.4942		.535	mg/L	108	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	.4942	.02	.544	mg/L	106	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	.4942	.02	.539	mg/L	105	85	115	1	20	

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### Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L49006-01	WG463634	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG463819	Mercury, total	M245.1 CVAA	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M245.1 CVAA	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG463313	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG463603	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L49006-02	WG463634	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG463819	Mercury, total	M245.1 CVAA	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M245.1 CVAA	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG463313	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG463757	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

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### Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L49006-03	WG463634	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG463819	Mercury, total	M245.1 CVAA	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M245.1 CVAA	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG463313	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG463757	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L49006-04	WG463634	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG463819	Mercury, total	M245.1 CVAA	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M245.1 CVAA	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG463313	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG463757	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

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### Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L49006-05	WG463634	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG463819	Mercury, total	M245.1 CVAA	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M245.1 CVAA	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG463313	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG463757	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L49006-06	WG463634	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG463819	Mercury, total	M245.1 CVAA	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M245.1 CVAA	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG463313	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG463757	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

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### Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L49006-07	WG463634	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG463819	Mercury, total	M245.1 CVAA	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M245.1 CVAA	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG463313	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG463757	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L49006-08	WG463634	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG463819	Mercury, total	M245.1 CVAA	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M245.1 CVAA	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG463313	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG463757	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

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### Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L49006-09	WG463634	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG463819	Mercury, total	M245.1 CVAA	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M245.1 CVAA	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG463313	3 Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG463757	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.



ACZ Project ID: L49006

No certification qualifiers associated with this analysis

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

### Sample <u>R</u>eceipt

NO

Х

NA

Х

Х

ACZ Project ID: L49006 Date Received: 12/21/2018 12:17 Received By: Date Printed: 12/26/2018

YES

Х

Х

Х

#### **Receipt Verification**

- 1) Is a foreign soil permit included for applicable samples?
- 2) Is the Chain of Custody form or other directive shipping papers present?
- 3) Does this project require special handling procedures such as CLP protocol?
- 4) Are any samples NRC licensable material?
- 5) If samples are received past hold time, proceed with requested short hold time analyses?
- 6) Is the Chain of Custody form complete and accurate?
- 7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?

A change was made in the Sample ID: Line 7 section prior to ACZ custody.

#### Samples/Containers

8) Are all containers intact and with no leaks?	
9) Are all labels on containers and are they intact and legible?	

- 10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?
- 11) For preserved bottle types, was the pH checked and within limits? <sup>1</sup>
- 12) Is there sufficient sample volume to perform all requested work?
- 13) Is the custody seal intact on all containers?
- 14) Are samples that require zero headspace acceptable?
- 15) Are all sample containers appropriate for analytical requirements?
- 16) Is there an Hg-1631 trip blank present?
- 17) Is there a VOA trip blank present?
- 18) Were all samples received within hold time?

#### **Chain of Custody Related Remarks**

#### **Client Contact Remarks**

#### **Shipping Containers**

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
6228	3.1	<=6.0	16	Yes

#### Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

Х		
YES	NO	NA
Х		
Х		
Х		
Х		
Х		
		Х
		Х
Х		
		Х
		Х
Х		

NA indicates Not Applicable



Sample Receipt

CRG	Mining,	LLC
01.0	winning,	

ACZ Project ID: L49006 Date Received: 12/21/2018 12:17 Received By: Date Printed: 12/26/2018

<sup>1</sup> The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

ACZ	aboratories, Inc.	111			CI	HAIN	of CUS	STO	ΟY
	oat Springs, CO 80487 (800) 334			106					
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	shall ACZ proceed with request ner instruction. If neither "YES" nor "NO" is indicated				analyses, even if	HT is expired.	NO and data will be g	ualified	J
Are samples for SDWA Con			Yes		No	V			
	forms. Results will be reported	to PQL fo	r Colo	rado.					
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*Sampler's Signature:	ME ALL "I attest t tamperin	o the authentic g with the sam	ity and va	lidity of this san way, is consider	ple. I understand ed fraud and pun	that intentior shable by Sta	nally mislabeling ti te Law.	ie time/date/	location of
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RM 2	12/20/18 11:45 M	SW	S						
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Matrix SW (Surface Wate	er) · GW (Ground Water) · WW (Waste	Water) · DV	V (Drink	ing Water) ·	SL (Sludge)	SO (Soil) ·	OL (Oil) · Oth	er (Speci	fy)
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Analytical Report

March 27, 2019

Report to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231 Bill to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231

Project ID: Q4 GL, R, C ACZ Project ID: L50524

Jake Wilkinson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 15, 2019. This project has been assigned to ACZ's project number, L50524. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L50524. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after April 26, 2019. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.

Max janicely

Max Janicek has reviewed and approved this report.







Project ID: Q4 GL, R, C Sample ID: GL 1

### Inorganic Analytical Results

ACZ Sample ID: **L50524-01** Date Sampled: 03/14/19 11:05 Date Received: 03/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							03/21/19 13:52	wtc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							03/21/19 11:36	mfm
Metals Analysis Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
	M200.7 ICP	Dilution	Result						
Aluminum, dissolved	M200.7 ICP M200.8 ICP-MS	1		U	mg/L	0.03	0.2	03/22/19 20:37	
Antimony, dissolved		1		U	mg/L	0.0004	0.002	03/25/19 17:46	
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	03/22/19 14:07	
Barium, dissolved	M200.7 ICP	1	0.014	В	mg/L	0.003	0.02	03/22/19 20:37	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	03/22/19 14:07	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	03/22/19 14:07	mfm
Calcium, dissolved	M200.7 ICP	1	14.3		mg/L	0.1	0.5	03/22/19 20:37	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	03/22/19 14:07	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 20:37	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 20:37	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	03/22/19 20:37	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	03/22/19 14:07	mfm
Magnesium, dissolved	M200.7 ICP	1	5.2		mg/L	0.2	1	03/22/19 20:37	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 20:37	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	03/21/19 13:03	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	03/22/19 20:37	dcm
Potassium, dissolved	M200.7 ICP	1	0.5	В	mg/L	0.2	1	03/22/19 20:37	dcm
Sodium, dissolved	M200.7 ICP	1	2.1		mg/L	0.2	1	03/22/19 20:37	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 20:37	dcm
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 20:37	dcm



Project ID: Q4 GL, R, C Sample ID: GL 1

### Inorganic Analytical Results

ACZ Sample ID: **L50524-01** Date Sampled: 03/14/19 11:05 Date Received: 03/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	63.6			mg/L	2	20	03/16/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Total Alkalinity		1	63.6			mg/L	2	20	03/16/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.7			%			03/27/19 0:00	calc
Sum of Anions			1.4			meq/L			03/27/19 0:00	calc
Sum of Cations			1.3			meq/L			03/27/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	03/21/19 11:32	ttg/wtc
Conductivity @25C	SM2510B	1	126			umhos/cm	1	10	03/16/19 4:39	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	03/22/19 14:21	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		57			mg/L	0.2	5	03/27/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							03/21/19 11:08	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.15			mg/L	0.02	0.1	03/27/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.15		*	mg/L	0.02	0.1	03/15/19 21:46	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	03/15/19 21:46	pjb
pH (lab)	SM4500H+ B									
рН		1	8.3	н		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	23.7			С	0.1	0.1	03/16/19 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	78			mg/L	10	20	03/19/19 15:33	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	3.3	В	*	mg/L	1	5	03/25/19 14:22	ttg/mss

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID: Q4 GL, R, C Sample ID: GL 2

### Inorganic Analytical Results

ACZ Sample ID: **L50524-02** Date Sampled: 03/14/19 10:45 Date Received: 03/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							03/21/19 13:57	wtc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							03/21/19 11:36	mfm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	03/22/19 20:41	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	03/25/19 17:47	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0037		mg/L	0.0002	0.001	03/22/19 14:09	mfm
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	03/22/19 20:41	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	03/22/19 14:09	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00172		mg/L	0.00005	0.0003	03/22/19 14:09	mfm
Calcium, dissolved	M200.7 ICP	1	22.6		mg/L	0.1	0.5	03/22/19 20:41	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	03/22/19 14:09	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 20:41	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 20:41	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	03/22/19 20:41	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	03/22/19 14:09	mfm
Magnesium, dissolved	M200.7 ICP	1	6.9		mg/L	0.2	1	03/22/19 20:41	dcm
Manganese, dissolved	M200.7 ICP	1	0.008	В	mg/L	0.005	0.03	03/22/19 20:41	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	03/21/19 13:04	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	03/22/19 20:41	dcm
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	03/22/19 20:41	dcm
Sodium, dissolved	M200.7 ICP	1	4.2		mg/L	0.2	1	03/22/19 20:41	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 20:41	dcm
Zinc, dissolved	M200.7 ICP	1	0.17		mg/L	0.01	0.05	03/22/19 20:41	dcm



Project ID: Q4 GL, R, C Sample ID: GL 2

### Inorganic Analytical Results

ACZ Sample ID: L50524-02 Date Sampled: 03/14/19 10:45 Date Received: 03/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	72.1			mg/L	2	20	03/16/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Total Alkalinity		1	73.3			mg/L	2	20	03/16/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-2.6			%			03/27/19 0:00	calc
Sum of Anions			2			meq/L			03/27/19 0:00	calc
Sum of Cations			1.9			meq/L			03/27/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	03/20/19 14:37	wtc
Conductivity @25C	SM2510B	1	197			umhos/cm	1	10	03/16/19 4:49	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	<sup>0.5</sup>		U	*	mg/L	0.003	0.01	03/22/19 14:22	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		85			mg/L	0.2	5	03/27/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							03/21/19 11:10	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.06	В		mg/L	0.02	0.1	03/27/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.06	В	*	mg/L	0.02	0.1	03/15/19 21:48	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	03/15/19 21:48	pjb
pH (lab)	SM4500H+ B									
рН		1	8.3	н		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	24.0			С	0.1	0.1	03/16/19 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	130			mg/L	10	20	03/19/19 15:36	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	24.4		*	mg/L	1	5	03/25/19 14:22	ttg/mss

REPIN.02.06.05.01

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID: Q4 GL, R, C Sample ID: GL 3

### Inorganic Analytical Results

ACZ Sample ID: L50524-03 Date Sampled: 03/14/19 11:30 Date Received: 03/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							03/21/19 14:02	wtc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							03/21/19 11:36	mfm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	03/22/19 20:44	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	03/25/19 17:49	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0002	0.001	03/22/19 14:10	mfm
Barium, dissolved	M200.7 ICP	1	0.014	В	mg/L	0.003	0.02	03/22/19 20:44	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	03/22/19 14:10	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00013	В	mg/L	0.00005	0.0003	03/22/19 14:10	mfm
Calcium, dissolved	M200.7 ICP	1	14.8		mg/L	0.1	0.5	03/22/19 20:44	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	03/22/19 14:10	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 20:44	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 20:44	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	03/22/19 20:44	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	03/22/19 14:10	mfm
Magnesium, dissolved	M200.7 ICP	1	5.3		mg/L	0.2	1	03/22/19 20:44	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 20:44	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	03/21/19 13:28	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	03/22/19 20:44	dcm
Potassium, dissolved	M200.7 ICP	1	0.5	В	mg/L	0.2	1	03/22/19 20:44	dcm
Sodium, dissolved	M200.7 ICP	1	2.1		mg/L	0.2	1	03/22/19 20:44	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 20:44	dcm
Zinc, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	03/22/19 20:44	dcm



Project ID: Q4 GL, R, C Sample ID: GL 3

### Inorganic Analytical Results

ACZ Sample ID: L50524-03 Date Sampled: 03/14/19 11:30 Date Received: 03/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	62.9			mg/L	2	20	03/16/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Total Alkalinity		1	62.9		*	mg/L	2	20	03/16/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.7			%			03/27/19 0:00	calc
Sum of Anions			1.4			meq/L			03/27/19 0:00	calc
Sum of Cations			1.3			meq/L			03/27/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	03/20/19 14:37	wtc
Conductivity @25C	SM2510B	1	130			umhos/cm	1	10	03/16/19 5:33	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	03/22/19 14:23	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		59			mg/L	0.2	5	03/27/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							03/21/19 11:13	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.14			mg/L	0.02	0.1	03/27/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.14		*	mg/L	0.02	0.1	03/15/19 21:49	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	03/15/19 21:49	pjb
pH (lab)	SM4500H+ B									
рН		1	8.2	н		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	22.2			С	0.1	0.1	03/16/19 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	96			mg/L	10	20	03/19/19 15:41	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	5.3		*	mg/L	1	5	03/25/19 14:22	ttg/mss

REPIN.02.06.05.01



Project ID: Q4 GL, R, C Sample ID: RM 1

### Inorganic Analytical Results

ACZ Sample ID: L50524-04 Date Sampled: 03/14/19 12:00 Date Received: 03/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							03/21/19 14:07	wtc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							03/21/19 11:37	mfm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	03/22/19 21:00	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	03/25/19 17:51	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	В	mg/L	0.0002	0.001	03/22/19 14:12	mfm
Barium, dissolved	M200.7 ICP	1	0.014	В	mg/L	0.003	0.02	03/22/19 21:00	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	03/22/19 14:12	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00013	В	mg/L	0.00005	0.0003	03/22/19 14:12	mfm
Calcium, dissolved	M200.7 ICP	1	16.3		mg/L	0.1	0.5	03/22/19 21:00	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	03/22/19 14:12	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:00	dcm
Copper, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	03/22/19 21:00	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	03/22/19 21:00	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	03/22/19 14:12	mfm
Magnesium, dissolved	M200.7 ICP	1	5.6		mg/L	0.2	1	03/22/19 21:00	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:00	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	03/21/19 13:29	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	03/22/19 21:00	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	03/22/19 21:00	dcm
Sodium, dissolved	M200.7 ICP	1	2.0		mg/L	0.2	1	03/22/19 21:00	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:00	dcm
Zinc, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	03/22/19 21:00	dcm



Project ID: Q4 GL, R, C Sample ID: RM 1

### Inorganic Analytical Results

ACZ Sample ID: L50524-04 Date Sampled: 03/14/19 12:00 Date Received: 03/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	66.5			mg/L	2	20	03/16/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Total Alkalinity		1	66.5		*	mg/L	2	20	03/16/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			03/27/19 0:00	calc
Sum of Anions			1.4			meq/L			03/27/19 0:00	calc
Sum of Cations			1.4			meq/L			03/27/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	03/20/19 14:37	wtc
Conductivity @25C	SM2510B	1	140			umhos/cm	1	10	03/16/19 5:42	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	03/22/19 14:23	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		64			mg/L	0.2	5	03/27/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							03/21/19 11:16	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.13			mg/L	0.02	0.1	03/27/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.13		*	mg/L	0.02	0.1	03/15/19 21:51	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	03/15/19 21:51	pjb
pH (lab)	SM4500H+ B									
pН		1	8.3	н		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	22.1			С	0.1	0.1	03/16/19 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	80			mg/L	10	20	03/19/19 15:44	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	3.6	В		mg/L	1	5	03/25/19 14:22	ttg/mss

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

CRG Mining, LLC Project ID: Q4 Q4 GL, R, C Sample ID: RM 2

# Inorganic Analytical Results

ACZ Sample ID:	L50524-05
Date Sampled:	03/14/19 12:20
Date Received:	03/15/19
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							03/21/19 14:12	wtc
Lab Filtration (0.45um)	M200.7/200.8/3005A							03/21/19 11:37	mfm
& Acidification									
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	03/22/19 21:03	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	03/25/19 17:53	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0084		mg/L	0.0002	0.001	03/22/19 14:18	mfm
Barium, dissolved	M200.7 ICP	1	0.004	В	mg/L	0.003	0.02	03/22/19 21:03	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	03/22/19 14:18	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00049		mg/L	0.00005	0.0003	03/22/19 14:18	mfm
Calcium, dissolved	M200.7 ICP	1	14.1		mg/L	0.1	0.5	03/22/19 21:03	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	03/22/19 14:18	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:03	dcm
Copper, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	03/22/19 21:03	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	03/22/19 21:03	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0001	0.0005	03/22/19 14:18	mfm
Magnesium, dissolved	M200.7 ICP	1	3.2		mg/L	0.2	1	03/22/19 21:03	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:03	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	03/21/19 13:30	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	03/22/19 21:03	dcm
Potassium, dissolved	M200.7 ICP	1	1.0		mg/L	0.2	1	03/22/19 21:03	dcm
Sodium, dissolved	M200.7 ICP	1	4.0		mg/L	0.2	1	03/22/19 21:03	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:03	dcm
Zinc, dissolved	M200.7 ICP	1	0.05		mg/L	0.01	0.05	03/22/19 21:03	dcm



Project ID: Q4 GL, R, C Sample ID: RM 2

### Inorganic Analytical Results

ACZ Sample ID: L50524-05 Date Sampled: 03/14/19 12:20 Date Received: 03/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	44.8			mg/L	2	20	03/16/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Total Alkalinity		1	44.8		*	mg/L	2	20	03/16/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.0			%			03/27/19 0:00	calc
Sum of Anions			1.3			meq/L			03/27/19 0:00	calc
Sum of Cations			1.2			meq/L			03/27/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	03/21/19 12:59	ttg
Conductivity @25C	SM2510B	1	126			umhos/cm	1	10	03/16/19 5:51	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	03/22/19 14:24	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		48			mg/L	0.2	5	03/27/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							03/21/19 11:18	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.05	В		mg/L	0.02	0.1	03/27/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.05	В	*	mg/L	0.02	0.1	03/15/19 21:58	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	03/15/19 21:58	pjb
pH (lab)	SM4500H+ B									
рН		1	8.1	н		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	22.1			С	0.1	0.1	03/16/19 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	100			mg/L	10	20	03/19/19 16:33	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	17.2			mg/L	1	5	03/25/19 14:22	ttg/mss

REPIN.02.06.05.01

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

CRG Mining, LLC Project ID: Q4 Q4 GL, R, C Sample ID: RM 3

# Inorganic Analytical Results

ACZ Sample ID:	L50524-06
Date Sampled:	03/14/19 12:45
Date Received:	03/15/19
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							03/21/19 14:16	wtc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							03/21/19 11:37	mfm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	03/22/19 21:07	dcm
Antimony, dissolved	M200.8 ICP-MS	1	0.0004	В	mg/L	0.0004	0.002	03/25/19 17:58	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0013		mg/L	0.0002	0.001	03/22/19 14:19	mfm
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	03/22/19 21:07	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	03/22/19 14:19	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00015	В	mg/L	0.00005	0.0003	03/22/19 14:19	mfm
Calcium, dissolved	M200.7 ICP	1	16.1		mg/L	0.1	0.5	03/22/19 21:07	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	03/22/19 14:19	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:07	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:07	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	03/22/19 21:07	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	03/22/19 14:19	mfm
Magnesium, dissolved	M200.7 ICP	1	5.4		mg/L	0.2	1	03/22/19 21:07	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:07	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	03/21/19 13:33	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	03/22/19 21:07	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	03/22/19 21:07	dcm
Sodium, dissolved	M200.7 ICP	1	2.1		mg/L	0.2	1	03/22/19 21:07	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:07	dcm
Zinc, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	03/22/19 21:07	dcm



Project ID: Q4 GL, R, C Sample ID: RM 3

### Inorganic Analytical Results

ACZ Sample ID: L50524-06 Date Sampled: 03/14/19 12:45 Date Received: 03/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	65.6			mg/L	2	20	03/16/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Total Alkalinity		1	65.6		*	mg/L	2	20	03/16/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.4			%			03/27/19 0:00	calc
Sum of Anions			1.5			meq/L			03/27/19 0:00	calc
Sum of Cations			1.4			meq/L			03/27/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	03/21/19 12:59	ttg
Conductivity @25C	SM2510B	1	139			umhos/cm	1	10	03/16/19 6:01	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	03/22/19 14:25	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		62			mg/L	0.2	5	03/27/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							03/21/19 11:21	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.13			mg/L	0.02	0.1	03/27/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.13		*	mg/L	0.02	0.1	03/15/19 22:00	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	03/15/19 22:00	pjb
pH (lab)	SM4500H+ B									
рН		1	8.3	Н		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	22.1			С	0.1	0.1	03/16/19 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	86			mg/L	10	20	03/19/19 15:46	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	6.1			mg/L	1	5	03/25/19 14:22	ttg/mss



Project ID: Q4 GL, R, C Sample ID: CM 1

### Inorganic Analytical Results

ACZ Sample ID: L50524-07 Date Sampled: 03/14/19 13:05 Date Received: 03/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							03/22/19 11:18	wtc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							03/21/19 11:38	mfm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	03/22/19 21:10	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	03/25/19 18:00	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0018		mg/L	0.0002	0.001	03/22/19 14:21	mfm
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	03/22/19 21:10	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	03/22/19 14:21	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00013	В	mg/L	0.00005	0.0003	03/22/19 14:21	mfm
Calcium, dissolved	M200.7 ICP	1	16.4		mg/L	0.1	0.5	03/22/19 21:10	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	03/22/19 14:21	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:10	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:10	dcm
Iron, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.02	0.05	03/22/19 21:10	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0003	В	mg/L	0.0001	0.0005	03/22/19 14:21	mfm
Magnesium, dissolved	M200.7 ICP	1	5.4		mg/L	0.2	1	03/22/19 21:10	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:10	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	03/21/19 13:34	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	03/22/19 21:10	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	03/22/19 21:10	dcm
Sodium, dissolved	M200.7 ICP	1	2.2		mg/L	0.2	1	03/22/19 21:10	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:10	dcm
Zinc, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	03/22/19 21:10	dcm



Project ID: Q4 GL, R, C Sample ID: CM 1

### Inorganic Analytical Results

ACZ Sample ID: L50524-07 Date Sampled: 03/14/19 13:05 Date Received: 03/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	65.8			mg/L	2	20	03/16/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Total Alkalinity		1	65.8		*	mg/L	2	20	03/16/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.4			%			03/27/19 0:00	calc
Sum of Anions			1.5			meq/L			03/27/19 0:00	calc
Sum of Cations			1.4			meq/L			03/27/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	03/21/19 12:59	ttg
Conductivity @25C	SM2510B	1	143			umhos/cm	1	10	03/16/19 6:10	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5 <sup>1</sup>		U	*	mg/L	0.003	0.01	03/22/19 15:39	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		63			mg/L	0.2	5	03/27/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							03/21/19 11:24	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.12			mg/L	0.02	0.1	03/27/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.12		*	mg/L	0.02	0.1	03/15/19 22:01	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	03/15/19 22:01	pjb
pH (lab)	SM4500H+ B									
рН		1	8.3	н		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	22.3			С	0.1	0.1	03/16/19 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	102			mg/L	10	20	03/19/19 16:36	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	6.7			mg/L	1	5	03/25/19 14:22	ttg/mss

REPIN.02.06.05.01

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID: Q4 GL, R, C Sample ID: CM 2

### Inorganic Analytical Results

ACZ Sample ID: L50524-08 Date Sampled: 03/14/19 13:20 Date Received: 03/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							03/22/19 11:36	wtc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							03/21/19 11:38	mfm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	03/22/19 21:20	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	03/25/19 18:05	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0022		mg/L	0.0002	0.001	03/22/19 14:26	mfm
Barium, dissolved	M200.7 ICP	1	0.012	В	mg/L	0.003	0.02	03/22/19 21:20	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	03/22/19 14:26	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00007	В	mg/L	0.00005	0.0003	03/22/19 14:26	mfm
Calcium, dissolved	M200.7 ICP	1	16.9		mg/L	0.1	0.5	03/22/19 21:20	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	03/22/19 14:26	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:20	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:20	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.02	0.05	03/22/19 21:20	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	03/22/19 14:26	mfm
Magnesium, dissolved	M200.7 ICP	1	3.3		mg/L	0.2	1	03/22/19 21:20	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:20	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	03/21/19 13:35	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	03/22/19 21:20	dcm
Potassium, dissolved	M200.7 ICP	1	0.5	В	mg/L	0.2	1	03/22/19 21:20	dcm
Sodium, dissolved	M200.7 ICP	1	5.9		mg/L	0.2	1	03/22/19 21:20	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:20	dcm
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:20	dcm



Project ID: Q4 GL, R, C Sample ID: CM 2

### Inorganic Analytical Results

ACZ Sample ID: L50524-08 Date Sampled: 03/14/19 13:20 Date Received: 03/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	69.0			mg/L	2	20	03/16/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Total Alkalinity		1	69.0		*	mg/L	2	20	03/16/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-6.7			%			03/27/19 0:00	calc
Sum of Anions			1.6			meq/L			03/27/19 0:00	calc
Sum of Cations			1.4			meq/L			03/27/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	03/21/19 12:59	ttg
Conductivity @25C	SM2510B	1	146			umhos/cm	1	10	03/16/19 6:19	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5 <sup>0</sup>		U	*	mg/L	0.003	0.01	03/22/19 15:41	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		56			mg/L	0.2	5	03/27/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							03/21/19 11:27	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.05	В		mg/L	0.02	0.1	03/27/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.05	В	*	mg/L	0.02	0.1	03/15/19 22:02	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	03/15/19 22:02	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	23.4			С	0.1	0.1	03/16/19 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	106			mg/L	10	20	03/19/19 16:38	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	12.0			mg/L	1	5	03/25/19 14:22	ttg/mss

REPIN.02.06.05.01

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

Project ID: Q4 GL, R, C Sample ID: CM 3

### Inorganic Analytical Results

ACZ Sample ID: **L50524-09** Date Sampled: 03/14/19 13:45 Date Received: 03/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							03/22/19 11:55	wtc
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							03/21/19 11:38	mfm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.2	03/22/19 21:23	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	03/25/19 18:07	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0017		mg/L	0.0002	0.001	03/22/19 14:28	mfm
Barium, dissolved	M200.7 ICP	1	0.013	В	mg/L	0.003	0.02	03/22/19 21:23	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	03/22/19 14:28	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00012	В	mg/L	0.00005	0.0003	03/22/19 14:28	mfm
Calcium, dissolved	M200.7 ICP	1	16.5		mg/L	0.1	0.5	03/22/19 21:23	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	03/22/19 14:28	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:23	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	03/22/19 21:23	dcm
Iron, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.02	0.05	03/22/19 21:23	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0003	В	mg/L	0.0001	0.0005	03/22/19 14:28	mfm
Magnesium, dissolved	M200.7 ICP	1	5.2		mg/L	0.2	1	03/22/19 21:23	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:23	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	03/21/19 13:36	che
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	03/22/19 21:23	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	03/22/19 21:23	dcm
Sodium, dissolved	M200.7 ICP	1	2.5		mg/L	0.2	1	03/22/19 21:23	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	03/22/19 21:23	dcm
Zinc, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	03/22/19 21:23	dcm



Project ID: Q4 GL, R, C Sample ID: CM 3

### Inorganic Analytical Results

ACZ Sample ID: **L50524-09** Date Sampled: 03/14/19 13:45 Date Received: 03/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	66.5			mg/L	2	20	03/16/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	03/16/19 0:00	enb
Total Alkalinity		1	66.5		*	mg/L	2	20	03/16/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.4			%			03/27/19 0:00	calc
Sum of Anions			1.5			meq/L			03/27/19 0:00	calc
Sum of Cations			1.4			meq/L			03/27/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	03/21/19 12:59	ttg
Conductivity @25C	SM2510B	1	144			umhos/cm	1	10	03/16/19 6:28	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	03/22/19 15:43	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		63			mg/L	0.2	5	03/27/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							03/21/19 11:29	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.11			mg/L	0.02	0.1	03/27/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.11		*	mg/L	0.02	0.1	03/15/19 22:03	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	03/15/19 22:03	pjb
pH (lab)	SM4500H+ B									
рН		1	8.3	н		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	23.5			С	0.1	0.1	03/16/19 0:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	96			mg/L	10	20	03/19/19 15:49	nmc
Sulfate	D516-02/-07 - Turbidimetric	1	7.3			mg/L	1	5	03/25/19 14:24	ttg/mss

REPIN.02.06.05.01



Inorganic Reference

	r Explanations						
Batch	A distinct set of samples analyzed at a specific time						
Found	Value of the QC Type of interest						
Limit	Upper limit for RPD, in %.						
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)						
MDL	Method Detection Limit. Same as Minimum Reporting Limit	unless omitted or ed	qual to the PQL (see comment #5).				
	Allows for instrument and annual fluctuations.						
PCN/SCN	A number assigned to reagents/standards to trace to the ma	anufacturer's certific	ate of analysis				
PQL	Practical Quantitation Limit. Synonymous with the EPA term	n "minimum level".					
QC	True Value of the Control Sample or the amount added to the	•					
Rec	Recovered amount of the true value or spike added, in % (e	except for LCSS, mg	/Kg)				
RPD	Relative Percent Difference, calculation used for Duplicate C	QC Types					
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)						
Sample	Value of the Sample of interest						
Sample Ty	rpes						
AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicat				
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank				
ССВ	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix				
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate				
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank				
ICB	Initial Calibration Blank	MS	Matrix Spike				
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate				
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil				
LCSS	Laboratory Control Sample Soil	5514/	Drop Blopk Water				
	Laboratory Control Sample - Soil PBW Prep Blank - Water						
LCSSD	Laboratory Control Sample - Soil Duplicate         PQV         Practical Quantitation Verification standard						
			•				
LCSSD LCSW	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water	PQV	Practical Quantitation Verification standard				
LCSSD LCSW Sample Ty	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water rpe Explanations	PQV SDL	Practical Quantitation Verification standard Serial Dilution				
LCSSD LCSW Sample Ty Blanks	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water vpe Explanations Verifies that there is no or minimal	PQV SDL contamination in the	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure.				
LCSSD LCSW Sample Ty Blanks Control Sat	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water vpe Explanations Verifies that there is no or minimal mples Verifies the accuracy of the method	PQV SDL contamination in the d, including the prep	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure.				
LCSSD LCSW Sample Ty Blanks Control Sal Duplicates	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water Pe Explanations Verifies that there is no or minimal mples Verifies the accuracy of the methor Verifies the precision of the instrum	PQV SDL contamination in the d, including the prep nent and/or method.	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure.				
LCSSD LCSW Sample Ty Blanks Control Sal Duplicates	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water PE Explanations Verifies that there is no or minimal mples Verifies the accuracy of the methor Verifies the precision of the instrum tified Matrix Determines sample matrix interference	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any.	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure.				
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>vpe Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the methor Verifies the precision of the instrum tified Matrix Determines sample matrix interfere Verifies the validity of the calibratio	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any.	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure.				
LCSSD LCSW Sample Ty Blanks Control Sal Duplicates Spikes/For Standard Z Qualifiers	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n.	Practical Quantitation Verification standard Serial Dilution				
LCSSD LCSW Sample Ty Blanks Control Sat Duplicates Spikes/For Standard Z Qualifiers B	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n.	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure. ed value is an estimated quantity.				
LCSSD LCSW Sample Ty Blanks Control Sal Duplicates Spikes/For Standard Z Qualifiers B H	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water TPE Explanations Werifies that there is no or minimal mples Verifies the accuracy of the methor Verifies the precision of the instrum tified Matrix Determines sample matrix interfere Verifies the validity of the calibratio s (Qual) Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure. ed value is an estimated quantity.				
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard Z Qualifiers B H L	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfered Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined n	PQV SDL contamination in the d, including the prep hent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold.	Practical Quantitation Verification standard Serial Dilution  prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime.				
LCSSD LCSW Sample Ty Blanks Control Sal Duplicates Spikes/For Standard Z Qualifiers B H	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfered Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined n The material was analyzed for, but was not detected above	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the assoc	Practical Quantitation Verification standard Serial Dilution  prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value.				
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard Z Qualifiers B H L	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfered Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined n	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the assoc	Practical Quantitation Verification standard Serial Dilution  prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value.				
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard Z Qualifiers B H L	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>PPE Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfere Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined n The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the assoc	Practical Quantitation Verification standard Serial Dilution  prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value.				
LCSSD LCSW Sample Ty Blanks Control Sau Duplicates Spikes/For Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>PPE Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfere Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined n The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the association or the sample detect	Practical Quantitation Verification standard Serial Dilution  proper method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.				
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>vpe Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfered Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined in The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of <b>ences</b>	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the asso or the sample detect	Practical Quantitation Verification standard Serial Dilution  Prep method or calibration procedure. procedure. ed value is an estimated quantity. ime. ciated value. ion limit. h 1983.				
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard Z Qualifiers B H L U U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>vpe Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfered Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined in The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of <b>ences</b> EPA 600/4-83-020. Methods for Chemical Analysis of Water	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the asso or the sample detect er and Wastes, Marc anic Substances in l	Practical Quantitation Verification standard Serial Dilution  prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993.				
LCSSD LCSW Sample Ty Blanks Control Sau Duplicates Spikes/For Standard Z Qualifiers B H L U U hod Reference (1) (2)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal Merifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfered Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined n The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of <b>ences</b> EPA 600/4-83-020. Methods for Chemical Analysis of Wate EPA 600/R-93-100. Methods for the Determination of Inorg	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the asso or the sample detect er and Wastes, Marc anic Substances in l	Practical Quantitation Verification standard Serial Dilution  prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993.				
LCSSD LCSW Sample Ty Blanks Control Sau Duplicates Spikes/For Standard Z Qualifiers B H L U U thod Reference (1) (2) (3)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal Merifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfered Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined n The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of <b>ences</b> EPA 600/4-83-020. Methods for Chemical Analysis of Wate EPA 600/R-94-111. Methods for the Determination of Metal	PQV SDL contamination in the d, including the prep hent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the associat or the sample detect er and Wastes, Marc anic Substances in I is in Environmental S	Practical Quantitation Verification standard Serial Dilution  prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993.				
LCSSD LCSW Sample Ty Blanks Control Sau Duplicates Spikes/For Standard Z Qualifiers B H L U U hod Reference (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal Merifies the accuracy of the method Verifies the precision of the instrum Determines sample matrix interfere Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined in The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Wate EPA 600/R-94-111. Methods for the Determination of Metal EPA SW-846. Test Methods for Evaluating Solid Waste.	PQV SDL contamination in the d, including the prep hent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the associat or the sample detect er and Wastes, Marc anic Substances in I is in Environmental S	Practical Quantitation Verification standard Serial Dilution  prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993.				
LCSSD LCSW Sample Ty Blanks Control Sau Duplicates Spikes/For Standard Z Qualifiers B H L U U hod Referent (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>PPE Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfere Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined n The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Wate EPA 600/R-94-111. Methods for the Determination of Inorg EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Waster	PQV SDL contamination in the d, including the prep rent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the associat or the sample detect er and Wastes, Marc anic Substances in l is in Environmental s water.	Practical Quantitation Verification standard Serial Dilution  e prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.				
LCSSD LCSW Sample Ty Blanks Control Sau Duplicates Spikes/For Standard Z Qualifiers B H L U U hod Referent (1) (2) (3) (4) (5) mments (1)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>PPE Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfere Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined n The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Wate EPA 600/R-94-111. Methods for the Determination of Inorg EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Waster	PQV SDL contamination in the d, including the prep rent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the associat or the sample detect er and Wastes, Marc anic Substances in l is in Environmental s water.	Practical Quantitation Verification standard Serial Dilution  e prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.  elues are used in the calculations.				
LCSSD LCSW Sample Ty Blanks Control Sau Duplicates Spikes/For Standard Z Qualifiers B H L U U hod Referent (1) (2) (3) (4) (5) nments (1) (2)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>PPE Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfere Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined in The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Wate EPA 600/R-94-111. Methods for the Determination of Inorg EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Waster QC results calculated from raw data. Results may vary sligh Soil, Sludge, and Plant matrices for Inorganic analyses are re-	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the associat or the sample detect er and Wastes, Marc anic Substances in l is in Environmental s water.	Practical Quantitation Verification standard Serial Dilution  e prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.  elues are used in the calculations.				
LCSSD LCSW Sample Ty Blanks Control Sau Duplicates Spikes/For Standard Z Qualifiers B H L U U hod Referent (1) (2) (3) (4) (5) nments (1) (2) (3)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>PPE Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfere Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined in The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Wate EPA 600/R-94-111. Methods for the Determination of Inorg EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Waster QC results calculated from raw data. Results may vary slight Soil, Sludge, and Plant matrices for Inorganic analyses are reported on an "	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the associat or the sample detect er and Wastes, Marc anic Substances in la s in Environmental s water.	Practical Quantitation Verification standard Serial Dilution  proper method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.  lues are used in the calculations. ight basis.				
LCSSD LCSW Sample Ty Blanks Control Sau Duplicates Spikes/For Standard Z Qualifiers B H L U U hod Referent (1) (2) (3) (4) (5) nments (1) (2)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>PPE Explanations</b> Werifies that there is no or minimal mples Verifies the accuracy of the method Verifies the precision of the instrum tified Matrix Determines sample matrix interfere Verifies the validity of the calibratio <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with Target analyte response was below the laboratory defined in The material was analyzed for, but was not detected above The associated value is either the sample quantitation limit of <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Wate EPA 600/R-94-111. Methods for the Determination of Inorg EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Waster QC results calculated from raw data. Results may vary sligh Soil, Sludge, and Plant matrices for Inorganic analyses are re-	PQV SDL contamination in the d, including the prep nent and/or method. ences, if any. n. d PQL. The associat an immediate hold t egative threshold. the level of the associat or the sample detect er and Wastes, Marc anic Substances in la s in Environmental s water.	Practical Quantitation Verification standard Serial Dilution  proper method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.  lues are used in the calculations. ight basis.				

For a complete list of ACZ's Extended Qualifiers, please click:

http://www.acz.com/public/extquallist.pdf

REP001.03.15.02

### CRG Mining, LLC

#### ACZ Project ID: L50524

	0.												
Alkalinity as CaC	03		SM2320	B - Titration									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468112													
WG468112PBW1	PBW	03/15/19 17:09				12.5	mg/L		-20	20			
WG468112LCSW3	LCSW	03/15/19 17:26	WC190307-1	820.0001		778	mg/L	95	90	110			
WG468112LCSW6	LCSW	03/15/19 21:14	WC190307-1	820.0001		799	mg/L	97	90	110			
WG468112PBW2	PBW	03/15/19 21:21				2.3	mg/L		-20	20			
WG468112LCSW9	LCSW	03/16/19 0:59	WC190307-1	820.0001		787	mg/L	96	90	110			
WG468112PBW3	PBW	03/16/19 1:05				U	mg/L		-20	20			
L50524-02DUP	DUP	03/16/19 4:58			73.3	75.6	mg/L				3	20	
WG468112LCSW12	LCSW	03/16/19 5:17	WC190307-1	820.0001		808	mg/L	99	90	110			
WG468112PBW4	PBW	03/16/19 5:23				2.1	mg/L		-20	20			
L50545-01DUP	DUP	03/16/19 10:44			196	190	mg/L				3	20	
WG468112LCSW15	LCSW	03/16/19 11:02	WC190307-1	820.0001		827	mg/L	101	90	110			
Aluminum, disso	lved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593													
WG468593ICV	ICV	03/22/19 19:59	II190211-1	2		1.957	mg/L	98	95	105			
WG468593ICB	ICB	03/22/19 20:05				U	mg/L		-0.09	0.09			
WG468593LFB	LFB	03/22/19 20:18	II190312-3	1.0006		.999	mg/L	100	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	1.0006	U	1.081	mg/L	108	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	1.0006	U	1.014	mg/L	101	85	115	6	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	1.0006	U	1.029	mg/L	103	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	1.0006	U	1.003	mg/L	100	85	115	3	20	
Antimony, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468739													
WG468739ICV	ICV	03/25/19 17:40	MS190225-2	.02		.02176	mg/L	109	90	110			
WG468739ICB	ICB	03/25/19 17:42				.00084	mg/L		-0.00088	0.00088			
WG468739LFB	LFB	03/25/19 17:44	MS190208-2	.01		.00976	mg/L	98	85	115			
L50524-05AS	AS	03/25/19 17:55	MS190208-2	.01	U	.00856	mg/L	86	70	130			
L50524-05ASD	ASD	03/25/19 17:56	MS190208-2	.01	U	.00907	mg/L	91	70	130	6	20	
Arsenic, dissolve	d		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468611													
WG468611ICV	ICV	03/22/19 14:02	MS190225-2	.05		.05056	mg/L	101	90	110			
WG468611ICB	ICB	03/22/19 14:03				U	mg/L	-	-0.00044	0.00044			
WG468611LFB	LFB	03/22/19 14:05	MS190208-2	.05005		.05161	mg/L	103	85	115			
L50524-04AS	AS	03/22/19 14:14	MS190208-2	.05005	.0003	.05637	mg/L	112	70	130			
L50524-04ASD	ASD	03/22/19 14:16	MS190208-2	.05005	.0003	.05421	mg/L	108	70	130	4	20	

### **CRG Mining, LLC**

#### ACZ Project ID: L50524

Barium, dissolv	ved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593													
WG468593ICV	ICV	03/22/19 19:59	II190211-1	2		1.9922	mg/L	100	95	105			
WG468593ICB	ICB	03/22/19 20:05				U	mg/L		-0.009	0.009			
WG468593LFB	LFB	03/22/19 20:18	II190312-3	.4995		.5003	mg/L	100	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	.4995	.014	.5096	mg/L	99	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	.4995	.014	.5106	mg/L	99	85	115	0	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	.4995	.013	.5048	mg/L	98	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	.4995	.013	.5096	mg/L	99	85	115	1	20	
Beryllium, disse	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468611													
WG468611ICV	ICV	03/22/19 14:02	MS190225-2	.05		.048838	mg/L	98	90	110			
WG468611ICB	ICB	03/22/19 14:03				U	mg/L		-0.000176	0.000176			
WG468611LFB	LFB	03/22/19 14:05	MS190208-2	.05005		.049179	mg/L	98	85	115			
L50524-04AS	AS	03/22/19 14:14	MS190208-2	.05005	U	.05152	mg/L	103	70	130			
L50524-04ASD	ASD	03/22/19 14:16	MS190208-2	.05005	U	.050048	mg/L	100	70	130	3	20	
Cadmium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468611													
WG468611ICV	ICV	03/22/19 14:02	MS190225-2	.05		.049803	mg/L	100	90	110			
WG468611ICB	ICB	03/22/19 14:03				U	mg/L		-0.00011	0.00011			
WG468611LFB	LFB	03/22/19 14:05	MS190208-2	.05005		.049362	mg/L	99	85	115			
L50524-04AS	AS	03/22/19 14:14	MS190208-2	.05005	.00013	.053414	mg/L	106	70	130			
L50524-04ASD	ASD	03/22/19 14:16	MS190208-2	.05005	.00013	.052091	mg/L	104	70	130	3	20	
Calcium, dissol	ved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593													
WG468593ICV	ICV	03/22/19 19:59	II190211-1	100		96.7	mg/L	97	95	105			
WG468593ICB	ICB	03/22/19 20:05				U	mg/L		-0.3	0.3			
WG468593LFB	LFB	03/22/19 20:18	II190312-3	68.01315		68.44	mg/L	101	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	68.01315	14.8	87.14	mg/L	106	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	68.01315	14.8	81.71	mg/L	98	85	115	6	20	
L30324-03A3D													
L50524-03ASD L50524-07AS	AS	03/22/19 21:13	II190312-3	68.01315	16.4	84.54	mg/L	100	85	115			

### CRG Mining, LLC

#### ACZ Project ID: L50524

ACZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Res%         Lower         Upper         RPD         Limit         Qual           WG4684180CB         ICB         0320191912:15         W180530-1         54.89         54.48         mpL         99         90         110         WG468418LPB1         LFB         0320191437         W180530-1         54.89         54.48         mpL         107         90         110         UK         VG468418LPB2         LFB         03201914511         20.03         32.28         mpL         107         90         110         UK         22         20           VG4684412EB1         LFB         03201915121         10XCL         30         221         247.2         mpL         67         90         110         M3           WG468444         WG4684412         LFB         032119132         W160114         30.03         30.74         mpL         10.5         1.5         UK         90         110         UK         412         42.01         mpL         2         20         20         20         20         20         20         20         20         20         20         20	Chloride			SM45000	CI-E									
WG4684181CB       ICB       0320/19 12:15       W180530-1       54.88       mgL       90       90       110         WG4684181CV       ICFB       0320/19 14.33       W180114       30.03       32.15       mgL       107       90       110         WG468418LFB2       IFB       0320/19 15.11       751       734.8       mgL       107       90       110       2       20       M3         WG468418LFB2       IFB       0320/19 15.11       751       734.8       mgL       7       0       110       2       20       M3         WG468449       W       W19011-8       30.03       221       247.2       mgL       90       90       110       V       V       M3         WG468494ICB       ICB       0321/19 9.38       W19011-8       30.03       22       48.92       mgL       90       90       110       V       V       M468494ICB       162       90       110       V       V       M3         WG468494ICB       ICB       0321/19 11.32       W19011-8       30.03       22       48.92       mgL       90       90       110       V       V       V       V       V       V       V       V	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG4884181CV         ICV         03/20/19 12:15         W1180330-1         54.89         54.48         mpL         99         90         110           WG488418LPE         IFB         03/20/19 14:33         W1190111-6         30.03         32:15         myL         107         90         110          M           L50520-07DUP         DUP         03/20/19 15:11         751         734.8         myL         7         90         110         M         M3           WG488418LPE         ICB         03/20/19 15:1         10x         30         221         247.2         myL         67         90         110         M3           WG488494CV         ICV         03/21/19 9:38         W11990111-6         30.03         30.74         myL         102         90         110         L5         5         V         M488494CV         ICV         03/21/19 11:32         W1190111-6         30.03         30.33         30.33         30.74         myL         102         90         110         U         102         90         110         U         102         90         110         103         101         90         110         U         104         90         110         U	WG468418													
WG488418LFB1         LFB         03/20/19 14:33         WI190111-6         30.03         32.15         mgL         107         90         110           WG488418LFB2         LFB         03/20/19 14:147         WI190111-6         30.03         32.28         mgL         107         90         110         2         20           L50520-08AS         AS         03/20/19 15:12         10XCL         30         221         247.2         mgL         87         90         110         2         20           KG468494C         KG         03/21/19 9:38         WI180350-1         54.80         30.74         mgL         102         90         110         2         20           WG468494C         ICB         03/21/19 11:32         WI180111-6         30.03         30.74         mgL         102         90         110         2         20         WG468494LFB2         LFB         03/21/19 11:32         WI180111-6         30.03         30.39         mgL         101         90         110         2         20         WG468505(C         ICB         03/21/19 13:30         WI180111-6         30.03         30.39         mgL         101         90         110         2         20         KG468555         KG4685	WG468418ICB	ICB	03/20/19 12:15				U	mg/L		-1.5	1.5			
WG488418LFB2         LFB         03/20/19 14:37         WI190111-0         30.03         32.28         mg/L         107         90         110         2         20           L6052-07DUP         DUP         03/20/19 15:11         10XCL         30         221         247.2         mg/L         67         90         110         2         20         M3           WG488494         CV         10X         30         221         247.2         mg/L         67         90         110         M3           WG488494         CV         10X         30.32/19 13.32         W119030-1         54.89         52.62         mg/L         90         90         110         52.20         90         110         52.20         20         100         52.22         90         110         90         90         110         90         110         2         20         100         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110 <td< td=""><td>WG468418ICV</td><td>ICV</td><td>03/20/19 12:15</td><td>WI180530-1</td><td>54.89</td><td></td><td>54.48</td><td>mg/L</td><td>99</td><td>90</td><td>110</td><td></td><td></td><td></td></td<>	WG468418ICV	ICV	03/20/19 12:15	WI180530-1	54.89		54.48	mg/L	99	90	110			
L65820-07DUP         DUP         03/2019 15:11         Tot         751         734.8         mg/L         2         20           L65820-020AS         AS         03/2019 15:12         10XCL         30         221         247.2         mg/L         87         90         110         M3           WG468494         WG468494         V         V         mg/L         -1.5         15         V </td <td>WG468418LFB1</td> <td>LFB</td> <td>03/20/19 14:33</td> <td>WI190111-6</td> <td>30.03</td> <td></td> <td>32.15</td> <td>mg/L</td> <td>107</td> <td>90</td> <td>110</td> <td></td> <td></td> <td></td>	WG468418LFB1	LFB	03/20/19 14:33	WI190111-6	30.03		32.15	mg/L	107	90	110			
L56520-08AS       AS       03/20/19 15:12       10XCL       30       221       247.2       mpl.       87       90       110       Image: constraint of the constraint of t	WG468418LFB2	LFB	03/20/19 14:37	WI190111-6	30.03		32.28	mg/L	107	90	110			
WG468494         WG468494         U         mg/L         -1.5         1.5         1.5           WG468494UCV         ICV         0321/19.9.38         W180530-1         54.89         52.62         mg/L         96         90         110           WG468494UCV         ICV         0321/19.11.32         W1190111-6         30.03         22         48.92         mg/L         102         90         110           L50322+02A         AS         0321/19.11.32         W1190111-6         30.03         22         48.92         mg/L         101         90         90         110         L5032+02A         AS         0321/19.13         W1190111-6         30.03         30.39         mg/L         101         90         110         V	L50520-07DUP	DUP	03/20/19 15:11			751	734.8	mg/L				2	20	
WG468494ICB         ICB         0.3/21/19 9:38         W180530-1         54.89         52.62         mpiL         -1.5         1.5           WG468494ICB         ICV         03/21/19 11:32         W1180111-6         30.03         30.74         mgiL         102         90         110           WG468494ICB         ILB         03/21/19 11:32         W1190111-6         30.03         22         48.82         mgiL         102         90         110           L50324-02DUP         DUP         03/21/19 11:32         W1190111-6         30.03         22         48.82         mgiL         101         90         110         2         20           WG468494ICB1         LFB         03/21/19 11:32         W1190111-6         30.03         30.39         mgiL         101         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110         90         110	L50520-08AS	AS	03/20/19 15:12	10XCL	30	221	247.2	mg/L	87	90	110			M3
WG468494I/CV       ICV       0.32/1/19.9.38       W1180530-1       54.89       52.62       mg/L       96       90       110         UG468494I/E1       LFB       0.32/1/19.11.32       W1190111-6       30.03       22       48.92       mg/L       102       90       110       J         L50323-02AS       AS       0.32/1/19.11.32       W1190111-6       30.03       22       48.92       mg/L       90       90       110       J       2       20         WG468494LFB2       LFB       0.3/2/1/19.11.36       W1190111-6       30.03       30.39       mg/L       101       90       110       J       V	WG468494													
WG468494LFB1       LFB       0.3/21/19 11.32       WI190111-6       30.03       22       48.92       mgL       90       90       110       2       20         L50324-02DUP       DUP       0.3/21/19 11.32       WI190111-6       30.03       22       48.92       mgL       90       90       110       2       20         WG468494LFB2       LFB       0.3/21/19 11.32       WI190111-6       30.03       30.39       mgL       101       90       110       2       20         WG468505LCB       LGB       0.3/21/19 9.38       WI190113-6       30.03       30.39       mgL       101       90       110       90       110       90       110       90       100	WG468494ICB	ICB	03/21/19 9:38				U	mg/L		-1.5	1.5			
L63323-02AS         AS         03/21/19 11:32         W1190111-6         3.0.3         2.2         48.92         mgl.         90         90         110         2         20           UG488494LFB2         LFB         03/21/19 11:32         W1190111-6         30.03         30.39         mgl.         101         90         110         2         20           WG488505         W190111-6         30.03         30.39         mgl.         101         90         110         2         20           WG488505         U         mgl.         -1.5         1.5         .5         .5         .5         .7         .7         .5         .5         .5         .5         .5         .7         .7         .5         .5         .5         .5         .5         .5         .7         .7         .5	WG468494ICV	ICV	03/21/19 9:38	WI180530-1	54.89		52.62	mg/L	96	90	110			
L50324-02DUP WG468494LFB2       DUP LFB       03/21/19 11:30       W190111-6       30.03       41.2       42.01       mg/L       101       90       110       2       20         WG468505       U       GSB       03/21/19 91:36       W190111-6       30.03       mg/L       101       90       110       90       110       90       110         WG468505(CB       ICB       03/21/19 9:38       W1180530-1       54.89       52.62       mg/L       96       90       110       90       110       90       110       90       101	WG468494LFB1	LFB	03/21/19 11:32	WI190111-6	30.03		30.74	mg/L	102	90	110			
WG468494LFB2       LFB       03/21/19 11:36       W190111-6       30.03       30.39       mg/L       101       90       110         WG468505         WG468505(CB       ICB       03/21/19 9:38       W180530-1       54.89       52.62       mg/L       96       90       110         WG468505(CV       ICV       03/21/19 12:59       W190111-6       30.03       30.39       mg/L       96       90       110         L50524-05AS       AS       03/21/19 12:59       W190111-6       30.03       U       31.87       mg/L       106       90       110         L50524-05AS       AS       03/21/19 12:59       W190111-6       30.03       U       31.87       mg/L       101       90       110       0       20       RA         WG468505LFB2       LFB       03/21/19 12:59       U       U       mg/L       101       90       110       0       110       0       101       90       110       10       101       90       110       10       101       10       101       10       101       10       101       10       101       10       101       101       10       101       101       101       101	L50323-02AS	AS	03/21/19 11:32	WI190111-6	30.03	22	48.92	mg/L	90	90	110			
WG468505         WG468505       U       mg/L       -1.5       1.5         WG468505(CV       ICV       03/21/19 9:38       W1180530-1       54.89       52.62       mg/L       96       90       110         WG468505(CV       ICV       03/21/19 12:59       W1190111-6       30.03       30.39       mg/L       101       90       110         L50524-05AS       AS       03/21/19 12:59       W1190111-6       30.03       U       31.87       mg/L       106       90       110         L50524-05DUP       DUP       03/21/19 12:59       U       U       mg/L       101       90       110         L60524-06DUP       DUP       03/21/19 13:03       W1190111-6       30.03       30.41       mg/L       101       90       110         L65524-06DUP       DUP       03/21/19 13:03       W1190111-6       30.03       30.41       mg/L       101       90       110       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         VG4686611CV       ICV       03/22/19 14:05       MS190208-2       .05005       U       0.5075       mg/L       101	L50324-02DUP	DUP	03/21/19 11:32			41.2	42.01	mg/L				2	20	
WG4686051CB         ICB         03/21/19 9:38         WI180530-1         54.89         52.62         mg/L         96         90         110           WG4685051CV         ICV         03/21/19 12:59         WI190111-6         30.03         30.39         mg/L         101         90         110           L50524-05AS         AS         03/21/19 12:59         WI190111-6         30.03         U         31.87         mg/L         106         90         110           L50524-05AS         AS         03/21/19 12:59         WI190111-6         30.03         U         31.87         mg/L         106         90         110           L50524-06DUP         DUP         03/21/19 13:03         WI190111-6         30.03         30.41         mg/L         101         90         110           L50524-06DUP         DUP         03/22/19 14:03         WI190111-6         30.03         30.41         mg/L         101         90         110         0         20         RA           VG468501CV         ICV         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual         MG4686111CV         ICV	WG468494LFB2	LFB	03/21/19 11:36	WI190111-6	30.03		30.39	mg/L	101	90	110			
WG468505ICV       ICV       03/21/19 9:38       W180530-1       54.89       52.62       mg/L       96       90       110         WG468505LFB1       LFB       03/21/19 12:59       W190111-6       30.03       U       31.87       mg/L       101       90       110         L50524-05AS       AS       03/21/19 12:59       W190111-6       30.03       U       31.87       mg/L       106       90       110       0       20       RA         WG468505LFB2       LFB       03/21/19 12:59       W190111-6       30.03       U       u       mg/L       101       90       110       0       20       RA         WG468505LFB2       LFB       03/21/19 13:03       W190111-6       30.03       30.41       mg/L       101       90       110       0       10       RA         WG468505LFB2       LFB       03/21/19 13:03       W190111-6       30.03       30.41       mg/L       101       90       110       10       RA       M2468561         KG468611       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Linit       Qual       M5190208-2 <td< td=""><td>WG468505</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>	WG468505													
WG468505LFB1       LFB       03/21/19 12:59       WI190111-6       30.03       U       31.87       mg/L       101       90       110         L50524-05AS       AS       03/21/19 12:59       WI190111-6       30.03       U       31.87       mg/L       106       90       110       0       20       RA         WG468505LFB2       LFB       03/21/19 12:59       WI190111-6       30.03       U       31.87       mg/L       101       90       110       0       20       RA         WG468505LFB2       LFB       03/21/19 13:03       WI190111-6       30.03       30.41       mg/L       101       90       110       0       20       RA         WG468505LFB2       LFB       03/21/19 13:03       WI190111-6       30.03       30.41       mg/L       101       90       110       0       101       0       101       0       101       0       101       0       101       105       105	WG468505ICB	ICB	03/21/19 9:38				U	mg/L		-1.5	1.5			
Nonconstrain       A.S.       03/21/19 12:59       WI190111-6       30.03       U       31.87       mg/L       106       90       110         L50524-06DUP       DUP       03/21/19 12:59       U       U       mg/L       101       90       110       0       20       RA         WG468505LFB2       LFB       03/21/19 13:03       WI190111-6       30.03       30.41       mg/L       101       90       110       100       PC       RA         KG468505LFB2       LFB       03/21/19 13:03       WI190111-6       30.03       30.41       mg/L       101       90       110       PC       RA         KG468505LFB2       LFB       03/21/19 14:02       M200.8 ICP-MS       Common Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG468611       U       U       mg/L       104       90       110       90       110       90       110       90       110       90       110       90       110       90       110       90       110       90       110       90       110       90       110       90       110       90       110       90       110       90       101 <th< td=""><td>WG468505ICV</td><td>ICV</td><td>03/21/19 9:38</td><td>WI180530-1</td><td>54.89</td><td></td><td>52.62</td><td>mg/L</td><td>96</td><td>90</td><td>110</td><td></td><td></td><td></td></th<>	WG468505ICV	ICV	03/21/19 9:38	WI180530-1	54.89		52.62	mg/L	96	90	110			
L50524-06DUP WG468505LFB2       DUP LFB       03/21/19 12:59 03/21/19 13:03       W190111-6       30.03       30.41       mg/L       101       90       110       20       RA         Chromium, dissolved       M200.8 ICP-MS       M200.8 ICP-MS       V       M200.8 ICP-MS       Limit       Qual         WG4686611       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG4686611       ICV       03/22/19 14:02       MS190225-2       .05       .05219       mg/L       104       90       110	WG468505LFB1	LFB	03/21/19 12:59	WI190111-6	30.03		30.39	mg/L	101	90	110			
WG468505LFB2       LFB       03/21/19 13:03       WI190111-6       30.03       30.41       mg/L       101       90       110         Chromium, dissolved       M200.8 ICP-MS         AC2 ID       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG4686611       U       03/22/19 14:02       MS190225-2       .05       .05219       mg/L       104       90       110       -       -       -       -       -       -       0.011       0.0011       0.0011       -       -       -       -       -       -       0       mg/L       104       90       110       -       -       -       -       -       -       0.011       0.011       -       -       -       -       -       0.011       0.011       -       -       -       -       0.011       0.0011       -       -       -       -       0.011       0.0011       -       -       -       -       0.011       0.0011       -       -       -       0.011       0.0011       -       -       0.011       0.0011       -       -	L50524-05AS	AS	03/21/19 12:59	WI190111-6	30.03	U	31.87	mg/L	106	90	110			
Chromium, dissolved         M200.8 ICP-MS           AcZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG468611         WG4686111CV         ICV         03/22/19 14:02         MS190225-2         .05         .05219         mg/L         104         90         110	L50524-06DUP	DUP	03/21/19 12:59			U	U	mg/L				0	20	RA
ACZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG468611         WG468611         U         ICV         03/22/19         14:02         MS190225-2         .05         .05219         mg/L         104         90         110 <td< td=""><td>WG468505LFB2</td><td>LFB</td><td>03/21/19 13:03</td><td>WI190111-6</td><td>30.03</td><td></td><td>30.41</td><td>mg/L</td><td>101</td><td>90</td><td>110</td><td></td><td></td><td></td></td<>	WG468505LFB2	LFB	03/21/19 13:03	WI190111-6	30.03		30.41	mg/L	101	90	110			
WG4686611         WG4686611         ICV         03/22/19 14:02         MS190225-2         .05         .05219         mg/L         104         90         110           WG4686611ICB         ICB         03/22/19 14:03         U         mg/L         -0.0011         0.0011         .00011           WG4686611LFB         LFB         03/22/19 14:05         MS190208-2         .05005         .05075         mg/L         101         85         115           L50524-04AS         AS         03/22/19 14:16         MS190208-2         .05005         U         .05192         mg/L         104         70         130         2         20           L50524-04AS         AS         03/22/19 14:16         MS190208-2         .05005         U         .05192         mg/L         101         70         130         2         20         20           Cobalt, dissolved         M200.7 ICP         M200.7 ICP         M200.7 ICP         X         X         X         X         Qual         MG468593         K         Lower         Upper         RPD         Limit         Qual           WG468593ICV         ICV         03/22/19 19:59         II190211-1         2.002         1.965         mg/L         98         95	Chromium, diss	olved		M200.8 I	CP-MS									
WG4686111CV       ICV       03/22/19 14:02       MS190225-2       .05       .05219       mg/L       104       90       110         WG4686111CB       ICB       03/22/19 14:03       MS190208-2       .05005       .05075       mg/L       101       85       115         WG468611LFB       LFB       03/22/19 14:105       MS190208-2       .05005       U       .05075       mg/L       101       85       115         L50524-04AS       AS       03/22/19 14:14       MS190208-2       .05005       U       .05068       mg/L       101       70       130       2       20         L50524-04ASD       ASD       03/22/19 14:16       MS190208-2       .05005       U       .05068       mg/L       101       70       130       2       20         Cobalt, dissolved       ASD       03/22/19 14:16       MS190208-2       .05005       U       .05068       mg/L       101       70       130       2       20         Cobalt, dissolved       MS200.71 ICP       M200.71 ICP       M200.71 ICP       Image: Mage:	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG4686111CB       ICB       03/22/19 14:03       U       mg/L       -0.0011       0.0011         WG468611LFB       LFB       03/22/19 14:05       MS190208-2       .05005       .05075       mg/L       101       85       115         L50524-04AS       AS       03/22/19 14:14       MS190208-2       .05005       U       .05192       mg/L       104       70       130         L50524-04ASD       ASD       03/22/19 14:16       MS190208-2       .05005       U       .05068       mg/L       101       70       130       2       20         Cobalt, dissolved       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG468593ICV       ICV       03/22/19 19:59       II190211-1       2.002       1.965       mg/L       98       95       105       V       V       VG468593ICV       ICV       03/22/19 19:59       II190211-1       2.002       1.965       mg/L       98       95       105       V       V       VG468593ICB       ICB       03/22/19 20:05       U       mg/L       101       85       115       V       V       V       <	WG468611													
WG468611LFB L50524-04AS       LFB       03/22/19 14:05       MS190208-2       .05005       U       .05075       mg/L       101       85       115         L50524-04AS       AS       03/22/19 14:14       MS190208-2       .05005       U       .05192       mg/L       104       70       130       2       20         Cobalt, dissolvet       MS200.7 ICP       M200.7 ICP       MS200.7 ICP       MS40208-2       1.965       mg/L       98       95       105       Limit       Qual         WG468593ICV       ICV       03/22/19 19:59       II190211-1       2.002       1.965       mg/L       98       95       105 </td <td>WG468611ICV</td> <td>ICV</td> <td>03/22/19 14:02</td> <td>MS190225-2</td> <td>.05</td> <td></td> <td>.05219</td> <td>mg/L</td> <td>104</td> <td>90</td> <td>110</td> <td></td> <td></td> <td></td>	WG468611ICV	ICV	03/22/19 14:02	MS190225-2	.05		.05219	mg/L	104	90	110			
L50524-04AS L50524-04ASD       AS ASD       03/22/19 14:14       MS190208-2 MS190208-2       05005 .05005       U       .05192 .05008       mg/L       104       70       130       2       20         Cobalt, dissolved       MS190208-2       .05005       U       .05192 .05005       mg/L       104       70       130       2       20         Cobalt, dissolved       MS190208-2       .05005       U       .05068       mg/L       104       70       130       2       20         Cobalt, dissolved       MS190208-2       .05005       U       .05068       mg/L       104       70       130       2       20         Cobalt, dissolved       MS200.7 ICP         MG4685931       CV       Analyzed       PCN/SCN       QC       Sample       Found Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG468593ICV       ICV       03/22/19 19:59       II190211-1       2.002       1.965       mg/L       98       95       105       105       104       70.03	WG468611ICB	ICB	03/22/19 14:03				U	mg/L		-0.0011	0.0011			
L50524-04ASD       ASD       03/22/19 14:16       MS190208-2       .05005       U       .05068       mg/L       101       70       130       2       20         Cobalt, dissolved       M200.7 ICP         ACZ ID       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RPD       Limit       Qual         WG468593ICV       ICV       03/22/19 19:59       II190211-1       2.002       1.965       mg/L       98       95       105       V       V       VG468593ICB       ICB       03/22/19 20:05       II190211-1       2.002       1.965       mg/L       98       95       105       V       V       V       V       V       V       0.03       0.03       V       V       V       V       V       V       0.03       0.03       V       V       V       V       0.03       0.03       V	WG468611LFB	LFB	03/22/19 14:05	MS190208-2	.05005		.05075	mg/L	101	85	115			
Cobalt, dissolved         M200.7 ICP           ACZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG468593I         ICV         03/22/19 19:59         II190211-1         2.002         1.965         mg/L         98         95         105         VG468593ICB         U         mg/L         -0.03         0.03         VG468593ICB         ICB         03/22/19 20:05         U         mg/L         101         85         115         VI	L50524-04AS	AS	03/22/19 14:14	MS190208-2	.05005	U	.05192	mg/L	104	70	130			
ACZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RPD         Limit         Qual           WG468593         WG468593ICV         ICV         03/22/19 19:59         II190211-1         2.002         1.965         mg/L         98         95         105	L50524-04ASD	ASD	03/22/19 14:16	MS190208-2	.05005	U	.05068	mg/L	101	70	130	2	20	
WG468593         WG468593ICV       ICV       03/22/19 19:59       II190211-1       2.002       1.965       mg/L       98       95       105         WG468593ICB       ICB       03/22/19 20:05       U       mg/L       -0.03       0.03         WG468593LFB       LFB       03/22/19 20:18       II190312-3       .501       .504       mg/L       101       85       115	Cobalt, dissolve	əd		M200.7 I	CP									
WG468593ICV       ICV       03/22/19 19:59       II190211-1       2.002       1.965       mg/L       98       95       105         WG468593ICB       ICB       03/22/19 20:05       U       mg/L       -0.03       0.03         WG468593LFB       LFB       03/22/19 20:18       II190312-3       .501       .504       mg/L       101       85       115	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593ICB         ICB         03/22/19 20:05         U         mg/L         -0.03         0.03           WG468593LFB         LFB         03/22/19 20:18         II190312-3         .501         .504         mg/L         101         85         115	WG468593													
WG468593ICB         ICB         03/22/19 20:05         U         mg/L         -0.03         0.03           WG468593LFB         LFB         03/22/19 20:18         II190312-3         .501         .504         mg/L         101         85         115	WG468593ICV	ICV	03/22/19 19:59	II190211-1	2.002		1.965	mg/L	98	95	105			
WG468593LFB LFB 03/22/19 20:18 II190312-3 .501 .504 mg/L 101 85 115											0.03			
L50524-03AS AS 03/22/19 20:47 II190312-3 .501 U .501 mg/L 100 85 115				II190312-3	.501			mg/L	101		115			
	L50524-03AS	AS	03/22/19 20:47	II190312-3	.501	U	.501	mg/L	100	85	115			
L50524-03ASD ASD 03/22/19 20:57 II190312-3 .501 U .499 mg/L 100 85 115 0 20				II190312-3				mg/L			115	0	20	
L50524-07AS AS 03/22/19 21:13 II190312-3 .501 U .49 mg/L 98 85 115	L50524-07AS	AS	03/22/19 21:13	II190312-3	.501	U	.49	mg/L	98	85	115			
L50524-07ASD ASD 03/22/19 21:16 II190312-3 .501 U .501 mg/L 100 85 115 2 20	L50524-07ASD	ASD	03/22/19 21:16	II190312-3	.501	U	.501	mg/L	100	85	115	2	20	

### **CRG Mining, LLC**

#### ACZ Project ID: L50524

Conductivity @2	5C		SM2510B										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468112													
WG468112LCSW2	LCSW	03/15/19 17:14	PCN57524	1410		1440	umhos/cm	102	90	110			
WG468112LCSW5	LCSW	03/15/19 21:02	PCN57524	1410		1420	umhos/cm	101	90	110			
WG468112LCSW8	LCSW	03/16/19 0:47	PCN57524	1410		1420	umhos/cm	101	90	110			
L50524-02DUP	DUP	03/16/19 4:58			197	198	umhos/cm				1	20	
WG468112LCSW11	LCSW	03/16/19 5:04	PCN57524	1410		1400	umhos/cm	99	90	110			
L50545-01DUP	DUP	03/16/19 10:44			1370	1370	umhos/cm				0	20	
WG468112LCSW14	LCSW	03/16/19 10:50	PCN57524	1410		1400	umhos/cm	99	90	110			
Copper, dissolve	d		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593													
WG468593ICV	ICV	03/22/19 19:59	II190211-1	2		1.944	mg/L	97	95	105			
WG468593ICB	ICB	03/22/19 20:05		-		U	mg/L		-0.03	0.03			
WG468593LFB	LFB	03/22/19 20:18	II190312-3	.4995		.499	mg/L	100	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	.4995	U	.509	mg/L	102	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	.4995	U	.505	mg/L	101	85	115	1	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	.4995	U	.507	mg/L	102	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	.4995	U	.508	mg/L	102	85	115	0	20	
Cyanide, total			M335.4 - 0	Colorimet	ric w/ distil	lation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468606													
WG468606ICV	ICV	03/22/19 13:29	WI190316-11	.3003		.2951	mg/L	98	90	110			
WG468606ICB	ICB	03/22/19 13:30				U	mg/L		-0.003	0.003			
WG468615													
WG468446LRB	LRB	03/22/19 14:09				U	mg/L		-0.003	0.003			
WG468446LFB	LFB	03/22/19 14:10	WI190316-8	.2		.2024	mg/L	101	90	110			
L49989-06DUP	DUP	03/22/19 14:12			U	U	mg/L				0	20	RA
L49990-06LFM	LFM	03/22/19 14:14	WI190316-8	.2	U	.1986	mg/L	99	90	110			
L50565-02LFM	LFM	03/22/19 14:33	WI190316-8	.2	U	.1984	mg/L	99	90	110			
L50566-01DUP	DUP	03/22/19 14:35			U	U	mg/L				0	20	RA
WG468625													
WG468547LRB	LRB	03/22/19 15:38				U	mg/L		-0.003	0.003			
WG468547LFB	LFB	03/22/19 15:39	WI190316-8	.2		.2106	mg/L	105	90	110			
L50524-07DUP	DUP	03/22/19 15:40			U	U	mg/L				0	20	RA
L50524-08LFM	LFM	03/22/19 15:42	WI190316-8	.2	U	.208	mg/L	104	90	110			
Iron, dissolved			M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593													
WG468593ICV	ICV	03/22/19 19:59	II190211-1	2		1.936	mg/L	97	95	105			
WG468593ICB	ICB	03/22/19 20:05				U	mg/L		-0.06	0.06			
WG468593LFB	LFB	03/22/19 20:18	II190312-3	1.0018		1.013	mg/L	101	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	1.0018	U	1.022	mg/L	102	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	1.0018	U	1.019	mg/L	102	85	115	0	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	1.0018	.02	1.023	mg/L	100	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	1.0018	.02	1.022	mg/L	100	85	115	0	20	

### **CRG Mining, LLC**

### ACZ Project ID: L50524

Lead, dissolved			M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468611													
WG468611ICV	ICV	03/22/19 14:02	MS190225-2	.05		.05008	mg/L	100	90	110			
WG468611ICB	ICB	03/22/19 14:03				U	mg/L		-0.00022	0.00022			
WG468611LFB	LFB	03/22/19 14:05	MS190208-2	.0496		.05184	mg/L	105	85	115			
L50524-04AS	AS	03/22/19 14:14	MS190208-2	.0496	.0001	.05351	mg/L	108	70	130			
L50524-04ASD	ASD	03/22/19 14:16	MS190208-2	.0496	.0001	.05234	mg/L	105	70	130	2	20	
Magnesium, dis	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593													
WG468593ICV	ICV	03/22/19 19:59	II190211-1	100		97.55	mg/L	98	95	105			
WG468593ICB	ICB	03/22/19 20:05				U	mg/L		-0.6	0.6			
WG468593LFB	LFB	03/22/19 20:18	II190312-3	50.12891		50.36	mg/L	100	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	50.12891	5.3	59.21	mg/L	108	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	50.12891	5.3	55.54	mg/L	100	85	115	6	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	50.12891	5.4	56.45	mg/L	102	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	50.12891	5.4	55.43	mg/L	100	85	115	2	20	
Manganese, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593													
WG468593ICV	ICV	03/22/19 19:59	II190211-1	2		1.9318	mg/L	97	95	105			
WG468593ICB	ICB	03/22/19 20:05				U	mg/L		-0.015	0.015			
WG468593LFB	LFB	03/22/19 20:18	II190312-3	.4995		.5035	mg/L	101	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	.4995	U	.5037	mg/L	101	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	.4995	U	.5019	mg/L	100	85	115	0	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	.4995	U	.5006	mg/L	100	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	.4995	U	.5051	mg/L	101	85	115	1	20	
			M245.1 (										
Mercury, total			101240.10	JVAA									
•	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
ACZ ID	Туре	Analyzed			Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
Mercury, total ACZ ID WG468361 WG468361ICV	Type	Analyzed 03/21/19 12:54			Sample	Found	Units mg/L	Rec%	Lower 95	Upper 105	RPD	Limit	Qual
ACZ ID WG468361			PCN/SCN	QC	Sample						RPD	Limit	Qual
ACZ ID WG468361 WG468361ICV	ICV	03/21/19 12:54	PCN/SCN	QC	Sample	.00505	mg/L		95	105	RPD	Limit	Qual
ACZ ID WG468361 WG468361ICV WG468361ICB	ICV ICB	03/21/19 12:54 03/21/19 12:54	PCN/SCN	QC	Sample	.00505 U	mg/L mg/L		95 -0.0002	105 0.0002	RPD	Limit	Qual
ACZ ID WG468361 WG468361ICV WG468361ICB WG468361LRB WG468361LFB	ICV ICB LRB	03/21/19 12:54 03/21/19 12:54 03/21/19 12:56	PCN/SCN HG190214-3	QC .004995	Sample	.00505 U U	mg/L mg/L mg/L	101	95 -0.0002 -0.00044	105 0.0002 0.00044	RPD	Limit	Qual
ACZ ID WG468361 WG468361ICV WG468361ICB WG468361ICB	ICV ICB LRB LFB LFM	03/21/19 12:54 03/21/19 12:54 03/21/19 12:56 03/21/19 12:57 03/21/19 13:31	PCN/SCN HG190214-3 HG190315-3	QC .004995 .002002 .002002		.00505 U U .00186	mg/L mg/L mg/L mg/L	101 93	95 -0.0002 -0.00044 85	105 0.0002 0.00044 115			Qual
ACZ ID WG468361 WG468361ICV WG468361ICB WG468361LCB WG468361LFB L50524-05LFM	ICV ICB LRB LFB	03/21/19 12:54 03/21/19 12:54 03/21/19 12:56 03/21/19 12:57	PCN/SCN HG190214-3 HG190315-3 HG190315-3	QC .004995 .002002	U	.00505 U U .00186 .00194	mg/L mg/L mg/L mg/L	101 93 97	95 -0.0002 -0.00044 85 85	105 0.0002 0.00044 115 115	RPD	Limit 20	Qual

### CRG Mining, LLC

### ACZ Project ID: L50524

Nickel, dissolved	l		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593													
WG468593ICV	ICV	03/22/19 19:59	II190211-1	2.004		2.0135	mg/L	100	95	105			
WG468593ICB	ICB	03/22/19 20:05				U	mg/L		-0.024	0.024			
WG468593LFB	LFB	03/22/19 20:18	II190312-3	.5		.5249	mg/L	105	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	.5	U	.5203	mg/L	104	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	.5	U	.5198	mg/L	104	85	115	0	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	.5	U	.513	mg/L	103	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	.5	U	.5196	mg/L	104	85	115	1	20	
Nitrate/Nitrite as	N, disse	olved	M353.2 - /	Automate	d Cadmiur	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468121													
WG468121ICV	ICV	03/15/19 21:22	WI190207-3	2.416		2.543	mg/L	105	90	110			
WG468121ICB	ICB	03/15/19 21:23				U	mg/L		-0.02	0.02			
WG468121LFB	LFB	03/15/19 21:28	WI181204-13	2		1.998	mg/L	100	90	110			
L50504-01AS	AS	03/15/19 21:31	WI181204-13	2	.2	2.223	mg/L	101	90	110			
L50509-01DUP	DUP	03/15/19 21:33			U	U	mg/L				0	20	RA
L50524-03AS	AS	03/15/19 21:50	WI181204-13	2	.14	2.148	mg/L	100	90	110			
L50524-04DUP	DUP	03/15/19 21:53			.13	.135	mg/L				4	20	RA
Nitrite as N, disso	olved		M353.2 - /	Automate	d Cadmiur	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468121													
WG468121ICV	ICV	03/15/19 21:22	WI190207-3	.609		.639	mg/L	105	90	110			
WG468121ICB	ICB	03/15/19 21:23				U	mg/L		-0.01	0.01			
WG468121LFB	LFB	03/15/19 21:28	WI181204-13	1		.978	mg/L	98	90	110			
L50504-01AS	AS	03/15/19 21:31	WI181204-13	1	.02	1.002	mg/L	98	90	110			
L50509-01DUP	DUP	03/15/19 21:33			U	U	mg/L				0	20	RA
L50524-03AS	AS	03/15/19 21:50	WI181204-13	1	U	.983	mg/L	98	90	110			
							-					~~	RA
L50524-04DUP	DUP	03/15/19 21:53			U	U	mg/L				0	20	RA
L50524-04DUP <b>pH (lab)</b>	DUP	03/15/19 21:53	SM4500H	+ B	U		-				0	20	KA
	DUP Type	03/15/19 21:53 Analyzed	SM4500H PCN/SCN	+ B QC	U Sample		-	Rec%	Lower	Upper	0 RPD	20 Limit	Qual
pH (lab)						U	mg/L	Rec%	Lower	Upper			
pH (lab) ACZ ID	Туре					U	mg/L	Rec%	Lower 5.9	Upper 6.1			
pH (lab) ACZ ID WG468112	Туре	Analyzed	PCN/SCN	QC		U Found	mg/L Units						
pH (lab) ACZ ID WG468112 WG468112LCSW1	Type	Analyzed 03/15/19 17:12	PCN/SCN PCN56769	QC 6		U Found 6	mg/L Units units	100	5.9	6.1			
pH (lab)           ACZ ID           WG468112           WG468112LCSW1           WG468112LCSW4	Type LCSW LCSW	Analyzed 03/15/19 17:12 03/15/19 20:59	PCN/SCN PCN56769 PCN56769	QC 6 6		U Found 6 6	mg/L Units units units	100 100	5.9 5.9	6.1 6.1			
pH (lab)           ACZ ID           WG468112           WG468112LCSW1           WG468112LCSW4           WG468112LCSW7	Type LCSW LCSW LCSW DUP	Analyzed 03/15/19 17:12 03/15/19 20:59 03/16/19 0:45	PCN/SCN PCN56769 PCN56769	QC 6 6	Sample	U Found 6 6 6	mg/L Units units units units	100 100	5.9 5.9	6.1 6.1	RPD	Limit	
pH (lab)           ACZ ID           WG468112           WG468112LCSW1           WG468112LCSW4           WG468112LCSW7           L50524-02DUP	Type LCSW LCSW LCSW DUP	Analyzed 03/15/19 17:12 03/15/19 20:59 03/16/19 0:45 03/16/19 4:58	PCN/SCN PCN56769 PCN56769 PCN56769	QC 6 6 6	Sample	U Found 6 6 6 8.3	mg/L Units units units units units	100 100 100	5.9 5.9 5.9	6.1 6.1 6.1	RPD	Limit	

### **CRG Mining, LLC**

### ACZ Project ID: L50524

MC468593         VIC         Object of the transmission of the transmission of transm	Potassium, diss	olved		M200.7 I	СР									
WG4685930CN         ICV         0322119 19:59         IIII0311-3         10         19.63         mpl.         98         95         105         V         V         V         V         MG4685931C8         ICI         0322119 20:05         IIII0311-3         101.8741         5.00         mpl.         98         95         105         0.0         V	ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG4888391C8         ICB         0322/19 20.05         No.         mother         m	WG468593													
WG488933LFB         LFB         03/22/19 20:18         1190312.3         101.8741         5         100.8         mpL         99         85         115           L5052-403AS         AS         03/22/19 20:71         1190312.3         101.8741         5         100.8         mpL         109         85         115         7         20           L5052-403AS         AS         03/22/19 20:71         1190312.3         101.8741         6         102.7         mpL         100         85         115         7         20           L5052-407AS         AS         03/22/19 20:11         1190312.3         101.8741         6         102.7         mpL         100         85         115         7         20           Residue, Filter-Libro and the particity of the	WG468593ICV	ICV	03/22/19 19:59	II190211-1	20		19.63	mg/L	98	95	105			
LB0524-03AS       AS       03/22/19 20:47       1199312-3       101.8741       .5       108.6       mpl.       106       85       115       7       20         LB0524-07ASD       AS       03/22/19 20:57       1190312-3       101.8741       .6       100.8       mpl.       99       85       115       2       20         L50524-07ASD       AS       03/22/19 20:57       1190312-3       101.8741       .6       100.8       mpl.       98       85       115       2       20         Control 1000       BS       115       7       A0       A0       A0       A0       A0       A0       A0       BS       115       2       20 <t< td=""><td>WG468593ICB</td><td>ICB</td><td>03/22/19 20:05</td><td></td><td></td><td></td><td>U</td><td>mg/L</td><td></td><td>-0.6</td><td>0.6</td><td></td><td></td><td></td></t<>	WG468593ICB	ICB	03/22/19 20:05				U	mg/L		-0.6	0.6			
LB652-403ASD         ASD         03/22/19 20:57         1190312.3         101.8741         5.         101.3         mpL         99         85         115         7         20           LB652-407AS         ASD         03/22/19 21:16         190312.3         101.8741         8         102.7         mpL         80         85         115         7         20           LB652-407AS         ASD         03/22/19 21:16         190312.3         101.8741         8         102.7         mpL         80         85         115         7         20         2           Recidue, Filter>////////////////////////////////////	WG468593LFB	LFB	03/22/19 20:18	II190312-3	101.8741		100.8	mg/L	99	85	115			
L59524-07AS       AS       0322/19 21:13       1190312-3       101 8741       6.       102.7       mpl.       100       85       115       2       20         Residue, Fitte-JJJ @180C       SM2540C         Kasidue, Fitte-JJJ @180C       SM2540C         VC468325       SM26402         WG468325       VE       VE         WG468325       VE														

### **CRG Mining, LLC**

#### ACZ Project ID: L50524

Vanadium, disse	olved		M200.7 IC	Р									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593													
WG468593ICV	ICV	03/22/19 19:59	II190211-1	2		2.0152	mg/L	101	95	105			
WG468593ICB	ICB	03/22/19 20:05				U	mg/L		-0.015	0.015			
WG468593LFB	LFB	03/22/19 20:18	II190312-3	.502		.5165	mg/L	103	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	.502	U	.5549	mg/L	111	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	.502	U	.5176	mg/L	103	85	115	7	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	.502	U	.5227	mg/L	104	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	.502	U	.5127	mg/L	102	85	115	2	20	
Zinc, dissolved			M200.7 IC	Р									
ACZ ID	Туре												
	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593	туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468593	ICV	Analyzed 03/22/19 19:59	PCN/SCN	QC 2	Sample	Found 1.909	Units mg/L	Rec% 95	Lower 95	Upper 105	RPD	Limit	Qual
					Sample						RPD	Limit	Qual
WG468593 WG468593ICV	ICV	03/22/19 19:59			Sample	1.909	mg/L		95	105	RPD	Limit	Qual
WG468593 WG468593ICV WG468593ICB	ICV ICB	03/22/19 19:59 03/22/19 20:05	1190211-1	2	Sample .01	1.909 U	mg/L mg/L	95	95 -0.03	105 0.03	RPD	Limit	Qual
WG468593 WG468593ICV WG468593ICB WG468593LFB	ICV ICB LFB	03/22/19 19:59 03/22/19 20:05 03/22/19 20:18	II190211-1 II190312-3	2 .4942		1.909 U .518	mg/L mg/L mg/L	95 105	95 -0.03 85	105 0.03 115	RPD 7	Limit	Qual
WG468593 WG468593ICV WG468593ICB WG468593LFB L50524-03AS	ICV ICB LFB AS	03/22/19 19:59 03/22/19 20:05 03/22/19 20:18 03/22/19 20:47	II190211-1 II190312-3 II190312-3	2 .4942 .4942	.01	1.909 U .518 .567	mg/L mg/L mg/L mg/L	95 105 113	95 -0.03 85 85	105 0.03 115 115			Qual



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#### **CRG Mining, LLC**

ACZ Project ID: L50524

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L50524-01	WG468615	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468121	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG468717	Sulfate	D516-02/-07 - Turbidimetric	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L50524-02	WG468418	Chloride	SM4500CI-E	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG468615	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468121	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG468717	Sulfate	D516-02/-07 - Turbidimetric	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

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#### **CRG Mining, LLC**

ACZ Project ID: L50524

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L50524-03	WG468418	Chloride	SM4500CI-E	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG468615	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468121	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG468717	Sulfate	D516-02/-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG468112	Total Alkalinity	SM2320B - Titration	RO	The duplicate originally assigned to this sample was not used for precision assessment because residue density exceeded the method limits. Another duplicate in the batch was used to assess precision. Method required duplicate frequency was not met.
L50524-04	WG468418	Chloride	SM4500CI-E	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG468615	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468121	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG468112	Total Alkalinity	SM2320B - Titration	RO	The duplicate originally assigned to this sample was not used for precision assessment because residue density exceeded the method limits. Another duplicate in the batch was used to assess precision. Method required duplicate frequency was not met.

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#### **CRG Mining, LLC**

ACZ Project ID: L50524

frequency was not met.

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L50524-05	WG468505	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468615	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468121	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG468112	Total Alkalinity	SM2320B - Titration	RO	The duplicate originally assigned to this sample was not used for precision assessment because residue density exceeded the method limits. Another duplicate in the batch was used to assess precision. Method required duplicate frequency was not met.
L50524-06	WG468505	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468615	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468121	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG468112	Total Alkalinity	SM2320B - Titration	RO	The duplicate originally assigned to this sample was not used for precision assessment because residue density exceeded the method limits. Another duplicate in the batch was used to assess precision. Method required duplicate frequency was not met

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#### **CRG Mining, LLC**

ACZ Project ID: L50524

frequency was not met.

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L50524-07	WG468505	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468625	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468121	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG468112	Total Alkalinity	SM2320B - Titration	RO	The duplicate originally assigned to this sample was not used for precision assessment because residue density exceeded the method limits. Another duplicate in the batch was used to assess precision. Method required duplicate frequency was not met.
L50524-08	WG468505	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468625	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468121	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG468112	Total Alkalinity	SM2320B - Titration	RO	The duplicate originally assigned to this sample was not used for precision assessment because residue density exceeded the method limits. Another duplicate in the batch was used to assess precision. Method required duplicate frequency was not met

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#### **CRG Mining, LLC**

ACZ Project ID: L50524

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L50524-09	WG468505	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468625	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG468121	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG468112	Total Alkalinity	SM2320B - Titration	RO	The duplicate originally assigned to this sample was not used for precision assessment because residue density exceeded the method limits. Another duplicate in the batch was used to assess precision. Method required duplicate frequency was not met.



ACZ Project ID: L50524

No certification qualifiers associated with this analysis

<b>ACZ</b> Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493		Sample Receipt		
CRG Mining, LLC ACZ F	Project ID:		L50524	
	Received: 0	3/15/201	19 10:57	
	ceived By:	0/	mjj	
Receipt Verification	te Printed:	3/	15/2019	
	YES	NO	NA	
1) Is a foreign soil permit included for applicable samples?			Х	
2) Is the Chain of Custody form or other directive shipping papers present?	Х			
3) Does this project require special handling procedures such as CLP protocol?		Х		
4) Are any samples NRC licensable material?			Х	
5) If samples are received past hold time, proceed with requested short hold time analyses?	Х			
6) Is the Chain of Custody form complete and accurate?		Х		
The date/time was entered on the COC per the information present on the sample containers for sample(s) 1-9.				
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples	s? X			
A change was made in the Sample ID: Line 7 section prior to ACZ custody.				
Samples/Containers				
	YES	NO	NA	
8) Are all containers intact and with no leaks?	X			
9) Are all labels on containers and are they intact and legible?	Х			
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	Х			
11) For preserved bottle types, was the pH checked and within limits? <sup>1</sup>	Х			
12) Is there sufficient sample volume to perform all requested work?	Х			
13) Is the custody seal intact on all containers?			Х	
14) Are samples that require zero headspace acceptable?			Х	
15) Are all sample containers appropriate for analytical requirements?	Х			
16) Is there an Hg-1631 trip blank present?			Х	
17) Is there a VOA trip blank present?			Х	
18) Were all samples received within hold time?	Х			
	NA indica	ates Not Ap	oplicable	

### Chain of Custody Related Remarks

Client	Contact	Remarks
Olicit	Contact	Remarks

Shipping Containers				
Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
5306	0.2	<=6.0	15	Yes

#### Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

REPAD LPII 2012-03

ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 33		Sample Receipt
CRG Mining, LLC	ACZ Project ID:	L50524
Q4 GL, R, C	Date Received:	03/15/2019 10:57
	Received By:	mjj
	Date Printed:	3/15/2019
Client must contact an ACZ Project Mana	ager if analysis should not proceed for samples received	1

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

<sup>1</sup> The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

<b>HLi</b> Laborate 2773 Downhill Drive Steamboat Springs, C	ories, Inc.		505	52L	ł	CH	AIN	of CU	510
Report to:	.0 00407 (000) 334	.0490							
Name: JAKE WILKINSON			Addres	ss: 5	10 S	outh	wis	(ONS/N	) St
Company: CAL MININ	6		60	NNI	SON,	(0 5	8123	30	
E-mail: GolDLinks 1987CG					970.				
Copy of Report to:									
Name:			E-mail	:					-
Company:			Teleph						
Invoice to:									
Name: JAKE WILKINSIN			Addres	ss: S	10 50	all	wi5(	onsin	S+
Company: Ch6 MiNiNG									
E-mail: (-oLDLINKS1987C)	(mail.com		Teleph	none:	9'70 -	417 -	3311		
If sample(s) received past holding time	(HT), or if insufficien		mains t	o comp	lete			YES	
analysis before expiration, shall ACZ pr If "NO" then ACZ will contact client for further instruction. If no	oceed with requeste	d short	HT ana	alyses?		even if HT	is expired. •	NO and data will be (	
Are samples for SDWA Compliance Mo		-,	Yes		_	0	X		
If yes, please include state forms. Resu	Its will be reported t		or Colo	rado.					
Sampler's Name: Iske wilkinson Sa	mpler's Site Informa	tion	State_	0	Z	ip code	8123	O Time	
*Sampler's Signature:	*i attest to tampering	with the sa	mple in any	way, is con	sidered fraud	and punish:	ible by State	e Law.	
PROJECT INFORMATION				ANAL	YSES REQU	JESTED (A	attach list	or use quote	number)
Quote #: Bottle Ornoun # B	5041609		ers						
PO#: Q4 GL, h, C			tain						
Reporting state for compliance testing:			Containers						
Check box if samples include NRC license			Ğ						
SAMPLE IDENTIFICATION	DATE:TIME	Matrix							
GL1 3/14/19 7	(11:05	SW	5						_
GL2 envered	loius	Sw	5	ļ					
Mald/c	ON 11130	SW	5						
	7 Bottle RIVO		S	ļ					
BM2	Living 15 12120		2						_
mm 3	12rus	SW	2	ļ				-	_
CM 01	13:05	SW	S						
CM2	13/20	Siv	S						_
CM3 L	<u></u>	SW	5						_
	entered per	66.10-							
Matrix SW (Surface Water) · GW (Grout	B NEEdin CONVY (Nyastesy	vəyam D	vv (Drink	ang wate	a) SL (SIL	iuge) · Si	J (301) -		ner (ohe
REMARKS									
<b>.</b>									
								-	
3									
Please refer to	ACZ's terms & cond	ditions	located						
RELINQUISHED BY:	DATE:T	IME			RECEIV	ED BY			DATE:
The in	1:45 P	m.				//		3/1:	5/19
	7 11 1 24	-	ſ			-			
F	3-14-19	1			/				

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Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

# Bottle Order Bottle List

Account: CRG/CRG Mining, LLC

Bottle Order: BO41609

Bill to Account: Bill to ACZ Ship Date Requested: 02/11/2019 Request Placed at: 02/08/2019 11:35 Service Requested: UPS Ground

#### Sampling supplies

PACK	Qty	ACZ ID	Туре	Description
	1	COC	Chain of Custody	Chain of Custody, 1 for 10 samples.
	2	SEAL	Custody Seal	Custody seals for cooler, two for each cooler.
	1	RETURN	Return Address	Return Address label, one for each cooler.
	45	LABELS	Sample Labels	ACZ supplied labels for sample containers

#### **ACZ Coolers**

	Qty 1	ACZ ID 5306	Size Large	Weight 13	UPS Tracking Number 1Z8101300317233601
Quote r Sample			LINE-SW		2 Surface water samples quarterly, client is not field filtering ACZ is responsible for necessary sample filtering
PACK	Qty	Туре	Size	Filter/Raw/Preserve	e Instructions
	1	GREEN PC	125 ML	Green pre-cleaned Filtered/Nitiric	Metals (dissolved including ICPMS) - This is a filtered sample. Completely fill container.
	1	PURPLE	250 ML	Raw/NaOH	Cyanide - Do not overfill as there is Sodium Hydroxide in the bottle.
	1	RAW	500 ML	Raw	Wet Chemistry (analyses that do not require preservative or filtration) - Completely fill container.
	1	RED	250 ML	Raw/Nitric	Metals (total except ICPMS) - Do not overfill as there is Nitric Acid in the bottle.
	1	WHITE	250 ML	Filtered	Wet chemistry (dissolved) - This is a filtered sample. Completely fill container.

Prepared By/Date:



Analytical Report

July 26, 2019

Report to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231 Bill to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231

Project ID: ACZ Project ID: L53166

Jake Wilkinson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 11, 2019. This project has been assigned to ACZ's project number, L53166. Please reference this number in all future inquiries.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L53166. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after August 25, 2019. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.

Bill Lane has reviewed and approved this report







Project ID: Sample ID: GL 1

## Inorganic Analytical Results

ACZ Sample ID:	L53166-01
Date Sampled:	07/10/19 13:15
Date Received:	07/11/19
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					07/15/19 14:28	mss2
Lab Filtration (0.45um)	M200.7/200.8/3005A							07/19/19 15:20	eij
& Acidification									
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	07/23/19 17:17	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/22/19 16:53	bsu
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	07/22/19 16:53	bsu
Barium, dissolved	M200.7 ICP	1	0.008	В	mg/L	0.007	0.04	07/23/19 17:17	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	07/22/19 16:53	bsu
Cadmium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	07/22/19 16:53	bsu
Calcium, dissolved	M200.7 ICP	1	9.0		mg/L	0.1	0.5	07/23/19 17:17	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/22/19 16:53	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:17	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:17	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	07/23/19 17:17	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	07/22/19 16:53	bsu
Magnesium, dissolved	M200.7 ICP	1	3.3		mg/L	0.2	1	07/23/19 17:17	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:17	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/17/19 10:43	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/23/19 17:17	dcm
Potassium, dissolved	M200.7 ICP	1	0.3	В	mg/L	0.2	1	07/23/19 17:17	dcm
Sodium, dissolved	M200.7 ICP	1	2.4		mg/L	0.2	1	07/23/19 17:17	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/24/19 12:27	aeh
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:17	dcm



Project ID: Sample ID: GL 1

## Inorganic Analytical Results

ACZ Sample ID: **L53166-01** Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	41.0			mg/L	2	20	07/15/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Total Alkalinity		1	41.0		*	mg/L	2	20	07/15/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.7			%			07/26/19 0:00	calc
Sum of Anions			0.822			meq/L			07/26/19 0:00	calc
Sum of Cations			0.834			meq/L			07/26/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	07/16/19 13:11	wtc
Conductivity @25C	SM2510B	1	79			umhos/cm	1	10	07/15/19 21:00	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/16/19 15:22	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		36			mg/L	0.2	5	07/26/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/15/19 16:22	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	07/26/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	07/12/19 2:17	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/12/19 2:17	pjb
pH (lab)	SM4500H+ B	1	8.0	н		units	0.1	0.1	07/15/19 21:00	enb
Residue, Filterable (TDS) @180C	SM2540C	1	54			mg/L	20	40	07/15/19 10:35	emk
Sulfate	D516-02/-07 - Turbidimetric	1		U		mg/L	1	5	07/22/19 9:41	mss2



Project ID: Sample ID: GL 2

## Inorganic Analytical Results

ACZ Sample ID:	L53166-02
Date Sampled:	07/10/19 13:15
Date Received:	07/11/19
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					07/16/19 10:20	mss2
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							07/19/19 15:20	eij
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	07/23/19 17:20	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/22/19 16:55	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0026		mg/L	0.0002	0.001	07/22/19 16:55	bsu
Barium, dissolved	M200.7 ICP	1	0.010	В	mg/L	0.007	0.04	07/23/19 17:20	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	07/22/19 16:55	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00442		mg/L	0.00005	0.0003	07/22/19 16:55	bsu
Calcium, dissolved	M200.7 ICP	1	25.7		mg/L	0.1	0.5	07/23/19 17:20	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/22/19 16:55	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:20	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:20	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	07/23/19 17:20	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0006		mg/L	0.0001	0.0005	07/22/19 16:55	bsu
Magnesium, dissolved	M200.7 ICP	1	7.3		mg/L	0.2	1	07/23/19 17:20	dcm
Manganese, dissolved	M200.7 ICP	1	0.03	В	mg/L	0.01	0.05	07/23/19 17:20	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/17/19 10:44	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/23/19 17:20	dcm
Potassium, dissolved	M200.7 ICP	1	0.8	В	mg/L	0.2	1	07/23/19 17:20	dcm
Sodium, dissolved	M200.7 ICP	1	4.3		mg/L	0.2	1	07/23/19 17:20	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/24/19 12:30	aeh
Zinc, dissolved	M200.7 ICP	1	0.41		mg/L	0.01	0.05	07/23/19 17:20	dcm



Project ID: Sample ID: GL 2

## Inorganic Analytical Results

ACZ Sample ID: **L53166-02** Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	73.5			mg/L	2	20	07/15/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Total Alkalinity		1	73.5		*	mg/L	2	20	07/15/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-6.7			%			07/26/19 0:00	calc
Sum of Anions			2.4			meq/L			07/26/19 0:00	calc
Sum of Cations			2.1			meq/L			07/26/19 0:00	calc
Chloride	SM4500CI-E	1	1.8	В		mg/L	0.5	2	07/16/19 13:11	wtc
Conductivity @25C	SM2510B	1	211			umhos/cm	1	10	07/15/19 21:09	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/16/19 16:32	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		94			mg/L	0.2	5	07/26/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/15/19 16:25	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.34			mg/L	0.02	0.1	07/26/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.34		*	mg/L	0.02	0.1	07/12/19 2:20	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/12/19 2:20	pjb
pH (lab)	SM4500H+ B	1	8.2	Н		units	0.1	0.1	07/15/19 21:09	enb
Residue, Filterable (TDS) @180C	SM2540C	1	134			mg/L	20	40	07/15/19 10:36	emk
Sulfate	D516-02/-07 - Turbidimetric	1	39.2			mg/L	1	5	07/22/19 9:41	mss2



Project ID: Sample ID: GL 3

## Inorganic Analytical Results

ACZ Sample ID:	L53166-03
Date Sampled:	07/10/19 13:15
Date Received:	07/11/19
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					07/16/19 10:40	mss2
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							07/19/19 15:20	eij
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	07/23/19 17:23	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/22/19 16:57	bsu
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	07/22/19 16:57	bsu
Barium, dissolved	M200.7 ICP	1	0.007	В	mg/L	0.007	0.04	07/23/19 17:23	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	07/22/19 16:57	bsu
Cadmium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	07/22/19 16:57	bsu
Calcium, dissolved	M200.7 ICP	1	9.3		mg/L	0.1	0.5	07/23/19 17:23	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/22/19 16:57	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:23	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:23	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	07/23/19 17:23	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	07/22/19 16:57	bsu
Magnesium, dissolved	M200.7 ICP	1	3.3		mg/L	0.2	1	07/23/19 17:23	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:23	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/17/19 10:45	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/23/19 17:23	dcm
Potassium, dissolved	M200.7 ICP	1	0.3	В	mg/L	0.2	1	07/23/19 17:23	dcm
Sodium, dissolved	M200.7 ICP	1	1.2		mg/L	0.2	1	07/23/19 17:23	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/24/19 12:33	aeh
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:23	dcm



Project ID: Sample ID: GL 3

## Inorganic Analytical Results

ACZ Sample ID: L53166-03 Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	41.3			mg/L	2	20	07/15/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Total Alkalinity		1	41.3		*	mg/L	2	20	07/15/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-2.0			%			07/26/19 0:00	calc
Sum of Anions			0.828			meq/L			07/26/19 0:00	calc
Sum of Cations			0.796			meq/L			07/26/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	07/16/19 13:11	wtc
Conductivity @25C	SM2510B	1	80			umhos/cm	1	10	07/15/19 21:18	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/16/19 16:34	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		37			mg/L	0.2	5	07/26/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/15/19 16:28	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	07/26/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	07/12/19 2:25	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/12/19 2:25	pjb
pH (lab)	SM4500H+ B	1	8.0	н		units	0.1	0.1	07/15/19 21:18	enb
Residue, Filterable (TDS) @180C	SM2540C	1	52			mg/L	20	40	07/15/19 10:37	emk
Sulfate	D516-02/-07 - Turbidimetric	1		U		mg/L	1	5	07/22/19 9:41	mss2



Project ID: Sample ID: RM 1

## Inorganic Analytical Results

ACZ Sample ID:	L53166-04
Date Sampled:	07/10/19 13:15
Date Received:	07/11/19
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					07/16/19 11:00	mss2
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							07/19/19 15:20	eij
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	07/23/19 17:26	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/22/19 17:02	bsu
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	07/22/19 17:02	bsu
Barium, dissolved	M200.7 ICP	1	0.007	В	mg/L	0.007	0.04	07/23/19 17:26	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	07/22/19 17:02	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00006	В	mg/L	0.00005	0.0003	07/22/19 17:02	bsu
Calcium, dissolved	M200.7 ICP	1	12.6		mg/L	0.1	0.5	07/23/19 17:26	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/22/19 17:02	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:26	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:26	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	07/23/19 17:26	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	07/22/19 17:02	bsu
Magnesium, dissolved	M200.7 ICP	1	4.2		mg/L	0.2	1	07/23/19 17:26	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:26	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/17/19 10:48	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/23/19 17:26	dcm
Potassium, dissolved	M200.7 ICP	1	0.4	В	mg/L	0.2	1	07/23/19 17:26	dcm
Sodium, dissolved	M200.7 ICP	1	1.1		mg/L	0.2	1	07/23/19 17:26	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/24/19 12:36	aeh
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:26	dcm



Project ID: Sample ID: RM 1

## Inorganic Analytical Results

ACZ Sample ID: L53166-04 Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	52.9			mg/L	2	20	07/15/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Total Alkalinity		1	52.9		*	mg/L	2	20	07/15/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.8			%			07/26/19 0:00	calc
Sum of Anions			1.1			meq/L			07/26/19 0:00	calc
Sum of Cations			1.0			meq/L			07/26/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	07/16/19 13:11	wtc
Conductivity @25C	SM2510B	1	102			umhos/cm	1	10	07/15/19 21:27	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/16/19 16:36	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		49			mg/L	0.2	5	07/26/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/15/19 16:32	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	07/26/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	07/12/19 2:27	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/12/19 2:27	pjb
pH (lab)	SM4500H+ B	1	8.1	н		units	0.1	0.1	07/15/19 21:27	enb
Residue, Filterable (TDS) @180C	SM2540C	1	70			mg/L	20	40	07/15/19 10:39	emk
Sulfate	D516-02/-07 - Turbidimetric	1		U		mg/L	1	5	07/22/19 9:41	mss2



Project ID: Sample ID: RM 2

## Inorganic Analytical Results

ACZ Sample ID: L53166-05 Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					07/16/19 11:10	mss2
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							07/19/19 15:20	eij
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	07/23/19 17:29	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/22/19 17:04	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0057		mg/L	0.0002	0.001	07/22/19 17:04	bsu
Barium, dissolved	M200.7 ICP	1		U	mg/L	0.007	0.04	07/23/19 17:29	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	07/22/19 17:04	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00136		mg/L	0.00005	0.0003	07/22/19 17:04	bsu
Calcium, dissolved	M200.7 ICP	1	16.4		mg/L	0.1	0.5	07/23/19 17:29	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/22/19 17:04	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:29	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:29	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	07/23/19 17:29	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0004	В	mg/L	0.0001	0.0005	07/22/19 17:04	bsu
Magnesium, dissolved	M200.7 ICP	1	3.7		mg/L	0.2	1	07/23/19 17:29	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:29	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/17/19 10:48	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/23/19 17:29	dcm
Potassium, dissolved	M200.7 ICP	1	1.0		mg/L	0.2	1	07/23/19 17:29	dcm
Sodium, dissolved	M200.7 ICP	1	4.2		mg/L	0.2	1	07/23/19 17:29	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/24/19 12:39	aeh
Zinc, dissolved	M200.7 ICP	1	0.11		mg/L	0.01	0.05	07/23/19 17:29	dcm



Project ID: Sample ID: RM 2

## Inorganic Analytical Results

ACZ Sample ID: L53166-05 Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	48.3			mg/L	2	20	07/15/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Total Alkalinity		1	48.3		*	mg/L	2	20	07/15/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-7.1			%			07/26/19 0:00	calc
Sum of Anions			1.5			meq/L			07/26/19 0:00	calc
Sum of Cations			1.3			meq/L			07/26/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	07/16/19 13:11	wtc
Conductivity @25C	SM2510B	1	142			umhos/cm	1	10	07/15/19 21:36	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/16/19 16:37	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		56			mg/L	0.2	5	07/26/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/15/19 16:35	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.05	В		mg/L	0.02	0.1	07/26/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.05	В	*	mg/L	0.02	0.1	07/12/19 2:28	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/12/19 2:28	pjb
pH (lab)	SM4500H+ B	1	8.0	н		units	0.1	0.1	07/15/19 21:36	enb
Residue, Filterable (TDS) @180C	SM2540C	1	94			mg/L	20	40	07/15/19 10:40	emk
Sulfate	D516-02/-07 - Turbidimetric	1	25.3			mg/L	1	5	07/22/19 9:41	mss2



Project ID: Sample ID: RM 3

## Inorganic Analytical Results

ACZ Sample ID:	L53166-06
Date Sampled:	07/10/19 13:15
Date Received:	07/11/19
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					07/16/19 11:20	mss2
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							07/19/19 15:20	eij
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	07/23/19 17:32	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/22/19 17:09	bsu
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	07/22/19 17:09	bsu
Barium, dissolved	M200.7 ICP	1	0.008	В	mg/L	0.007	0.04	07/23/19 17:32	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	07/22/19 17:09	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00005	В	mg/L	0.00005	0.0003	07/22/19 17:09	bsu
Calcium, dissolved	M200.7 ICP	1	12.7		mg/L	0.1	0.5	07/23/19 17:32	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/22/19 17:09	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:32	dcm
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:32	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	07/23/19 17:32	dcm
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	07/22/19 17:09	bsu
Magnesium, dissolved	M200.7 ICP	1	4.2		mg/L	0.2	1	07/23/19 17:32	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:32	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/17/19 10:51	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/23/19 17:32	dcm
Potassium, dissolved	M200.7 ICP	1	0.4	В	mg/L	0.2	1	07/23/19 17:32	dcm
Sodium, dissolved	M200.7 ICP	1	1.0		mg/L	0.2	1	07/23/19 17:32	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/24/19 12:48	aeh
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:32	dcm



Project ID: Sample ID: RM 3

## Inorganic Analytical Results

ACZ Sample ID: L53166-06 Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	53.1			mg/L	2	20	07/15/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Total Alkalinity		1	53.1		*	mg/L	2	20	07/15/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.8			%			07/26/19 0:00	calc
Sum of Anions			1.1			meq/L			07/26/19 0:00	calc
Sum of Cations			1.0			meq/L			07/26/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	07/16/19 13:11	wtc
Conductivity @25C	SM2510B	1	102			umhos/cm	1	10	07/15/19 21:45	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/16/19 16:37	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		49.0			mg/L	0.2	5	07/26/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/15/19 16:38	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.02	В		mg/L	0.02	0.1	07/26/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.02	В	*	mg/L	0.02	0.1	07/12/19 2:29	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/12/19 2:29	pjb
pH (lab)	SM4500H+ B	1	8.1	н		units	0.1	0.1	07/15/19 21:45	enb
Residue, Filterable (TDS) @180C	SM2540C	1	46		*	mg/L	20	40	07/15/19 10:41	emk
Sulfate	D516-02/-07 - Turbidimetric	1		U		mg/L	1	5	07/22/19 9:41	mss2



Project ID: Sample ID: CM 1

## Inorganic Analytical Results

ACZ Sample ID: **L53166-07** Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					07/16/19 11:30	mss2
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							07/19/19 15:20	eij
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	07/23/19 17:41	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/22/19 17:11	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	В	mg/L	0.0002	0.001	07/22/19 17:11	bsu
Barium, dissolved	M200.7 ICP	1	0.008	В	mg/L	0.007	0.04	07/23/19 17:41	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	07/22/19 17:11	bsu
Cadmium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	07/22/19 17:11	bsu
Calcium, dissolved	M200.7 ICP	1	12.8		mg/L	0.1	0.5	07/23/19 17:41	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/22/19 17:11	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/24/19 12:52	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:41	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	07/23/19 17:41	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0001	0.0005	07/22/19 17:11	bsu
Magnesium, dissolved	M200.7 ICP	1	4.2		mg/L	0.2	1	07/23/19 17:41	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:41	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/17/19 10:52	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/23/19 17:41	dcm
Potassium, dissolved	M200.7 ICP	1	0.4	В	mg/L	0.2	1	07/23/19 17:41	dcm
Sodium, dissolved	M200.7 ICP	1	1.0		mg/L	0.2	1	07/23/19 17:41	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/24/19 12:52	aeh
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/24/19 12:52	aeh



Project ID: Sample ID: CM 1

## Inorganic Analytical Results

ACZ Sample ID: L53166-07 Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	53.3			mg/L	2	20	07/15/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Total Alkalinity		1	53.3		*	mg/L	2	20	07/15/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.8			%			07/26/19 0:00	calc
Sum of Anions			1.1			meq/L			07/26/19 0:00	calc
Sum of Cations			1.0			meq/L			07/26/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	07/16/19 13:11	wtc
Conductivity @25C	SM2510B	1	102			umhos/cm	1	10	07/15/19 21:55	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/16/19 16:38	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		49			mg/L	0.2	5	07/26/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/15/19 16:41	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.02	В		mg/L	0.02	0.1	07/26/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.02	В	*	mg/L	0.02	0.1	07/12/19 2:30	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/12/19 2:30	pjb
pH (lab)	SM4500H+ B	1	8.1	Н		units	0.1	0.1	07/15/19 21:55	enb
Residue, Filterable (TDS) @180C	SM2540C	1	70			mg/L	20	40	07/15/19 10:43	emk
Sulfate	D516-02/-07 - Turbidimetric	1		U	*	mg/L	1	5	07/22/19 10:13	mss2



Project ID: Sample ID: CM 2

## Inorganic Analytical Results

ACZ Sample ID:	L53166-08
Date Sampled:	07/10/19 13:15
Date Received:	07/11/19
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					07/16/19 11:40	mss2
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							07/19/19 15:20	eij
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	07/23/19 17:50	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/22/19 17:13	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0022		mg/L	0.0002	0.001	07/22/19 17:13	bsu
Barium, dissolved	M200.7 ICP	1	0.014	В	mg/L	0.007	0.04	07/23/19 17:50	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	07/22/19 17:13	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00029	В	mg/L	0.00005	0.0003	07/22/19 17:13	bsu
Calcium, dissolved	M200.7 ICP	1	20.9		mg/L	0.1	0.5	07/23/19 17:50	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/22/19 17:13	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/24/19 13:01	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:50	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	07/23/19 17:50	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0006		mg/L	0.0001	0.0005	07/22/19 17:13	bsu
Magnesium, dissolved	M200.7 ICP	1	3.9		mg/L	0.2	1	07/23/19 17:50	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:50	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/17/19 10:53	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/23/19 17:50	dcm
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	07/23/19 17:50	dcm
Sodium, dissolved	M200.7 ICP	1	6.2		mg/L	0.2	1	07/23/19 17:50	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/24/19 13:01	aeh
Zinc, dissolved	M200.7 ICP	1	0.03	В	mg/L	0.01	0.05	07/24/19 13:01	aeh



Project ID: Sample ID: CM 2

## Inorganic Analytical Results

ACZ Sample ID: L53166-08 Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	59.9			mg/L	2	20	07/15/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Total Alkalinity		1	59.9		*	mg/L	2	20	07/15/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			07/26/19 0:00	calc
Sum of Anions			1.7			meq/L			07/26/19 0:00	calc
Sum of Cations			1.7			meq/L			07/26/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	07/16/19 13:11	wtc
Conductivity @25C	SM2510B	1	166			umhos/cm	1	10	07/15/19 22:04	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/16/19 16:41	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		68			mg/L	0.2	5	07/26/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/15/19 16:44	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.04	В		mg/L	0.02	0.1	07/26/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.04	В	*	mg/L	0.02	0.1	07/12/19 2:32	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/12/19 2:32	pjb
pH (lab)	SM4500H+ B	1	8.1	н		units	0.1	0.1	07/15/19 22:04	enb
Residue, Filterable (TDS) @180C	SM2540C	1	116		*	mg/L	20	40	07/15/19 10:44	emk
Sulfate	D516-02/-07 - Turbidimetric	1	21.5		*	mg/L	1	5	07/22/19 10:13	mss2



Project ID: Sample ID: CM 3

## Inorganic Analytical Results

ACZ Sample ID: **L53166-09** Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					07/16/19 11:50	mss2
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							07/19/19 15:20	eij
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	07/23/19 17:53	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	07/22/19 17:15	bsu
Arsenic, dissolved	M200.8 ICP-MS	1	0.0004	В	mg/L	0.0002	0.001	07/22/19 17:15	bsu
Barium, dissolved	M200.7 ICP	1	0.008	В	mg/L	0.007	0.04	07/23/19 17:53	dcm
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	07/22/19 17:15	bsu
Cadmium, dissolved	M200.8 ICP-MS	1	0.00007	В	mg/L	0.00005	0.0003	07/22/19 17:15	bsu
Calcium, dissolved	M200.7 ICP	1	12.9		mg/L	0.1	0.5	07/23/19 17:53	dcm
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	07/22/19 17:15	bsu
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/24/19 13:04	aeh
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:53	dcm
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	07/23/19 17:53	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0004	В	mg/L	0.0001	0.0005	07/22/19 17:15	bsu
Magnesium, dissolved	M200.7 ICP	1	4.2		mg/L	0.2	1	07/23/19 17:53	dcm
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/23/19 17:53	dcm
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	07/17/19 10:54	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	07/23/19 17:53	dcm
Potassium, dissolved	M200.7 ICP	1	0.4	В	mg/L	0.2	1	07/23/19 17:53	dcm
Sodium, dissolved	M200.7 ICP	1	1.2		mg/L	0.2	1	07/23/19 17:53	dcm
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	07/24/19 13:04	aeh
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	07/24/19 13:04	aeh



Project ID: Sample ID: CM 3

## Inorganic Analytical Results

ACZ Sample ID: **L53166-09** Date Sampled: 07/10/19 13:15 Date Received: 07/11/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	53.8			mg/L	2	20	07/15/19 0:00	enb
Carbonate as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Hydroxide as CaCO3		1		U		mg/L	2	20	07/15/19 0:00	enb
Total Alkalinity		1	53.8		*	mg/L	2	20	07/15/19 0:00	enb
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			07/26/19 0:00	calc
Sum of Anions			1.1			meq/L			07/26/19 0:00	calc
Sum of Cations			1.1			meq/L			07/26/19 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	07/16/19 13:17	wtc
Conductivity @25C	SM2510B	1	104		*	umhos/cm	1	10	07/15/19 22:48	enb
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	07/16/19 16:42	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		50			mg/L	0.2	5	07/26/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/15/19 16:47	kja
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2			U		mg/L	0.02	0.1	07/26/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.02	0.1	07/12/19 2:33	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/12/19 2:33	pjb
pH (lab)	SM4500H+ B	1	8.1	Н	*	units	0.1	0.1	07/15/19 22:48	enb
Residue, Filterable (TDS) @180C	SM2540C	1	62			mg/L	20	40	07/15/19 10:46	emk
Sulfate	D516-02/-07 - Turbidimetric	1		U	*	mg/L	1	5	07/22/19 10:13	mss2



Inorganic Reference

Batch	A distinct set of samples analyzed at a specific time		
Found	Value of the QC Type of interest		
Limit	Upper limit for RPD, in %.		
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)		
MDL	Method Detection Limit. Same as Minimum Reporting Limit u	unless omitted or e	qual to the PQL (see comment #5).
	Allows for instrument and annual fluctuations.		
PCN/SCN	A number assigned to reagents/standards to trace to the main	nufacturer's certific	ate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term	"minimum level".	
QC	True Value of the Control Sample or the amount added to the	e Spike	
Rec	Recovered amount of the true value or spike added, in % (ex	cept for LCSS, mg	/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate Q	C Types	
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)		
Sample	Value of the Sample of interest		
Sample Ty	rpes		
AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
ССВ	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSS LCSSD	Laboratory Control Sample - Soil Laboratory Control Sample - Soil Duplicate	PBW PQV	Prep Blank - Water Practical Quantitation Verification standard
			•
LCSSD LCSW	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water	PQV	Practical Quantitation Verification standard
LCSSD LCSW	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water	PQV SDL	Practical Quantitation Verification standard
LCSSD LCSW Sample Ty	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water ype Explanations Verifies that there is no or minimal of	PQV SDL contamination in the	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure.
LCSSD LCSW Sample Ty Blanks	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water Pe Explanations Verifies that there is no or minimal of mples Verifies the accuracy of the method	PQV SDL contamination in the	Practical Quantitation Verification standard Serial Dilution
LCSSD LCSW Sample Ty Blanks Control San Duplicates	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water Pe Explanations Verifies that there is no or minimal of mples Verifies the accuracy of the method	PQV SDL contamination in the l, including the prep ent and/or method.	Practical Quantitation Verification standard Serial Dilution
LCSSD LCSW Sample Ty Blanks Control San Duplicates	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water The Explanations Merifies that there is no or minimal of Verifies the accuracy of the method Verifies the precision of the instrument	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any.	Practical Quantitation Verification standard Serial Dilution
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water The Explanations The Ex	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any.	Practical Quantitation Verification standard Serial Dilution
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water The Explanations The Ex	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n.	Practical Quantitation Verification standard Serial Dilution
LCSSD LCSW Sample Ty Blanks Control Sau Duplicates Spikes/For Standard	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>Ppe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrument tified Matrix Determines sample matrix interferent Verifies the validity of the calibration s (Qual)	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. h.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. eted value is an estimated quantity.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/Fort Standard Z Qualifiers B	Laboratory Control Sample - Soil Duplicate         Laboratory Control Sample - Water         rpe Explanations         mples       Verifies that there is no or minimal of Verifies the accuracy of the method         Verifies the precision of the instrument of the Matrix       Determines sample matrix interferent Verifies the validity of the calibration         s (Qual)       Analyte concentration detected at a value between MDL and	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. eted value is an estimated quantity.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/Fort Standard Z Qualifiers B H	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>PPE Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold.	Practical Quantitation Verification standard Serial Dilution  procedure.  procedure.  ed value is an estimated quantity. ime.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard Z Qualifiers B H L	Laboratory Control Sample - Soil Duplicate         Laboratory Control Sample - Water         rpe Explanations         mples       Verifies that there is no or minimal of Verifies the accuracy of the method         verifies the precision of the instrument of Verifies the precision of the instrument of Verifies the validity of the calibration         s (Qual)         Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined net	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. ime. ciated value.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard Z Qualifiers B H L	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>rpe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. ime. ciated value.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>rpe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat r the sample detect	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. ime. ciated value. ion limit.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/Fort Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>rpe Explanations</b> Type Explanations Merifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrument tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined nee The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or Ences	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat r the sample detect	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. eted value is an estimated quantity. ime. ciated value. ion limit. h 1983.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/Fort Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/4-83-020. Methods for Chemical Analysis of Water	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat the sample detect	Practical Quantitation Verification standard Serial Dilution  procedure.  procedure.  ed value is an estimated quantity. ime.  ciated value. ion limit.  h 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard Z Qualifiers B H L U U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/4-83-020. Methods for Chemical Analysis of Water EPA 600/R-93-100. Methods for the Determination of Inorga	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat the sample detect	Practical Quantitation Verification standard Serial Dilution  procedure.  procedure.  ed value is an estimated quantity. ime.  ciated value. ion limit.  h 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/Fort Standard Z Qualifiers B H L U U Sthod Reference (1) (2) (3)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrume tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat r the sample detect and Wastes, Marc inic Substances in l s in Environmental S	Practical Quantitation Verification standard Serial Dilution  procedure.  procedure.  ed value is an estimated quantity. ime.  ciated value. ion limit.  h 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/Fort Standard Z Qualifiers B H L U U thod Refere (1) (2) (3) (4)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined nee The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga EPA 600/R-94-111. Methods for Evaluating Solid Waste.	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat r the sample detect and Wastes, Marc inic Substances in l s in Environmental S	Practical Quantitation Verification standard Serial Dilution  procedure.  procedure.  ed value is an estimated quantity. ime.  ciated value. ion limit.  h 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/Fort Standard Z Qualifiers B H L U U Sthod Reference (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined nee The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga EPA 600/R-94-111. Methods for Evaluating Solid Waste.	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat r the sample detect r and Wastes, Marc unic Substances in l s in Environmental s vater.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. eted value is an estimated quantity. ime. inciated value. ion limit. h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/Fort Standard Z Qualifiers B H L U U thod Refere (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga EPA SW-846. Test Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastew	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat r the sample detect and Wastes, Marc in Environmental s vater.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. ime. ciated value. ion limit. h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/For Standard Z Qualifiers B H L U U thod Refere (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>5 (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>Proces</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastew	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the associat the sample detect and Wastes, Marc inic Substances in l s in Environmental s vater.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. ime. ciated value. ion limit. h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/Fort Standard Z Qualifiers B H L U U thod Refere (1) (2) (3) (4) (5) mments (1) (2)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>5 (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastew QC results calculated from raw data. Results may vary slight Soil, Sludge, and Plant matrices for Inorganic analyses are re-	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. the level of the associat r the sample detect and Wastes, Marc inic Substances in l s in Environmental S vater.	Practical Quantitation Verification standard Serial Dilution  e prep method or calibration procedure. procedure.  ted value is an estimated quantity. ime.  ted value. ion limit.  h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.  Hues are used in the calculations. Eight basis.
LCSSD LCSW Sample Ty Blanks Control San Duplicates Spikes/Fort Standard Z Qualifiers B H L U U Sthod Reference (1) (2) (3) (4) (5) Somments (1) (2) (3)	Laboratory Control Sample - Soil Duplicate         Laboratory Control Sample - Water         mple Explanations         Werifies that there is no or minimal of the model         mples       Verifies the accuracy of the method         Verifies the precision of the instrument         tified Matrix       Determines sample matrix interference         Verifies the validity of the calibration         s (Qual)         Analyte concentration detected at a value between MDL and         Analysis exceeded method hold time. pH is a field test with a         Target analyte response was below the laboratory defined nee         The material was analyzed for, but was not detected above the         The associated value is either the sample quantitation limit or         ences         EPA 600/R-93-100. Methods for Chemical Analysis of Water         EPA 600/R-93-100. Methods for the Determination of Inorga         EPA 600/R-94-111. Methods for the Determination of Metals         EPA SW-846. Test Methods for Evaluating Solid Waste.         Standard Methods for the Examination of Water and Wastew         QC results calculated from raw data. Results may vary slight         Soil, Sludge, and Plant matrices for Inorganic analyses are reported on an "a	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. the level of the associat r the sample detect and Wastes, Marc inic Substances in l s in Environmental S vater.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. ime. ciated value. ion limit. h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. elues are used in the calculations. cight basis.

https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

REP001.03.15.02

### CRG Mining, LLC

#### ACZ Project ID: L53166

WG476948LCSW3         LCSW           L53166-08DUP         DUP           WG476948LCSW6         LCSW           WG476948PBW2         PBW           L53190-01DUP         DUP           WG476948LCSW9         LCSW           WG476948LCSW9         LCSW           WG476948LCSW12         LCSW           WG476948LCSW15         LCSW           WG476948LCSW15         LCSW           WG476948LCSW15         LCSW           WG476948LCSW15         LCSW           WG4776948LCSW15         LCSW           WG4776948LCSW15         LCSW           WG4776948LCSW15         LCSW           WG4776948LCSW15         LCSW           WG477627LC         ICV           WG477627ICV         ICV           WG477627LFB         LFB           L53166-07AS         AS	Analyzed 07/15/19 18:42 07/15/19 18:59 07/15/19 22:13 07/15/19 22:32 07/15/19 22:39 07/16/19 3:03 07/16/19 3:21 07/16/19 3:27 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28 07/23/19 17:44	PCN/SCN WC190709-1 WC190709-1 WC190709-1 WC190709-1 WC190709-1 II190715-2	3 - Titration QC 820.0001 820.0001 820.0001 820.0001 820.0001 CP QC 2	Sample 59.9 158 Sample	Found 23.3 789 60 825 4 147 831 2.7 825 3.2 812 812	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	Rec%	Lower -20 90 -20 90 -20 90 -20 90 -20 90	Upper 20 110 110 20 110 20 110 20 110 20 110	RPD 0 7	Limit 20 20	Qual B4 B7
WG476948         WG476948PBW1       PBW         WG476948LCSW3       LCSW         L53166-08DUP       DUP         WG476948LCSW6       LCSW         WG476948LCSW6       LCSW         WG476948LCSW6       LCSW         WG476948LCSW9       LCSW         WG476948LCSW9       LCSW         WG476948LCSW12       LCSW         WG476948LCSW12       LCSW         WG476948LCSW15       LCSW         WG476948LCSW15       LCSW         Addresse       PBW         WG476948LCSW15       LCSW         WG476948LCSW15       LCSW         Addresse       PBW         WG477627ICV       ICV         WG477627ICP       ICB         WG477627ICB       ICB         WG477627ICFB       LFB         L53166-07AS       AS         L53166-07ASD       ASD	07/15/19 18:42 07/15/19 18:59 07/15/19 22:13 07/15/19 22:32 07/15/19 22:39 07/16/19 3:03 07/16/19 3:21 07/16/19 3:27 07/16/19 7:06 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 WC190709-1 WC190709-1 WC190709-1 WC190709-1 M200.7 I PCN/SCN II190715-2	820.0001 820.0001 820.0001 820.0001 CP QC	59.9	23.3 789 60 825 4 147 831 2.7 825 3.2 812	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	96 101 101 101 99	-20 90 -20 90 -20 90 -20 90 -20 90	20 110 20 110 20 110 20 110 20 110	7		
NG476948PBW1         PBW           NG476948LCSW3         LCSW           L53166-08DUP         DUP           NG476948LCSW6         LCSW           NG476948LCSW6         LCSW           NG476948PBW2         PBW           L53190-01DUP         DUP           NG476948LCSW9         LCSW           NG476948LCSW12         LCSW           NG476948LCSW12         LCSW           NG476948LCSW15         LCSW           NG477627LCW         ICV           NG477627LFB         LFB           .53166-07AS         AS           .53166-07ASD         ASD	07/15/19 18:59 07/15/19 22:13 07/15/19 22:32 07/15/19 22:39 07/16/19 3:03 07/16/19 3:21 07/16/19 3:27 07/16/19 7:06 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 WC190709-1 WC190709-1 WC190709-1 M200.7 I PCN/SCN II190715-2	820.0001 820.0001 820.0001 820.0001 CP QC	158	789 60 825 4 147 831 2.7 825 3.2 812	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	101 101 101 99	90 90 -20 90 -20 90 -20 90	110 110 20 110 20 110 20 110	7		B4 B7
WG476948LCSW3       LCSW         L53166-08DUP       DUP         WG476948LCSW6       LCSW         WG476948PBW2       PBW         L53190-01DUP       DUP         WG476948LCSW9       LCSW         WG476948LCSW12       LCSW         WG476948LCSW12       LCSW         WG476948LCSW12       LCSW         WG476948LCSW15       LCSW         WG476948LCSW15       LCSW         WG476948LCSW15       LCSW         WG476948LCSW15       LCSW         WG4776948LCSW15       LCSW         WG4776948LCSW15       LCSW         WG477627ICV       ICV         WG477627ICB       ICB         WG477627ICFB       LFB         L53166-07AS       AS         L53166-07ASD       ASD	07/15/19 18:59 07/15/19 22:13 07/15/19 22:32 07/15/19 22:39 07/16/19 3:03 07/16/19 3:21 07/16/19 3:27 07/16/19 7:06 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 WC190709-1 WC190709-1 WC190709-1 M200.7 I PCN/SCN II190715-2	820.0001 820.0001 820.0001 820.0001 CP QC	158	789 60 825 4 147 831 2.7 825 3.2 812	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	101 101 101 99	90 90 -20 90 -20 90 -20 90	110 110 20 110 20 110 20 110	7		
L53166-08DUP       DUP         WG476948LCSW6       LCSW         WG476948LCSW9       PBW         L53190-01DUP       DUP         WG476948LCSW9       LCSW         WG476948LCSW9       LCSW         WG476948LCSW12       LCSW         WG476948LCSW12       LCSW         WG476948LCSW15       LCSW         Addresse       PBW         WG476948LCSW15       LCSW         Aluminum, dissolved       Acz ID         WG477627ICV       ICV         WG477627ICB       ICB         WG477627LFB       LFB         L53166-07AS       AS         L53166-07ASD       ASD	07/15/19 22:13 07/15/19 22:32 07/15/19 22:39 07/16/19 3:03 07/16/19 3:21 07/16/19 3:27 07/16/19 7:06 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 WC190709-1 WC190709-1 WC190709-1 M200.7 I PCN/SCN II190715-2	820.0001 820.0001 820.0001 820.0001 CP QC	158	60 825 4 147 831 2.7 825 3.2 812	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	101 101 101 99	90 -20 90 -20 90 -20 90	110 20 110 20 110 20 110	7		
NG476948LCSW6         LCSW           NG476948PBW2         PBW           .53190-01DUP         DUP           NG476948PBW3         PBW           NG476948LCSW9         LCSW           NG476948PBW3         PBW           NG476948LCSW12         LCSW           NG476948LCSW15         LCSW           NG476948LCSW15         LCSW           Aduminum, dissolved         MG477627ICV           NG477627ICV         ICV           NG477627ICB         ICB           NG477627LFB         LFB           .53166-07AS         AS           .53166-07ASD         ASD	07/15/19 22:32 07/15/19 22:39 07/16/19 3:03 07/16/19 3:21 07/16/19 3:27 07/16/19 7:06 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 WC190709-1 WC190709-1 M200.7 I PCN/SCN	820.0001 820.0001 820.0001 CP QC	158	825 4 147 831 2.7 825 3.2 812	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	101 101 99	-20 90 -20 90 -20 90	20 110 20 110 20 110	7		
WG476948PBW2     PBW       .53190-01DUP     DUP       NG476948LCSW9     LCSW       NG476948PBW3     PBW       NG476948LCSW12     LCSW       NG476948LCSW15     LCSW       NG476948LCSW15     LCSW       Aduminum, dissol     Ved       MG477627ICV     Type       NG477627ICB     ICB       NG477627LFB     LFB       .53166-07AS     ASD	07/15/19 22:39 07/16/19 3:03 07/16/19 3:21 07/16/19 3:27 07/16/19 7:06 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 WC190709-1 WC190709-1 M200.7 I PCN/SCN	820.0001 820.0001 820.0001 CP QC		4 147 831 2.7 825 3.2 812	mg/L mg/L mg/L mg/L mg/L mg/L	101 101 99	-20 90 -20 90 -20 90	20 110 20 110 20 110		20	
53190-01DUP     DUP       NG476948LCSW9     LCSW       NG476948PBW3     PBW       NG476948LCSW12     LCSW       NG476948LCSW15     LCSW       NG476948LCSW15     LCSW       NG476948LCSW15     LCSW       NG476948LCSW15     LCSW       NG476948LCSW15     LCSW       NG476948LCSW15     LCSW       NG4776948LCSW15     LCSW       NG4776948LCSW15     LCSW       NG4776948LCSW15     LCSW       NG477627ICM     ICV       NG477627ICB     ICB       NG477627LFB     LFB       .53166-07AS     AS       .53166-07ASD     ASD	07/16/19 3:03 07/16/19 3:21 07/16/19 3:27 07/16/19 7:06 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 WC190709-1 M200.7 I PCN/SCN II190715-2	820.0001 820.0001 CP QC		147 831 2.7 825 3.2 812	mg/L mg/L mg/L mg/L mg/L	101 99	90 -20 90 -20 90	110 20 110 20 110		20	
WG476948LCSW9       LCSW         WG476948PBW3       PBW         WG476948PBW4       PBW         WG476948LCSW15       LCSW         WG476948LCSW15       LCSW         Aduminum, dissolved       Acz ID         WG477627       Type         WG477627ICV       ICV         WG477627ICB       ICB         WG477627LFB       LFB         L53166-07AS       AS	07/16/19 3:21 07/16/19 3:27 07/16/19 7:06 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 WC190709-1 M200.7 I PCN/SCN II190715-2	820.0001 820.0001 CP QC		831 2.7 825 3.2 812	mg/L mg/L mg/L mg/L mg/L	101 99	-20 90 -20 90	20 110 20 110			
WG476948PBW3       PBW         WG476948LCSW12       LCSW         WG476948LCSW12       LCSW         WG476948LCSW12       LCSW         WG476948LCSW12       LCSW         Aluminum, dissolved       Acz ID         ACZ ID       Type         WG477627       ICV         WG477627ICV       ICV         WG477627ICB       ICB         WG477627LFB       LFB         L53166-07AS       AS         L53166-07ASD       ASD	07/16/19 3:27 07/16/19 7:06 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 WC190709-1 M200.7 I PCN/SCN II190715-2	820.0001 820.0001 CP QC	Sample	2.7 825 3.2 812	mg/L mg/L mg/L mg/L	101 99	-20 90 -20 90	20 110 20 110			
WG476948LCSW12       LCSW         WG476948PBW4       PBW         WG476948LCSW15       LCSW         Aluminum, dissolved         ACZ ID       Type         WG477627       WG477627ICV         NG477627ICB       ICB         NG477627LFB       LFB         L53166-07AS       AS         L53166-07ASD       ASD	07/16/19 7:06 07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 M200.7 I PCN/SCN II190715-2	820.0001 CP QC	Sample	825 3.2 812	mg/L mg/L mg/L	99	90 -20 90	110 20 110			
WG476948PBW4         PBW           WG476948LCSW15         LCSW           Aluminum, dissolved           ACZ ID         Type           WG477627         ICV           WG477627ICV         ICV           NG477627ICB         ICB           VG477627LFB         LFB           L53166-07AS         ASD	07/16/19 7:12 07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	WC190709-1 M200.7 I PCN/SCN II190715-2	820.0001 CP QC	Sample	3.2 812	mg/L mg/L	99	-20 90	20 110			
WG476948LCSW15LCSWAluminum, dissolvedACZ IDTypeWG477627ICVICVWG477627ICBICBWG477627ICBLFBL53166-07ASASL53166-07ASDASD	07/16/19 11:00 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	M200.7 I PCN/SCN II190715-2	CP QC	Sample	812	mg/L		90	110			
Aluminum, dissolved ACZ ID Type WG477627 WG477627ICV ICV WG477627ICB ICB WG477627LFB LFB _53166-07AS AS	Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	M200.7 I PCN/SCN II190715-2	CP QC	Sample								
ACZ ID         Type           WG477627         ICV           NG477627ICV         ICV           NG477627ICB         ICB           NG477627IFB         LFB           .53166-07AS         AS           .53166-07ASD         ASD	07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper			
NG477627           VG477627ICV         ICV           VG477627ICB         ICB           VG477627IFB         LFB           .53166-07AS         AS           .53166-07ASD         ASD	07/23/19 16:09 07/23/19 16:15 07/23/19 16:28	II190715-2		Sample	Found	Units	Re <u>c%</u>	ower	Upper			
NG477627ICV         ICV           NG477627ICB         ICB           NG477627ICB         LFB           .53166-07AS         AS           .53166-07ASD         ASD	07/23/19 16:15 07/23/19 16:28		2					Lower	- pp	RPD	Limit	Qual
VG477627ICB         ICB           VG477627LFB         LFB           .53166-07AS         AS           .53166-07ASD         ASD	07/23/19 16:15 07/23/19 16:28		2									
NG477627LFB         LFB           .53166-07AS         AS           .53166-07ASD         ASD	07/23/19 16:28				1.998	mg/L	100	95	105			
_53166-07AS AS _53166-07ASD ASD					U	mg/L		-0.15	0.15			
_53166-07ASD ASD	07/23/19 17:44	II190722-2	1.0006		1.022	mg/L	102	85	115			
		II190722-2	1.0006	U	1.044	mg/L	104	85	115			
Antimony, dissolved	07/23/19 17:47	II190722-2	1.0006	U	1.031	mg/L	103	85	115	1	20	
		M200.8 I	CP-MS									
ACZ ID Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477508												
NG477508ICV ICV	07/22/19 16:47	MS190630-2	.02		.01885	mg/L	94	90	110			
NG477508ICB ICB	07/22/19 16:49				U	mg/L		-0.00088	0.00088			
WG477508LFB LFB	07/22/19 16:51	MS190719-2	.01		.00982	mg/L	98	85	115			
_53166-03AS AS	07/22/19 16:58	MS190719-2	.01	U	.00872	mg/L	87	70	130			
_53166-03ASD ASD	07/22/19 17:00	MS190719-2	.01	U	.00877	mg/L	88	70	130	1	20	
Arsenic, dissolved		M200.8 I	CP-MS									
ACZ ID Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477508												
NG477508ICV ICV	07/22/19 16:47	MS190630-2	.05		.05026	mg/L	101	90	110			
			.00				101					
		MS190719-2	05005			-	89					
				U								
	07/22/19 17:00	MS190719-2	.05005	U	.04848	mg/L	97	70	130	1	20	
Barium dissolved		M200 7 I	CP									
	Analyzed			Sample	Found	Units	Rec%	Lower	Unner	RPD	l imit	Qual
1,100				Campio						- TR B		- Cranal
WG477627			2		1.9528	mg/L	98	95	105			
	07/23/10 16:00	1190715-2			1.5020	mg/L	30	30	105			
NG477627ICV ICV	07/23/19 16:09	II190715-2	-						0.004			
NG477627ICV ICV NG477627ICB ICB	07/23/19 16:15				U	-	<u> </u>	-0.021	0.021			
WG477627ICB ICB WG477627LFB LFB		II190715-2 II190722-2 II190722-2	_ .4995 .4995	.008	U .4786 .4913	mg/L mg/L	96 97		0.021 115 115			
WG477508LFB         LFB           L53166-03AS         AS           L53166-03ASD         ASD           Barium, dissolved	07/22/19 16:49 07/22/19 16:51 07/22/19 16:58 07/22/19 17:00 Analyzed	MS190719-2 MS190719-2 MS190719-2 M200.7 I PCN/SCN		U U Sample	U .04448 .04879 .04848		89 97 97 Rec%	-0.00044 85 70 70 70	0.00044 115 130 130 Upper	1 RPD	20 Limit	

## **CRG Mining, LLC**

## ACZ Project ID: L53166

Beryllium, disso	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477508													
WG477508ICV	ICV	07/22/19 16:47	MS190630-2	.05		.048503	mg/L	97	90	110			
WG477508ICB	ICB	07/22/19 16:49				.000116	mg/L		-0.000176	0.000176			
WG477508LFB	LFB	07/22/19 16:51	MS190719-2	.05005		.043525	mg/L	87	85	115			
L53166-03AS	AS	07/22/19 16:58	MS190719-2	.05005	U	.049755	mg/L	99	70	130			
L53166-03ASD	ASD	07/22/19 17:00	MS190719-2	.05005	U	.050486	mg/L	101	70	130	1	20	
Cadmium, disse	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477508													
WG477508ICV	ICV	07/22/19 16:47	MS190630-2	.05		.049341	mg/L	99	90	110			
WG477508ICB	ICB	07/22/19 16:49				U	mg/L		-0.00011	0.00011			
WG477508LFB	LFB	07/22/19 16:51	MS190719-2	.05005		.04313	mg/L	86	85	115			
L53166-03AS	AS	07/22/19 16:58	MS190719-2	.05005	U	.048361	mg/L	97	70	130			
L53166-03ASD	ASD	07/22/19 17:00	MS190719-2	.05005	U	.049351	mg/L	99	70	130	2	20	
Calcium, dissol	ved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	100		100.65	mg/L	101	95	105			
WG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.3	0.3			
WG477627LFB	LFB	07/23/19 16:28	II190722-2	68.11783		70.18	mg/L	103	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	68.11783	12.8	83.89	mg/L	104	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	68.11783	12.8	83.93	mg/L	104	85	115	0	20	
Chloride			SM4500	CI-E									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477032													
WG477032ICB	ICB	07/16/19 10:08				U	mg/L		-1.5	1.5			
WG477032ICV	ICV	07/16/19 10:08	WI190501-1	54.835		53.73	mg/L	98	90	110			
WG477032LFB1	LFB	07/16/19 13:07	WI190111-6	30.03		32.9	mg/L	110	90	110			
L53160-01DUP	DUP	07/16/19 13:09			80.5	80.14	mg/L				0	20	
L53161-01AS	AS	07/16/19 13:09	WI190111-6	30.03	55.3	84.5	mg/L	97	90	110	•		
WG477032LFB2	LFB	07/16/19 13:11	WI190111-6	30.03		32.34	mg/L	108	90	110			
L53170-01AS	AS	07/16/19 13:17	WI190111-6	30.03	39.1	68.47	mg/L	98	90	110			
L53170-02DUP	DUP	07/16/19 13:17		00100	54.1	53.57	mg/L				1	20	
Chromium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477508													
WG477508ICV	ICV	07/22/19 16:47	MS190630-2	.05		.05188	mg/L	104	90	110			
WG477508ICB	ICB	07/22/19 16:49		.00		.00100 U	mg/L	104	-0.0011	0.0011			
WG477508LFB	LFB	07/22/19 16:51	MS190719-2	.05005		.04394	mg/L	88	85	115			
L53166-03AS	AS	07/22/19 16:58	MS190719-2	.05005	U	.04394	mg/L	96	70	130			
L53166-03ASD	ASD	07/22/19 10:38	MS190719-2 MS190719-2	.05005	U	.04837	mg/L	90 97	70	130	1	20	
200100-00A0D	700	51122113 11.00		.00000	0	.0-037		31	10	100	I	20	

## CRG Mining, LLC

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Cobalt, dissolved	ł		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	2.004		1.938	mg/L	97	95	105			
WG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.03	0.03			
WG477627LFB	LFB	07/23/19 16:28	II190722-2	.5		.471	mg/L	94	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	.5	U	.466	mg/L	93	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	.5	U	.455	mg/L	91	85	115	2	20	
WG477744													
WG477744ICV	ICV	07/24/19 11:54	II190715-2	2.004		1.971	mg/L	98	95	105			
WG477744ICB	ICB	07/24/19 12:00				U	mg/L		-0.03	0.03			
WG477744LFB	LFB	07/24/19 12:12	II190722-2	.5		.482	mg/L	96	85	115			
L53112-02AS	AS	07/24/19 12:21	II190722-2	.5	U	.479	mg/L	96	85	115			
L53112-02ASD	ASD	07/24/19 12:24	II190722-2	.5	U	.467	mg/L	93	85	115	3	20	
L53166-07AS	AS	07/24/19 12:55	II190722-2	.5	U	.481	mg/L	96	85	115			
L53166-07ASD	ASD	07/24/19 12:58	II190722-2	.5	U	.484	mg/L	97	85	115	1	20	
Conductivity @2	5C		SM2510	)B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476948													
WG476948LCSW2	LCSW	07/15/19 18:47	PCN58600	1410		1440	umhos/cm	102	90	110			
L53166-08DUP	DUP	07/15/19 22:13			166	165	umhos/cm				1	20	
WG476948LCSW5	LCSW	07/15/19 22:19	PCN58600	1410		1420	umhos/cm	101	90	110			
L53190-01DUP	DUP	07/16/19 3:03			370	368	umhos/cm				1	20	
WG476948LCSW8	LCSW	07/16/19 3:08	PCN58600	1410		1330	umhos/cm	94	90	110			
WG476948LCSW11	LCSW	07/16/19 6:53	PCN58600	1410		1340	umhos/cm	95	90	110			
WG476948LCSW14	LCSW	07/16/19 10:49	PCN58600	1410		1340	umhos/cm	95	90	110			
Copper, dissolve	d		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
	ICV	07/23/19 16:09	II190715-2	2		1.929	mg/L	96	95	105			
WG477627ICV	10.0	01123/13 10.03		-									
	ICB	07/23/19 16:15		-		U	mg/L		-0.03	0.03			
WG477627ICV WG477627ICB WG477627LFB			II190722-2	- .5005		U .484	mg/L mg/L	97	-0.03 85	0.03 115			
WG477627ICB	ICB	07/23/19 16:15			U		•	97 98					

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Cyanide, total			M335.4 -	Colorimetr	ic w/ distil	lation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477047													
WG477047ICV	ICV	07/16/19 14:59	WI190715-5	.3		.2865	mg/L	96	90	110			
NG477047ICB	ICB	07/16/19 15:00				U	mg/L		-0.003	0.003			
NG476881LRB	LRB	07/16/19 15:00				U	mg/L		-0.003	0.003			
NG476881LFB	LFB	07/16/19 15:01	WI190715-2	.2		.2048	mg/L	102	90	110			
_53063-07DUP	DUP	07/16/19 15:15			U	U	mg/L				0	20	RA
_53063-08LFM	LFM	07/16/19 15:16	WI190715-2	.2	.009	.2081	mg/L	100	90	110			
WG477060													
VG477060ICV	ICV	07/16/19 15:46	WI190715-5	.3		.2869	mg/L	96	90	110			
NG477060ICB	ICB	07/16/19 15:47				U	mg/L		-0.003	0.003			
NG477065													
VG476977LRB	LRB	07/16/19 16:31				U	mg/L		-0.003	0.003			
NG476977LFB	LFB	07/16/19 16:31	WI190715-2	.2		.1985	mg/L	99	90	110			
_53166-02DUP	DUP	07/16/19 16:33			U	U	mg/L				0	20	RA
_53166-03LFM	LFM	07/16/19 16:35	WI190715-2	.2	U	.1937	mg/L	97	90	110			
ron, dissolved			M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
NG477627													
NG477627ICV	ICV	07/23/19 16:09	II190715-2	2		1.918	mg/L	96	95	105			
VG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.09	0.09			
NG477627LFB	LFB	07/23/19 16:28	II190722-2	1.0018		1.009	mg/L	101	85	115			
_53166-07AS	AS	07/23/19 17:44	II190722-2	1.0018	U	.983	mg/L	98	85	115			
_53166-07ASD	ASD	07/23/19 17:47	II190722-2	1.0018	U	.982	mg/L	98	85	115	0	20	
ead, dissolved			M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
NG477508													
VG477508ICV	ICV	07/22/19 16:47	MS190630-2	.05		.05102	mg/L	102	90	110			
NG477508ICB	ICB	07/22/19 16:49				U	mg/L		-0.00022	0.00022			
VG477508LFB	LFB	07/22/19 16:51	MS190719-2	.05005		.04481	mg/L	90	85	115			
_53166-03AS	AS	07/22/19 16:58	MS190719-2	.05005	U	.04996	mg/L	100	70	130			
_53166-03ASD	ASD	07/22/19 17:00	MS190719-2	.05005	U	.05067	mg/L	101	70	130	1	20	
Magnesium, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
NG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	100		96.4	mg/L	96	95	105			
NG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.6	0.6			
NG477627LFB	LFB	07/23/19 16:28	II190722-2	50.31093		48.84	mg/L	97	85	115			
_53166-07AS	AS	07/23/19 17:44	II190722-2	50.31093	4.2	54.19	mg/L	99	85	115			
_53166-07ASD	ASD	07/23/19 17:47	II190722-2	50.31093	4.2			99	85	115	0	20	

## CRG Mining, LLC

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Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:28 07/23/19 17:44 07/23/19 17:47	PCN/SCN II190715-2 II190722-2 II190722-2 II190722-2	QC 2 .5015 .5015	Sample	Found 1.91 U	Units mg/L	Rec% 96	Lower 95	Upper	RPD	Limit	Qual
07/23/19 16:15 07/23/19 16:28 07/23/19 17:44 07/23/19 17:47	II190722-2 II190722-2	.5015			mg/L	96	05	105			
07/23/19 16:15 07/23/19 16:28 07/23/19 17:44 07/23/19 17:47	II190722-2 II190722-2	.5015			mg/L	96	05	105			
07/23/19 16:28 07/23/19 17:44 07/23/19 17:47	II190722-2					00	90	105			
07/23/19 17:44 07/23/19 17:47	II190722-2			0	mg/L		-0.03	0.03			
07/23/19 17:47		.5015		.485	mg/L	97	85	115			
	II190722-2		U	.493	mg/L	98	85	115			
		.5015	U	.493	mg/L	98	85	115	0	20	
	M245.1 C	VAA									
Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
07/17/19 10:27	HG190716-3	.004995		.00502	mg/L	101	95	105			
07/17/19 10:28				U	mg/L		-0.0002	0.0002			
07/17/19 10:30				U	mg/L		-0.00044	0.00044			
07/17/19 10:31	HG190716-6	.002002		.00195	mg/L	97	85	115			
07/17/19 10:32	HG190716-6	.002002	U	.00194	mg/L	97	85	115			
07/17/19 10:33	HG190716-6	.002002	U	.0019	mg/L	95	85	115	2	20	
07/17/19 10:46	HG190716-6	.002002	U	.00189	mg/L	94	85	115			
07/17/19 10:47	HG190716-6	.002002	U	.00187	mg/L	93	85	115	1	20	
	M200.7 I	CP									
Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
07/23/19 16:09	II190715-2	2.004		1.9532	mg/L	97	95	105			
07/23/19 16:15				U	mg/L		-0.024	0.024			
07/23/19 16:28	II190722-2	.5		.496	mg/L	99	85	115			
07/23/19 17:44	II190722-2	.5	U	.4871	mg/L	97	85	115			
07/23/19 17:47	II190722-2	.5	U	.4832	mg/L	97	85	115	1	20	
olved	M353.2 -	Automated	d Cadmiun	n Reduc	tion						
Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
07/12/19 1:47	WI190508-3	2.416		2.408	mg/L	100	90	110			
07/12/19 1:48				U	mg/L		-0.02	0.02			
07/12/19 1:52	WI190405-9	2		2.028	mg/L	101	90	110			
07/12/19 2:18			.03	.027	mg/L				11	20	RA
07/12/19 2:35	WI190405-9	20	10.1	30.23	mg/L	101	90	110			
	M353.2 -	Automated	d Cadmiun	n Reduc	tion						
Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
07/12/19 1:47	WI190508-3	.609		.562	mg/L	92	90	110			
07/12/19 1:48				U	mg/L		-0.01	0.01			
07/12/19 1:52	WI190405-9	1		1.004	mg/L	100	90	110			
07/12/19 2:14	WI190405-9	1	.97	1.949	mg/L	98	90	110			
					-				0	20	RA
	07/17/19 10:28 07/17/19 10:30 07/17/19 10:31 07/17/19 10:32 07/17/19 10:33 07/17/19 10:46 07/17/19 10:47 Analyzed 07/23/19 16:09 07/23/19 16:15 07/23/19 16:15 07/23/19 16:15 07/23/19 17:47 07/23/19 17:47 07/12/19 17:47 07/12/19 17:48 07/12/19 17:48 07/12/19 17:48 07/12/19 17:47 07/12/19 17:48 07/12/19 17:47 07/12/19 17:48 07/12/19 17:48 07/12/19 17:48	07/17/19 10:28         07/17/19 10:30         07/17/19 10:31         HG190716-6         07/17/19 10:32         HG190716-6         07/17/19 10:33         HG190716-6         07/17/19 10:33         HG190716-6         07/17/19 10:34         HG190716-6         07/17/19 10:47         HG190716-6         07/17/19 10:47         HG190716-6         07/17/19 10:47         HG190716-6         07/17/19 10:47         HG190716-6         07/12/19 16:15         07/23/19 16:28         07/23/19 16:28         1190722-2         07/23/19 17:47         1190722-2         07/23/19 17:47         1190722-2         07/23/19 17:47         1190722-2         07/23/19 17:47         1190722-2         07/23/19 17:47         1190722-2         07/23/19 17:47         1190722-2         07/12/19 1:47         07/12/19 1:48         07/12/19 1:48         07/12/19 1:48         07/12/19 1:48         07/12/19 1:48         07/12/19 1:48      <	07/17/19 10:28       07/17/19 10:30         07/17/19 10:31       HG190716-6       .002002         07/17/19 10:32       HG190716-6       .002002         07/17/19 10:33       HG190716-6       .002002         07/17/19 10:33       HG190716-6       .002002         07/17/19 10:34       HG190716-6       .002002         07/17/19 10:47       HG190716-6       .002002         07/17/19 10:47       HG190716-6       .002002         07/17/19 10:47       HG190716-6       .002002         07/23/19 16:09       II190715-2       2.004         07/23/19 16:15       II190722-2       .5         07/23/19 16:28       II190722-2       .5         07/23/19 17:47       II190722-2       .5         07/23/19 17:47       II190722-2       .5         07/23/19 17:47       II190722-2       .5         07/12/19 1:47       WI190508-3       2.416         07/12/19 1:47       WI190508-3       2.416         07/12/19 1:48       WI190405-9       20         07/12/19 2:35       WI190405-9       20         M353.2 - Automated         Analyzed       PCN/SCN       QC         07/12/19 1:47       WI190508-3       .609	07/17/19 10:28       07/17/19 10:30         07/17/19 10:31       HG190716-6       .002002         07/17/19 10:32       HG190716-6       .002002       U         07/17/19 10:33       HG190716-6       .002002       U         07/17/19 10:33       HG190716-6       .002002       U         07/17/19 10:33       HG190716-6       .002002       U         07/17/19 10:47       HG190716-6       .002002       U         07/17/19 10:47       HG190716-6       .002002       U         07/23/19 16:47       HG190716-6       .002002       U         07/23/19 16:28       II190722-2       .5       U         07/23/19 16:28       II190722-2       .5       U         07/23/19 17:47       II190722-2       .5       U         07/23/19 17:47       II190722-2       .5       U         07/12/19 1:47       W1190508-3       2.416       .03         07/12/19 1:47       W1190508-3       2.416       .03         07/12/19 1:48       .03       .03       .07/12/19 1:48         07/12/19 2:35       WI190405-9       2       .03         07/12/19 1:48       .03       .609       .01         07/12/19 1:48       .609	OT/17/19 10:28         U           07/17/19 10:30         U           07/17/19 10:31         HG190716-6         .002002         U         .00195           07/17/19 10:32         HG190716-6         .002002         U         .00194           07/17/19 10:33         HG190716-6         .002002         U         .00194           07/17/19 10:34         HG190716-6         .002002         U         .00189           07/17/19 10:46         HG190716-6         .002002         U         .00189           07/17/19 10:47         HG190716-6         .002002         U         .00189           07/17/19 10:47         HG190716-6         .002002         U         .00187           M200.7 ICP           M200.7 ICP           Analyzed         PCN/SCN         QC         Sample         Found           07/23/19 16:15         II190722-2         .5         U         .4832           07/23/19 17:47         II190722-2         .5         U         .4832           colved         M353.2 - Automated Cadmium Reduct         Analyzed         PCN/SCN         QC         Sample         Found           07/12/19 1:47         WI190405-9         2         .003	OT/17/19         DOUL         U         mg/L           07/17/19         10:30         U         mg/L           07/17/19         10:31         HG190716-6         .002002         U         .00194         mg/L           07/17/19         10:32         HG190716-6         .002002         U         .00194         mg/L           07/17/19         10:33         HG190716-6         .002002         U         .00189         mg/L           07/17/19         10:46         HG190716-6         .002002         U         .00189         mg/L           07/17/19         10:47         HG190716-6         .002002         U         .00187         mg/L           07/12/19         10:47         HG190716-6         .002002         U         .00187         mg/L           07/12/19         10:47         HG190715-2         2.004         1.9532         mg/L           07/23/19         16:15         U         mg/L         mg/L           07/23/19         16:28         I190722-2         .5         U         .4821         mg/L           07/12/19         17:47         I190722-2         .5         U         .4821         mg/L           07/12/19         11:47	Minor         Minor <th< td=""><td>07/17/19 10:28       U       mg/L       -0.0002         07/17/19 10:30       U       mg/L       -0.00044         07/17/19 10:31       HG190716-6       .002002       U       .00195       mg/L       97       85         07/17/19 10:32       HG190716-6       .002002       U       .00195       mg/L       97       85         07/17/19 10:33       HG190716-6       .002002       U       .00194       mg/L       97       85         07/17/19 10:34       HG190716-6       .002002       U       .00187       mg/L       93       85         07/17/19 10:47       HG190716-8       .002002       U       .00187       mg/L       93       85         07/17/19 10:47       HG190716-8       .002002       U       .00187       mg/L       93       85         07/12/19 16:15       V       .002002       U       .00187       mg/L       97       95         07/23/19 16:28       II190715-2       2.004       1.9532       mg/L       97       85         07/23/19 16:24       II190722-2       .5       U       .4871       mg/L       97       85         07/12/19 17:47       II190722-2       .5       U       .4</td><td>O7/17/19 10:28         U         mg/L         -0.0002         0.0002           07/17/19 10:30         U         mg/L         -0.0002         0.00044           07/17/19 10:31         HG190716-6         .002002         U         .0019         mg/L         97         85         115           07/17/19 10:32         HG190716-6         .002002         U         .0019         mg/L         97         85         115           07/17/19 10:34         HG190716-6         .002002         U         .0019         mg/L         97         85         115           07/17/19 10:47         HG190716-6         .002002         U         .00187         mg/L         93         85         115           07/17/19 10:47         HG190716-8         .002002         U         .00187         mg/L         93         85         115           07/12/19 10:47         HG190716-8         .002002         U         .00187         mg/L         93         85         115           07/23/19 16:09         I1190712-2         2.004         1.9532         mg/L         97         95         105           07/23/19 16:15         U         mg/L         -0.024         .024         .024         .024</td><td>Mail         Mail         <th< td=""><td>07/17/19 10:28       U       mg/L       -0.0002       0.0002         07/17/19 10:30       HG190716-6       0.02002       0.0195       mg/L       97       85       115         07/17/19 10:32       HG190716-6       0.02002       U       0.0194       mg/L       97       85       115         07/17/19 10:32       HG190716-6       0.02002       U       .0019       mg/L       97       85       115       2       20         07/17/19 10:46       HG190716-6       .002002       U       .00189       mg/L       97       85       115       1       20         07/17/19 10:47       HG190716-6       .002002       U       .00187       mg/L       93       85       115       1       20         M200.7 ICP         M200.7 ICP         M200.7 ICP         M200.7 ICP         M200.7 ICP         O7/23/19 16:09       II190722-2       .5       U       .4821       mg/L       97       85       115       0         07/23/19 16:28       II190722-2       .5       U       .4821       mg/L       97       85       115       1       20     &lt;</td></th<></td></th<>	07/17/19 10:28       U       mg/L       -0.0002         07/17/19 10:30       U       mg/L       -0.00044         07/17/19 10:31       HG190716-6       .002002       U       .00195       mg/L       97       85         07/17/19 10:32       HG190716-6       .002002       U       .00195       mg/L       97       85         07/17/19 10:33       HG190716-6       .002002       U       .00194       mg/L       97       85         07/17/19 10:34       HG190716-6       .002002       U       .00187       mg/L       93       85         07/17/19 10:47       HG190716-8       .002002       U       .00187       mg/L       93       85         07/17/19 10:47       HG190716-8       .002002       U       .00187       mg/L       93       85         07/12/19 16:15       V       .002002       U       .00187       mg/L       97       95         07/23/19 16:28       II190715-2       2.004       1.9532       mg/L       97       85         07/23/19 16:24       II190722-2       .5       U       .4871       mg/L       97       85         07/12/19 17:47       II190722-2       .5       U       .4	O7/17/19 10:28         U         mg/L         -0.0002         0.0002           07/17/19 10:30         U         mg/L         -0.0002         0.00044           07/17/19 10:31         HG190716-6         .002002         U         .0019         mg/L         97         85         115           07/17/19 10:32         HG190716-6         .002002         U         .0019         mg/L         97         85         115           07/17/19 10:34         HG190716-6         .002002         U         .0019         mg/L         97         85         115           07/17/19 10:47         HG190716-6         .002002         U         .00187         mg/L         93         85         115           07/17/19 10:47         HG190716-8         .002002         U         .00187         mg/L         93         85         115           07/12/19 10:47         HG190716-8         .002002         U         .00187         mg/L         93         85         115           07/23/19 16:09         I1190712-2         2.004         1.9532         mg/L         97         95         105           07/23/19 16:15         U         mg/L         -0.024         .024         .024         .024	Mail         Mail <th< td=""><td>07/17/19 10:28       U       mg/L       -0.0002       0.0002         07/17/19 10:30       HG190716-6       0.02002       0.0195       mg/L       97       85       115         07/17/19 10:32       HG190716-6       0.02002       U       0.0194       mg/L       97       85       115         07/17/19 10:32       HG190716-6       0.02002       U       .0019       mg/L       97       85       115       2       20         07/17/19 10:46       HG190716-6       .002002       U       .00189       mg/L       97       85       115       1       20         07/17/19 10:47       HG190716-6       .002002       U       .00187       mg/L       93       85       115       1       20         M200.7 ICP         M200.7 ICP         M200.7 ICP         M200.7 ICP         M200.7 ICP         O7/23/19 16:09       II190722-2       .5       U       .4821       mg/L       97       85       115       0         07/23/19 16:28       II190722-2       .5       U       .4821       mg/L       97       85       115       1       20     &lt;</td></th<>	07/17/19 10:28       U       mg/L       -0.0002       0.0002         07/17/19 10:30       HG190716-6       0.02002       0.0195       mg/L       97       85       115         07/17/19 10:32       HG190716-6       0.02002       U       0.0194       mg/L       97       85       115         07/17/19 10:32       HG190716-6       0.02002       U       .0019       mg/L       97       85       115       2       20         07/17/19 10:46       HG190716-6       .002002       U       .00189       mg/L       97       85       115       1       20         07/17/19 10:47       HG190716-6       .002002       U       .00187       mg/L       93       85       115       1       20         M200.7 ICP         M200.7 ICP         M200.7 ICP         M200.7 ICP         M200.7 ICP         O7/23/19 16:09       II190722-2       .5       U       .4821       mg/L       97       85       115       0         07/23/19 16:28       II190722-2       .5       U       .4821       mg/L       97       85       115       1       20     <

#### ACZ Project ID: L53166

pH (lab)			SM4500	)H+ B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476948													
WG476948LCSW1	LCSW	07/15/19 18:45	PCN58053	6		6	units	100	5.9	6.1			
L53166-08DUP	DUP	07/15/19 22:13			8.1	8.1	units				0	20	
WG476948LCSW4	LCSW	07/15/19 22:17	PCN58053	6		6	units	100	5.9	6.1			
L53190-01DUP	DUP	07/16/19 3:03			8.4	8.5	units				1	20	
WG476948LCSW7	LCSW	07/16/19 3:06	PCN58053	6		6	units	100	5.9	6.1			
WG476948LCSW10	LCSW	07/16/19 6:51	PCN58053	6		6	units	100	5.9	6.1			
WG476948LCSW13	LCSW	07/16/19 10:47	PCN58053	6		6	units	100	5.9	6.1			
Potassium, disso	olved		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	20		19.65	mg/L	98	95	105			
WG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.6	0.6			
WG477627LFB	LFB	07/23/19 16:28	II190722-2	99.96426		98.95	mg/L	99	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	99.96426	.4	101.3	mg/L	101	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	99.96426	.4	101	mg/L	101	85	115	0	20	
Residue, Filterab	le (TDS	) @180C	SM2540	)C									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476868													
WG476868PBW	PBW	07/15/19 10:30				U	mg/L		-40	40			
WG476868LCSW	LCSW	07/15/19 10:31	PCN59102	1000		986	mg/L	99	80	120			
L53166-08DUP	DUP	07/15/19 10:45			116	112	mg/L				4	10	RA
L53190-01DUP	DUP	07/15/19 10:59			236	244	mg/L				3	10	RA
Sodium, dissolve	əd		M200.7	ICP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	100		101.48	mg/L	101	95	105			
WG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.6	0.6			
WG477627LFB	LFB	07/23/19 16:28	II190722-2	100.0471		102.4	mg/L	102	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	100.0471	1	105.2	mg/L	104	85	115			
							5						

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#### ACZ Project ID: L53166

Sulfate			D516-02/-	07 - Turbi	dimetric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477468													
WG477468ICB	ICB	07/22/19 9:15				U	mg/L		-3	3			
WG477468ICV	ICV	07/22/19 9:15	WI190710-1	20		20	mg/L	100	90	110			
WG477468LFB	LFB	07/22/19 9:35	WI181024-4	10.03		9	mg/L	90	90	110			
L53163-01DUP	DUP	07/22/19 9:48			1280	1300	mg/L				2	20	
L53163-02AS	AS	07/22/19 9:48	SO4TURB50X	10	1180	1190	mg/L	100	90	110			
WG477470													
WG477470ICB	ICB	07/22/19 9:15				U	mg/L		-3	3			
WG477470ICV	ICV	07/22/19 9:15	WI190710-1	20		20	mg/L	100	90	110			
WG477470LFB	LFB	07/22/19 10:13	WI181024-4	10.03		9.8	mg/L	98	90	110			
L53166-07DUP	DUP	07/22/19 10:13			U	U	mg/L				0	20	RA
L53166-08AS	AS	07/22/19 10:13	WI181024-4	10.03	21.5	32.6	mg/L	111	90	110			M1
Vanadium, diss	olved		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477744													
WG477744ICV	ICV	07/24/19 11:54	II190715-2	2		1.937	mg/L	97	95	105			
WG477744ICB	ICB	07/24/19 12:00				U	mg/L		-0.015	0.015			
WG477744LFB	LFB	07/24/19 12:12	II190722-2	.5005		.4932	mg/L	99	85	115			
L53112-02AS	AS	07/24/19 12:21	II190722-2	.5005	U	.4983	mg/L	100	85	115			
L53112-02ASD	ASD	07/24/19 12:24	II190722-2	.5005	U	.4971	mg/L	99	85	115	0	20	
L53166-07AS	AS	07/24/19 12:55	II190722-2	.5005	U	.502	mg/L	100	85	115			
L53166-07ASD	ASD	07/24/19 12:58	II190722-2	.5005	U	.5106	mg/L	102	85	115	2	20	
Zinc, dissolved			M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	2		1.898	mg/L	95	95	105			
WG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.03	0.03			
WG477627LFB	LFB	07/23/19 16:28	II190722-2	.50075		.503	mg/L	100	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	.50075	U	.503	mg/L	100	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	.50075	U	.498	mg/L	99	85	115	1	20	
WG477744													
WG477744ICV	ICV	07/24/19 11:54	II190715-2	2		1.937	mg/L	97	95	105			
WG477744ICB	ICB	07/24/19 12:00				U	mg/L		-0.03	0.03			
WG477744LFB	LFB	07/24/19 12:12	II190722-2	.50075		.513	mg/L	102	85	115			
L53112-02AS	AS	07/24/19 12:21	II190722-2	.50075	U	.51	mg/L	102	85	115			
L53112-02ASD	ASD	07/24/19 12:24	II190722-2	.50075	U	.525	mg/L	105	85	115	3	20	
L53166-07AS	AS	07/24/19 12:55	II190722-2	.50075	U	.522	mg/L	104	85	115			
L53166-07ASD	ASD	07/24/19 12:58	II190722-2	.50075	U	.523	mg/L	104	85	115	0	20	

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L53166-01	WG477047	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476742	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG476948	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.
L53166-02	WG477065	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476742	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG476948	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.
L53166-03	WG477065	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476742	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG476948	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L53166-04		Cyanide, total	M335.4 - Colorimetric w/ distillation		Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476742	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG476948	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.
L53166-05	WG477065	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476742	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG476948	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.
L53166-06	WG477065	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476742	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG476868	Residue, Filterable (TDS) @180C	SM2540C	Z3	Sample volume yielded a residue less than 2.5 mg
	WG476948	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L53166-07	WG477065	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476742	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG477470	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476948	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.
L53166-08	WG477065	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476742	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG476868	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG477470	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476948	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.

**AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

(800) 334-5493

Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

4

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L53166-09	WG476948	Conductivity @25C	SM2510B	RP	The duplicate originally assigned to this sample could not be used for precision assessment. The duplicate was not measured. The titrant normality was too weak or too strong for the sample alkalinity or instrument error. Another duplicate in the QC batch was used to assess precision. Method required duplicate frequency was met.
	WG477065	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476742	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG476948	pH (lab)	SM4500H+ B	RP	The duplicate originally assigned to this sample could not be used for precision assessment. The duplicate was not measured. The titrant normality was too weak or too strong for the sample alkalinity or instrument error. Another duplicate in the QC batch was used to assess precision. Method required duplicate frequency was met.
	WG477470	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG476948	Total Alkalinity	SM2320B - Titration	RP	The duplicate originally assigned to this sample could not be used for precision assessment. The duplicate was not measured. The titrant normality was too weak or too strong for the sample alkalinity or instrument error. Another duplicate in the QC batch was used to assess precision. Method required duplicate frequency was met.



ACZ Project ID: L53166

No certification qualifiers associated with this analysis

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

## Sample Receipt

ACZ Project ID: L53166 Date Received: 07/11/2019 12:40 Received By: Date Printed: 7/12/2019

#### **Receipt Verification**

- 1) Is a foreign soil permit included for applicable samples?
- 2) Is the Chain of Custody form or other directive shipping papers present?
- 3) Does this project require special handling procedures such as CLP protocol?
- 4) Are any samples NRC licensable material?
- 5) If samples are received past hold time, proceed with requested short hold time analyses?
- 6) Is the Chain of Custody form complete and accurate?

The date/time was not present on the sample containers or on the COC. The "Relinquished By" date was used to enter the samples.

The sample matrix was entered per the requested quotation.

The quote was entered from the sample bag label.

7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?

#### Samples/Containers

- 8) Are all containers intact and with no leaks?
- 9) Are all labels on containers and are they intact and legible?
- 10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?
- 11) For preserved bottle types, was the pH checked and within limits?<sup>1</sup>
- 12) Is there sufficient sample volume to perform all requested work?
- 13) Is the custody seal intact on all containers?
- 14) Are samples that require zero headspace acceptable?
- 15) Are all sample containers appropriate for analytical requirements?
- 16) Is there an Hg-1631 trip blank present?
- 17) Is there a VOA trip blank present?
- 18) Were all samples received within hold time?

#### **Chain of Custody Related Remarks**

Client Contact Remarks		
Shipping Containers		
Cooler Id	Temp (°C)	Temn

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
5185	3.8	<=6.0	15	N/A

YES	NO	NA
		Х
Х		
	Х	
		Х
Х		
	Х	

Х	

YES	NO	NA
Х		
Х		
Х		
Х		
Х		
		Х
		Х
Х		
		Х
		Х
Х		

NA indicates Not Applicable



ACZ Project ID: L53166 Date Received: 07/11/2019 12:40 Received By: Date Printed: 7/12/2019

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.

<sup>1</sup> The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCI preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

	ACZ Laboratories, Inc.									
	Report to: Name: JAKE USILKINSC Company: CREMININE	LLC	6	UNNIS		1:5cons 81230				
	E-mail: Jwilkiyson @CA Copy of Report to:	E MINING COM	Telephone	<u>: 710-</u>	- 11 /:	))		_		
	Name:		E-mail:							
	Company:		Telephone							
	Invoice to:									
	Name: JAKE WILKIN SON Company: CRG MINING LLC			Address: 501 SONTH WISCONSIN ST GUNNISON CO 81230						
	E-mail: JWIKINSONACT	••	Telephone			VES		-		
	If sample(s) received past holding time (HT), or if insufficient HT remains to complete YES Analysis before expiration, shall ACZ proceed with requested short HT analyses? NO									
	If "NO" then ACZ will contact client for further instruction. If neither Are samples for SDWA Compliance Monit		Yes		, even if HT is expire	d, and data will be qu	alified	-1		
	If yes, please include state forms. Results	•						_		
	d and	pler's Site Information *Lattest to the authent	State			<u>230</u> Time		<u> </u>		
	*Sampler's Signature:	tampering with the sar	nple in anyway, is co	nsidered fraud and	l punishable by State	ist or use quote n				
	PROJECT INFORMATION			NALYSES REQ	UESa ED (attach i	ist or use quote n	umber)			
	Quote #: PO#:		ners							
	Reporting state for compliance testing:		Containers							
	Check box if samples include NRC licensed	material?	ŭ 5							
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	CM3							-		
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ţ	Please refer to AC	Z's terms & conditions	located on t	he reverse	side of this	COC.				
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		2.1.1.								



October 30, 2019

Report to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231 Bill to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231

Project ID: ACZ Project ID: L55257

Jake Wilkinson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 15, 2019. This project has been assigned to ACZ is project number, L55257. Please reference this number in all future inquiries.

All analyses were performed according to ACZ<sup>S</sup> Quality Assurance Plan. The enclosed results relate only to the samples received under L55257. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ<sup>S</sup> current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after November 29, 2019. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZS stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.

Max janicele

Max Janicek has reviewed and approved this report.





Project ID: Sample ID: GL-1

# Inorganic Analytical Results

ACZ Sample ID:	L55257-01
Date Sampled:	10/14/19 11:30
Date Received:	10/15/19
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					10/21/19 14:17	rbt
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							10/23/19 13:40	rap
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	10/24/19 23:23	kja
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/24/19 15:34	mfm
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	10/24/19 15:34	mfm
Barium, dissolved	M200.7 ICP	1	0.018	В	mg/L	0.007	0.04	10/24/19 23:23	kja
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	10/24/19 15:34	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00005	0.0003	10/24/19 15:34	mfm
Calcium, dissolved	M200.7 ICP	1	13.9		mg/L	0.1	0.5	10/24/19 23:23	kja
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/24/19 15:34	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/25/19 18:13	kja
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:23	kja
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	10/24/19 23:23	kja
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	10/24/19 15:34	mfm
Magnesium, dissolved	M200.7 ICP	1	4.8		mg/L	0.2	1	10/24/19 23:23	kja
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:23	kja
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	10/24/19 17:17	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/24/19 23:23	kja
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	10/24/19 23:23	kja
Sodium, dissolved	M200.7 ICP	1	2.1		mg/L	0.2	1	10/24/19 23:23	kja
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/25/19 18:13	kja
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/25/19 18:13	kja



Project ID: Sample ID: GL-1

# Inorganic Analytical Results

ACZ Sample ID: **L55257-01** Date Sampled: 10/14/19 11:30 Date Received: 10/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	59.9			mg/L	2	20	10/22/19 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Total Alkalinity		1	59.9			mg/L	2	20	10/22/19 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.0			%			10/30/19 0:00	calc
Sum of Anions			1.3			meq/L			10/30/19 0:00	calc
Sum of Cations			1.2			meq/L			10/30/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	10/23/19 13:37	wtc
Conductivity @25C	SM2510B	1	117			umhos/cm	1	10	10/22/19 17:35	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	10/21/19 16:53	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		55			mg/L	0.2	5	10/30/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							10/17/19 11:55	mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.09	В		mg/L	0.02	0.1	10/30/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.09	В	*	mg/L	0.02	0.1	10/15/19 23:21	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	10/15/19 23:21	pjb
pH (lab)	SM4500H+ B									
pН		1	8.1	н		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.8			С	0.1	0.1	10/22/19 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	74		*	mg/L	20	40	10/16/19 11:33	jck
Sulfate	D516-02/-07 - Turbidimetric	1	5.0		*	mg/L	1	5	10/22/19 10:06	mss2

### **CRG Mining, LLC**

Project ID: Sample ID: GL-2

# Inorganic Analytical Results

ACZ Sample ID: **L55257-02** Date Sampled: 10/14/19 11:15 Date Received: 10/15/19 Sample Matrix: Surface Water

Inorganic Prep										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-						10/21/19 14:26	rbt
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								10/23/19 13:40	rap
Metals Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.05	0.3	10/24/19 23:32	kja
Antimony, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0004	0.002	10/24/19 15:35	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0031			mg/L	0.0002	0.001	10/24/19 15:35	mfm
Barium, dissolved	M200.7 ICP	1	0.015	В		mg/L	0.007	0.04	10/24/19 23:32	kja
Beryllium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00008	0.0003	10/24/19 15:35	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00235			mg/L	0.00005	0.0003	10/24/19 15:35	mfm
Calcium, dissolved	M200.7 ICP	1	22.5			mg/L	0.1	0.5	10/24/19 23:32	kja
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	10/24/19 15:35	mfm
Cobalt, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	10/25/19 18:23	kja
Copper, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	10/24/19 23:32	kja
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.03	0.08	10/24/19 23:32	kja
Lead, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	10/24/19 15:35	mfm
Magnesium, dissolved	M200.7 ICP	1	6.6			mg/L	0.2	1	10/24/19 23:32	kja
Manganese, dissolved	M200.7 ICP	1	0.01	В		mg/L	0.01	0.05	10/24/19 23:32	kja
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	10/24/19 17:20	slm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	10/24/19 23:32	kja
Potassium, dissolved	M200.7 ICP	1	0.9	В		mg/L	0.2	1	10/24/19 23:32	kja
Sodium, dissolved	M200.7 ICP	1	4.2			mg/L	0.2	1	10/24/19 23:32	kja
Vanadium, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	10/25/19 18:23	kja
Zinc, dissolved	M200.7 ICP	1	0.24			mg/L	0.01	0.05	10/25/19 18:23	kja



Project ID: Sample ID: GL-2

# Inorganic Analytical Results

ACZ Sample ID: **L55257-02** Date Sampled: 10/14/19 11:15 Date Received: 10/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	68.9			mg/L	2	20	10/22/19 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Total Alkalinity		1	68.9			mg/L	2	20	10/22/19 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-2.6			%			10/30/19 0:00	calc
Sum of Anions			2			meq/L			10/30/19 0:00	calc
Sum of Cations			1.9			meq/L			10/30/19 0:00	calc
Chloride	SM4500CI-E	1	0.9	В	*	mg/L	0.5	2	10/23/19 13:39	wtc
Conductivity @25C	SM2510B	1	185			umhos/cm	1	10	10/22/19 17:45	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5 <sup>1</sup>		U	*	mg/L	0.003	0.01	10/21/19 16:54	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		83			mg/L	0.2	5	10/30/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							10/17/19 11:58	s mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.14			mg/L	0.02	0.1	10/30/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.14		*	mg/L	0.02	0.1	10/15/19 23:22	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	10/15/19 23:22	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	22.6			С	0.1	0.1	10/22/19 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	114		*	mg/L	20	40	10/16/19 11:35	jck
Sulfate	D516-02/-07 - Turbidimetric	1	26.8		*	mg/L	1	5	10/22/19 10:06	mss2



Project ID: Sample ID: GL-3

# Inorganic Analytical Results

ACZ Sample ID: **L55257-03** Date Sampled: 10/14/19 11:45 Date Received: 10/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					10/21/19 14:35	rbt
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							10/23/19 13:40	rap
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U *	mg/L	0.05	0.3	10/24/19 23:35	kja
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/24/19 15:37	mfm
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	10/24/19 15:37	mfm
Barium, dissolved	M200.7 ICP	1	0.016	В	mg/L	0.007	0.04	10/24/19 23:35	kja
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	10/24/19 15:37	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00012	В	mg/L	0.00005	0.0003	10/24/19 15:37	mfm
Calcium, dissolved	M200.7 ICP	1	14.4		mg/L	0.1	0.5	10/24/19 23:35	kja
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/24/19 15:37	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/25/19 18:26	kja
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:35	kja
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	10/24/19 23:35	kja
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	10/24/19 15:37	mfm
Magnesium, dissolved	M200.7 ICP	1	4.9		mg/L	0.2	1	10/24/19 23:35	kja
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:35	kja
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	10/24/19 17:20	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/24/19 23:35	kja
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	10/24/19 23:35	kja
Sodium, dissolved	M200.7 ICP	1	2.2		mg/L	0.2	1	10/24/19 23:35	kja
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/25/19 18:26	kja
Zinc, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	10/25/19 18:26	kja



Project ID: Sample ID: GL-3

# Inorganic Analytical Results

ACZ Sample ID: L55257-03 Date Sampled: 10/14/19 11:45 Date Received: 10/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	59.8			mg/L	2	20	10/22/19 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Total Alkalinity		1	59.8			mg/L	2	20	10/22/19 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.0			%			10/30/19 0:00	calc
Sum of Anions			1.3			meq/L			10/30/19 0:00	calc
Sum of Cations			1.2			meq/L			10/30/19 0:00	calc
Chloride	SM4500CI-E	1	0.6	В	*	mg/L	0.5	2	10/23/19 13:39	wtc
Conductivity @25C	SM2510B	1	120			umhos/cm	1	10	10/22/19 17:55	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5 י		U	*	mg/L	0.003	0.01	10/21/19 16:55	mss2
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		56			mg/L	0.2	5	10/30/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							10/17/19 12:01	mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.10			mg/L	0.02	0.1	10/30/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.10		*	mg/L	0.02	0.1	10/15/19 23:23	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	10/15/19 23:23	pjb
pH (lab)	SM4500H+ B									
pН		1	8.1	н		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	22.0			С	0.1	0.1	10/22/19 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	68		*	mg/L	20	40	10/16/19 11:38	jck
Sulfate	D516-02/-07 - Turbidimetric	1	4.9	В	*	mg/L	1	5	10/22/19 10:06	mss2



Project ID: Sample ID: RM-1

# Inorganic Analytical Results

ACZ Sample ID: L55257-04 Date Sampled: 10/14/19 12:00 Date Received: 10/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					10/24/19 10:19	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							10/23/19 13:40	rap
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U *	mg/L	0.05	0.3	10/24/19 23:39	kja
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/24/19 15:39	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0002	0.001	10/24/19 15:39	mfm
Barium, dissolved	M200.7 ICP	1	0.015	В	mg/L	0.007	0.04	10/24/19 23:39	kja
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	10/24/19 15:39	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00012	В	mg/L	0.00005	0.0003	10/24/19 15:39	mfm
Calcium, dissolved	M200.7 ICP	1	15.6		mg/L	0.1	0.5	10/24/19 23:39	kja
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/24/19 15:39	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/25/19 18:29	kja
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:39	kja
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	10/24/19 23:39	kja
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	10/24/19 15:39	mfm
Magnesium, dissolved	M200.7 ICP	1	5.2		mg/L	0.2	1	10/24/19 23:39	kja
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:39	kja
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	10/24/19 17:21	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/24/19 23:39	kja
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	10/24/19 23:39	kja
Sodium, dissolved	M200.7 ICP	1	2.1		mg/L	0.2	1	10/24/19 23:39	kja
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/25/19 18:29	kja
Zinc, dissolved	M200.7 ICP	1	0.01	В	mg/L	0.01	0.05	10/25/19 18:29	kja



Project ID: Sample ID: RM-1

# Inorganic Analytical Results

ACZ Sample ID: L55257-04 Date Sampled: 10/14/19 12:00 Date Received: 10/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	65.5			mg/L	2	20	10/22/19 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Total Alkalinity		1	65.5			mg/L	2	20	10/22/19 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.7			%			10/30/19 0:00	calc
Sum of Anions			1.4			meq/L			10/30/19 0:00	calc
Sum of Cations			1.3			meq/L			10/30/19 0:00	calc
Chloride	SM4500CI-E	1	0.6	В	*	mg/L	0.5	2	10/23/19 13:39	wtc
Conductivity @25C	SM2510B	1	128			umhos/cm	1	10	10/22/19 18:04	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	10/24/19 13:35	ttg
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		60			mg/L	0.2	5	10/30/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							10/17/19 12:04	mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.08	В		mg/L	0.02	0.1	10/30/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.08	В	*	mg/L	0.02	0.1	10/15/19 23:25	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	10/15/19 23:25	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.5			С	0.1	0.1	10/22/19 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	68		*	mg/L	20	40	10/16/19 15:26	еер
Sulfate	D516-02/-07 - Turbidimetric	1	5.1		*	mg/L	1	5	10/22/19 10:06	mss2



Project ID: Sample ID: RM-2

# Inorganic Analytical Results

ACZ Sample ID:	L55257-05
Date Sampled:	10/14/19 12:45
Date Received:	10/15/19
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					10/24/19 10:36	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							10/23/19 13:40	rap
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U *	mg/L	0.05	0.3	10/24/19 23:42	kja
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/24/19 15:41	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0081		mg/L	0.0002	0.001	10/24/19 15:41	mfm
Barium, dissolved	M200.7 ICP	1		U	mg/L	0.007	0.04	10/24/19 23:42	kja
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	10/24/19 15:41	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00062		mg/L	0.00005	0.0003	10/24/19 15:41	mfm
Calcium, dissolved	M200.7 ICP	1	14.8		mg/L	0.1	0.5	10/24/19 23:42	kja
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/24/19 15:41	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/25/19 18:32	kja
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:42	kja
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	10/24/19 23:42	kja
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	10/24/19 15:41	mfm
Magnesium, dissolved	M200.7 ICP	1	3.3		mg/L	0.2	1	10/24/19 23:42	kja
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:42	kja
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	10/24/19 17:22	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/24/19 23:42	kja
Potassium, dissolved	M200.7 ICP	1	1.1		mg/L	0.2	1	10/24/19 23:42	kja
Sodium, dissolved	M200.7 ICP	1	4.2		mg/L	0.2	1	10/24/19 23:42	kja
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/25/19 18:32	kja
Zinc, dissolved	M200.7 ICP	1	0.06		mg/L	0.01	0.05	10/25/19 18:32	kja



Project ID: Sample ID: RM-2

# Inorganic Analytical Results

ACZ Sample ID: L55257-05 Date Sampled: 10/14/19 12:45 Date Received: 10/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	43.4			mg/L	2	20	10/22/19 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Total Alkalinity		1	43.4			mg/L	2	20	10/22/19 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.0			%			10/30/19 0:00	calc
Sum of Anions			1.3			meq/L			10/30/19 0:00	calc
Sum of Cations			1.2			meq/L			10/30/19 0:00	calc
Chloride	SM4500CI-E	1	0.6	В	*	mg/L	0.5	2	10/23/19 13:39	) wtc
Conductivity @25C	SM2510B	1	125			umhos/cm	1	10	10/22/19 18:13	8 emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	10/24/19 13:37	′ ttg
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		51			mg/L	0.2	5	10/30/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							10/17/19 12:07	' mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	10/30/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	10/15/19 23:27	' pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	10/15/19 23:27	' pjb
pH (lab)	SM4500H+ B									
pН		1	8.0	н		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.6			С	0.1	0.1	10/22/19 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	74		*	mg/L	20	40	10/16/19 15:28	в еер
Sulfate	D516-02/-07 - Turbidimetric	1	20.3		*	mg/L	1	5	10/22/19 10:06	6 mss2



Project ID: Sample ID: RM-3

# Inorganic Analytical Results

ACZ Sample ID: L55257-06 Date Sampled: 10/14/19 12:20 Date Received: 10/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XC	Q Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					10/24/19 10:52	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							10/23/19 13:40	rap
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XC	Q Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U *	mg/L	0.05	0.3	10/24/19 23:45	kja
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/24/19 15:46	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0008	В	mg/L	0.0002	0.001	10/24/19 15:46	mfm
Barium, dissolved	M200.7 ICP	1	0.016	В	mg/L	0.007	0.04	10/24/19 23:45	kja
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	10/24/19 15:46	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00015	В	mg/L	0.00005	0.0003	10/24/19 15:46	mfm
Calcium, dissolved	M200.7 ICP	1	15.9		mg/L	0.1	0.5	10/24/19 23:45	kja
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/24/19 15:46	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/25/19 18:36	kja
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:45	kja
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	10/24/19 23:45	kja
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	10/24/19 15:46	mfm
Magnesium, dissolved	M200.7 ICP	1	5.2		mg/L	0.2	1	10/24/19 23:45	kja
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:45	kja
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	10/24/19 17:25	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/24/19 23:45	kja
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	10/24/19 23:45	kja
Sodium, dissolved	M200.7 ICP	1	2.3		mg/L	0.2	1	10/24/19 23:45	kja
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/25/19 18:36	kja
Zinc, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	10/25/19 18:36	kja



Project ID: Sample ID: RM-3

# Inorganic Analytical Results

ACZ Sample ID: L55257-06 Date Sampled: 10/14/19 12:20 Date Received: 10/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	63.3			mg/L	2	20	10/22/19 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Total Alkalinity		1	63.3			mg/L	2	20	10/22/19 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.7			%			10/30/19 0:00	calc
Sum of Anions			1.4			meq/L			10/30/19 0:00	calc
Sum of Cations			1.3			meq/L			10/30/19 0:00	calc
Chloride	SM4500CI-E	1	0.6	В	*	mg/L	0.5	2	10/23/19 13:39	wtc
Conductivity @25C	SM2510B	1	128			umhos/cm	1	10	10/22/19 18:23	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5 <sup>1</sup>		U	*	mg/L	0.003	0.01	10/24/19 13:39	ttg
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		61			mg/L	0.2	5	10/30/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							10/17/19 12:10	mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.08	В		mg/L	0.02	0.1	10/30/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.08	В	*	mg/L	0.02	0.1	10/15/19 23:34	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	10/15/19 23:34	pjb
pH (lab)	SM4500H+ B									
pН		1	8.1	н		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	22.1			С	0.1	0.1	10/22/19 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	66		*	mg/L	20	40	10/16/19 15:30	eep
Sulfate	D516-02/-07 - Turbidimetric	1	5.8		*	mg/L	1	5	10/22/19 10:06	mss2



Project ID: Sample ID: CM-1

# Inorganic Analytical Results

ACZ Sample ID: L55257-07 Date Sampled: 10/14/19 13:00 Date Received: 10/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					10/24/19 11:00	ttg
Lab Filtration (0.45um)	M200.7/200.8/3005A							10/23/19 13:40	rap
& Acidification									
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U *	mg/L	0.05	0.3	10/24/19 23:48	kja
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/24/19 15:48	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0014		mg/L	0.0002	0.001	10/24/19 15:48	mfm
Barium, dissolved	M200.7 ICP	1	0.017	В	mg/L	0.007	0.04	10/24/19 23:48	kja
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	10/24/19 15:48	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00013	В	mg/L	0.00005	0.0003	10/24/19 15:48	mfm
Calcium, dissolved	M200.7 ICP	1	16.4		mg/L	0.1	0.5	10/24/19 23:48	kja
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/24/19 15:48	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/25/19 18:39	kja
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:48	kja
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	10/24/19 23:48	kja
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	10/24/19 15:48	mfm
Magnesium, dissolved	M200.7 ICP	1	5.3		mg/L	0.2	1	10/24/19 23:48	kja
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:48	kja
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	10/24/19 17:26	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/24/19 23:48	kja
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	10/24/19 23:48	kja
Sodium, dissolved	M200.7 ICP	1	2.3		mg/L	0.2	1	10/24/19 23:48	kja
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/25/19 18:39	kja
Zinc, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	10/25/19 18:39	kja



Project ID: Sample ID: CM-1

# Inorganic Analytical Results

ACZ Sample ID: **L55257-07** Date Sampled: 10/14/19 13:00 Date Received: 10/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	63.5			mg/L	2	20	10/22/19 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Total Alkalinity		1	63.5			mg/L	2	20	10/22/19 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			10/30/19 0:00	calc
Sum of Anions			1.4			meq/L			10/30/19 0:00	calc
Sum of Cations			1.4			meq/L			10/30/19 0:00	calc
Chloride	SM4500CI-E	1	0.6	В	*	mg/L	0.5	2	10/23/19 13:39	wtc
Conductivity @25C	SM2510B	1	131			umhos/cm	1	10	10/22/19 18:32	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	10/24/19 13:39	ttg
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		63			mg/L	0.2	5	10/30/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							10/17/19 12:13	mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.07	В		mg/L	0.02	0.1	10/30/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.07	В	*	mg/L	0.02	0.1	10/15/19 23:37	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	10/15/19 23:37	pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.7			С	0.1	0.1	10/22/19 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	70		*	mg/L	20	40	10/16/19 15:32	еер
Sulfate	D516-02/-07 - Turbidimetric	1	6.7		*	mg/L	1	5	10/22/19 10:06	mss2

REPIN.02.06.05.01

\* Please refer to Qualifier Reports for details.



Project ID: Sample ID: CM-2

# Inorganic Analytical Results

ACZ Sample ID: L55257-08 Date Sampled: 10/14/19 13:15 Date Received: 10/15/19 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					10/24/19 11:08	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							10/23/19 13:40	rap
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U *	mg/L	0.05	0.3	10/24/19 23:57	kja
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	10/24/19 15:53	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0028		mg/L	0.0002	0.001	10/24/19 15:53	mfm
Barium, dissolved	M200.7 ICP	1	0.016	В	mg/L	0.007	0.04	10/24/19 23:57	kja
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	10/24/19 15:53	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00013	В	mg/L	0.00005	0.0003	10/24/19 15:53	mfm
Calcium, dissolved	M200.7 ICP	1	19.0		mg/L	0.1	0.5	10/24/19 23:57	kja
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	10/24/19 15:53	mfm
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/25/19 18:48	kja
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:57	kja
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	10/24/19 23:57	kja
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	10/24/19 15:53	mfm
Magnesium, dissolved	M200.7 ICP	1	3.6		mg/L	0.2	1	10/24/19 23:57	kja
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/24/19 23:57	kja
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	10/24/19 17:27	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	10/24/19 23:57	kja
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	10/24/19 23:57	kja
Sodium, dissolved	M200.7 ICP	1	6.0		mg/L	0.2	1	10/24/19 23:57	kja
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	10/25/19 18:48	kja
Zinc, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	10/25/19 18:48	kja



Project ID: Sample ID: CM-2

# Inorganic Analytical Results

ACZ Sample ID: L55257-08 Date Sampled: 10/14/19 13:15 Date Received: 10/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	57.3			mg/L	2	20	10/22/19 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Total Alkalinity		1	57.3			mg/L	2	20	10/22/19 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			10/30/19 0:00	calc
Sum of Anions			1.5			meq/L			10/30/19 0:00	calc
Sum of Cations			1.5			meq/L			10/30/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	10/23/19 13:39	wtc
Conductivity @25C	SM2510B	1	154			umhos/cm	1	10	10/22/19 18:42	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5 <sup>1</sup>		U	*	mg/L	0.003	0.01	10/24/19 13:40	ttg
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		62			mg/L	0.2	5	10/30/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							10/17/19 12:16	i mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	10/30/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	10/15/19 23:38	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	10/15/19 23:38	pjb
pH (lab)	SM4500H+ B									
pН		1	8.1	н		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.7			С	0.1	0.1	10/22/19 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	94		*	mg/L	20	40	10/16/19 15:34	еер
Sulfate	D516-02/-07 - Turbidimetric	1	17.9		*	mg/L	1	5	10/22/19 10:06	mss2



Project ID: Sample ID: CM-3

# Inorganic Analytical Results

ACZ Sample ID: **L55257-09** Date Sampled: 10/14/19 13:45 Date Received: 10/15/19 Sample Matrix: Surface Water

Inorganic Prep										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-						10/24/19 11:17	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								10/23/19 13:40	rap
Metals Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.05	0.3	10/25/19 0:00	kja
Antimony, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0004	0.002	10/24/19 15:55	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0018			mg/L	0.0002	0.001	10/24/19 15:55	mfm
Barium, dissolved	M200.7 ICP	1	0.016	В		mg/L	0.007	0.04	10/25/19 0:00	kja
Beryllium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00008	0.0003	10/24/19 15:55	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00016	В		mg/L	0.00005	0.0003	10/24/19 15:55	mfm
Calcium, dissolved	M200.7 ICP	1	16.4			mg/L	0.1	0.5	10/25/19 0:00	kja
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	10/24/19 15:55	mfm
Cobalt, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	10/25/19 18:52	kja
Copper, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	10/25/19 0:00	kja
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.03	0.08	10/25/19 0:00	kja
Lead, dissolved	M200.8 ICP-MS	1	0.0002	В		mg/L	0.0001	0.0005	10/24/19 15:55	mfm
Magnesium, dissolved	M200.7 ICP	1	5.1			mg/L	0.2	1	10/25/19 0:00	kja
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	10/25/19 0:00	kja
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	10/24/19 17:28	slm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	10/25/19 0:00	kja
Potassium, dissolved	M200.7 ICP	1	0.7	В		mg/L	0.2	1	10/25/19 0:00	kja
Sodium, dissolved	M200.7 ICP	1	2.5			mg/L	0.2	1	10/25/19 0:00	kja
Vanadium, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	10/25/19 18:52	kja
Zinc, dissolved	M200.7 ICP	1	0.01	В		mg/L	0.01	0.05	10/25/19 18:52	kja



Project ID: Sample ID: CM-3

# Inorganic Analytical Results

ACZ Sample ID: **L55257-09** Date Sampled: 10/14/19 13:45 Date Received: 10/15/19 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	63.4			mg/L	2	20	10/22/19 0:00	emk
Carbonate as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Hydroxide as CaCO3		1		U		mg/L	2	20	10/22/19 0:00	emk
Total Alkalinity		1	63.4			mg/L	2	20	10/22/19 0:00	emk
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			10/30/19 0:00	calc
Sum of Anions			1.4			meq/L			10/30/19 0:00	calc
Sum of Cations			1.4			meq/L			10/30/19 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	10/23/19 13:39	wtc
Conductivity @25C	SM2510B	1	133			umhos/cm	1	10	10/22/19 18:52	emk
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	10/24/19 13:43	ttg
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		62.0			mg/L	0.2	5	10/30/19 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							10/17/19 12:19	mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.07	В		mg/L	0.02	0.1	10/30/19 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.07	В	*	mg/L	0.02	0.1	10/15/19 23:39	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	10/15/19 23:39	pjb
pH (lab)	SM4500H+ B									
рН		1	8.2	Н		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.8			С	0.1	0.1	10/22/19 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	74		*	mg/L	20	40	10/16/19 15:36	еер
Sulfate	D516-02/-07 - Turbidimetric	1	7.6		*	mg/L	1	5	10/22/19 10:31	mss2



Inorganic Reference

Batch	A distinct set of samples analyzed at a specific time		
Found	Value of the QC Type of interest		
Limit	Upper limit for RPD, in %.		
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)		
MDL	Method Detection Limit. Same as Minimum Reporting Limit u	inless omitted or er	$r_{\rm rual}$ to the POL (see comment #5)
	Allows for instrument and annual fluctuations.		
PCN/SCN	A number assigned to reagents/standards to trace to the mai	nufacturers certifica	ate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term		,
QC	True Value of the Control Sample or the amount added to the	e Spike	
Rec	Recovered amount of the true value or spike added, in % (ex	cept for LCSS, mg	/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate Q	C Types	
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)		
Sample	Value of the Sample of interest		
C Sample Ty	rpes		
AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
ССВ	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
LCSS LCSSD	Laboratory Control Sample - Soil Laboratory Control Sample - Soil Duplicate	PBW PQV	Prep Blank - Water Practical Quantitation Verification standard
			•
LCSSD LCSW	Laboratory Control Sample - Soil Duplicate	PQV	Practical Quantitation Verification standard
LCSSD LCSW	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water vpe Explanations	PQV SDL	Practical Quantitation Verification standard
LCSSD LCSW C Sample Ty	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water /pe Explanations Verifies that there is no or minimal c	PQV SDL contamination in the	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure.
LCSSD LCSW C Sample Ty Blanks	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water ype Explanations Verifies that there is no or minimal of mples Verifies the accuracy of the method	PQV SDL contamination in the	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water vpe Explanations Verifies that there is no or minimal of mples Verifies the accuracy of the method	PQV SDL contamination in the l, including the prep ent and/or method.	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any.	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water /pe Explanations mples Verifies that there is no or minimal of Verifies the accuracy of the method Verifies the precision of the instrument tified Matrix Determines sample matrix interferent Verifies the validity of the calibration	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any.	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water /pe Explanations mples Verifies that there is no or minimal of Verifies the accuracy of the method Verifies the precision of the instrument tified Matrix Determines sample matrix interferent Verifies the validity of the calibration	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n.	Practical Quantitation Verification standard Serial Dilution prep method or calibration procedure. procedure.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration s (Qual)	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. h.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B	Laboratory Control Sample - Soil Duplicate         Laboratory Control Sample - Water         rpe Explanations         mples       Verifies that there is no or minimal of Verifies the accuracy of the method         verifies the precision of the instrument of the Matrix       Determines sample matrix interferent Verifies the validity of the calibration         s (Qual)       Analyte concentration detected at a value between MDL and	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>Ppe Explanations</b> Type Explanations Type Expla	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold.	Practical Quantitation Verification standard Serial Dilution  proper method or calibration procedure. procedure.  ed value is an estimated quantity. ime.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>/pe Explanations</b> mples Verifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the asso	Practical Quantitation Verification standard Serial Dilution proper method or calibration procedure. procedure. ed value is an estimated quantity. ime. ciated value.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the asso	Practical Quantitation Verification standard Serial Dilution proper method or calibration procedure. procedure. ed value is an estimated quantity. ime. ciated value.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the asso r the sample detect	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. ed value is an estimated quantity. ime. ciated value. ion limit.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>rpe Explanations</b> Temples Verifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrument tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined nee The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or <b>ences</b>	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the asso r the sample detect	Practical Quantitation Verification standard Serial Dilution  procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>rpe Explanations</b> mples Verifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined nee The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/4-83-020. Methods for Chemical Analysis of Water	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the asso the sample detect and Wastes, Marc nic Substances in I	Practical Quantitation Verification standard Serial Dilution  procedure.  procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U ethod Reference (1) (2)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/4-83-020. Methods for Chemical Analysis of Water EPA 600/R-93-100. Methods for the Determination of Inorga	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the asso the sample detect and Wastes, Marc nic Substances in I	Practical Quantitation Verification standard Serial Dilution  procedure.  procedure.  ed value is an estimated quantity. ime.  ciated value. ion limit.  h 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U ethod Reference (1) (2) (3)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. The level of the associat the sample detect and Wastes, Marc nic Substances in I s in Environmental S	Practical Quantitation Verification standard Serial Dilution  procedure.  procedure.  ed value is an estimated quantity. ime.  ciated value. ion limit.  h 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U Sthod Refere (1) (2) (3) (4)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>ype Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga EPA SW-846. Test Methods for Evaluating Solid Waste.	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. The level of the associat the sample detect and Wastes, Marc nic Substances in I s in Environmental S	Practical Quantitation Verification standard Serial Dilution  Proper method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U Sthod Reference (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>ype Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga EPA SW-846. Test Methods for Evaluating Solid Waste.	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. he level of the asso r the sample detect r and Wastes, Marc nic Substances in I s in Environmental S vater.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. ed value is an estimated quantity. ime. ciated value. ion limit. h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U Sthod Reference (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>rpe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/4-83-020. Methods for Chemical Analysis of Water EPA 600/R-93-100. Methods for the Determination of Inorga EPA 600/R-94-111. Methods for the Determination of Metals EPA SW-846. Test Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastew	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. The level of the associat the sample detect and Wastes, Marc nic Substances in I is in Environmental S vater.	Practical Quantitation Verification standard Serial Dilution  e prep method or calibration procedure. procedure.  ed value is an estimated quantity. ime. ciated value. ion limit.  h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.  Hues are used in the calculations.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U Sthod Reference (1) (2) (3) (4) (5)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined need The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastew	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associate an immediate hold t egative threshold. The level of the associate and Wastes, Marc nic Substances in I is in Environmental S vater.	Practical Quantitation Verification standard Serial Dilution  procedure.  procedure.  ed value is an estimated quantity. ime.  ciated value. ion limit.  h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994.  Hues are used in the calculations.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U ethod Reference (1) (2) (3) (4) (5) Somments (1) (2)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrument tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastew QC results calculated from raw data. Results may vary slight Soil, Sludge, and Plant matrices for Inorganic analyses are re-	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. The level of the associat r the sample detect and Wastes, Marc inic Substances in I s in Environmental S vater.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. ed value is an estimated quantity. ime. ciated value. ion limit. h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. fues are used in the calculations. ight basis.
LCSSD LCSW Sample Ty Blanks Control Sa Duplicates Spikes/For Standard Z Qualifiers B H L U U ethod Refere (1) (2) (3) (4) (5) Somments (1) (2) (3)	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water <b>pe Explanations</b> Werifies that there is no or minimal of mples Verifies the accuracy of the method Verifies the precision of the instrum- tified Matrix Determines sample matrix interferent Verifies the validity of the calibration <b>s (Qual)</b> Analyte concentration detected at a value between MDL and Analysis exceeded method hold time. pH is a field test with a Target analyte response was below the laboratory defined ne The material was analyzed for, but was not detected above th The associated value is either the sample quantitation limit or <b>ences</b> EPA 600/R-93-100. Methods for Chemical Analysis of Water EPA 600/R-94-111. Methods for the Determination of Inorga EPA 600/R-94-111. Methods for the Determination of Metals EPA SW-846. Test Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastew QC results calculated from raw data. Results may vary slight Soil, Sludge, and Plant matrices for Inorganic analyses are re- Animal matrices for Inorganic analyses are reported on an "a	PQV SDL contamination in the l, including the prep ent and/or method. nces, if any. n. PQL. The associat an immediate hold t egative threshold. The level of the associat r the sample detect and Wastes, Marc inic Substances in I s in Environmental S vater.	Practical Quantitation Verification standard Serial Dilution e prep method or calibration procedure. procedure. ed value is an estimated quantity. ime. ciated value. ion limit. h 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. fues are used in the calculations. ight basis.

https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

REP001.03.15.02

#### **CRG Mining, LLC**

#### ACZ Project ID: L55257

Alkalinity as CaC	03		SM23208	3 - Titration									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484563													
WG484563PBW1	PBW	10/22/19 17:07				U	mg/L		-20	20			
WG484563LCSW3	LCSW	10/22/19 17:26	WC191014-2	820.0001		806	mg/L	98	90	110			
L55262-01DUP	DUP	10/22/19 19:15			431	419	mg/L				3	20	
WG484563LCSW6	LCSW	10/22/19 21:34	WC191014-2	820.0001		827	mg/L	101	90	110			
WG484563PBW2	PBW	10/22/19 21:40				2.8	mg/L		-20	20			
WG484563LCSW9	LCSW	10/23/19 1:00	WC191014-2	820.0001		801	mg/L	98	90	110			
WG484563PBW3	PBW	10/23/19 1:07				2.9	mg/L		-20	20			
WG484563LCSW12	LCSW	10/23/19 5:21	WC191014-2	820.0001		803	mg/L	98	90	110			
WG484563PBW4	PBW	10/23/19 5:28				2.3	mg/L		-20	20			
WG484563LCSW15	LCSW	10/23/19 9:07	WC191014-2	820.0001		823	mg/L	100	90	110			
Aluminum, disso	lved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													
WG484785ICV	ICV	10/24/19 22:25	II191017-1	2		2.012	mg/L	101	95	105			
WG484785ICB	ICB	10/24/19 22:31				U	mg/L		-0.15	0.15			
WG484785LFB	LFB	10/24/19 22:43	II191011-4	1.0012		1.072	mg/L	107	85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4	1.0012	U	1.118	mg/L	112	85	115			
L55257-01ASD	ASD	10/24/19 23:29	II191011-4	1.0012	U	1.146	mg/L	114	85	115	2	20	
L55341-06AS	AS	10/25/19 0:06	II191011-4	1.0012	U	1.198	mg/L	120	85	115			M1
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	1.0012	U	1.172	mg/L	117	85	115	2	20	M1
Antimony, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484777													
WG484777ICV	ICV	10/24/19 15:28	MS191014-8	.02004		.01811	mg/L	90	90	110			
WG484777ICB	ICB	10/24/19 15:30		.02004		U	mg/L	50	-0.00088	0.00088			
WG484777LFB	LFB	10/24/19 15:32	MS191023-3	.01		.00901	mg/L	90	85	115			
L55257-05AS	AS	10/24/19 15:43	MS191023-3	.01	U	.00837	mg/L	84	70	130			
L55257-05ASD	ASD	10/24/19 15:44	MS191023-3	.01	U	.00851	mg/L	85	70	130	2	20	
Arsenic, dissolve	ed		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484777													
WG484777ICV	ICV	10/24/19 15:28	MS191014-8	.05		.04778	mg/L	96	90	110			
WG484777ICB	ICB	10/24/19 15:20				.04770 U	mg/L	00	-0.00044	0.00044			
WG484777LFB	LFB	10/24/19 15:30	MS191023-3	.05005		.045	mg/L	90	-0.00044 85	115			
L55257-05AS	AS	10/24/19 15:43	MS191023-3	.05005	.0081	.05516	mg/L	94	70	130			
L55257-05ASD	ASD	10/24/19 15:44	MS191023-3	.05005	.0081	.05373	mg/L	94 91	70	130	3	20	

## **CRG Mining, LLC**

## ACZ Project ID: L55257

Barium, dissolv	/ed		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													
WG484785ICV	ICV	10/24/19 22:25	II191017-1	2		2.0088	mg/L	100	95	105			
WG484785ICB	ICB	10/24/19 22:31		-		U	mg/L		-0.021	0.021			
WG484785LFB	LFB	10/24/19 22:43	II191011-4	.4995		.5234	mg/L	105	85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4	.4995	.018	.5632	mg/L	109	85	115			
L55257-01ASD	ASD	10/24/19 23:29	II191011-4	.4995	.018	.5577	mg/L	108	85	115	1	20	
L55341-06AS	AS	10/25/19 0:06	II191011-4	.4995	.201	.7311	mg/L	106	85	115			
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	.4995	.201	.7428	mg/L	108	85	115	2	20	
Beryllium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484777													
WG484777ICV	ICV	10/24/19 15:28	MS191014-8	.05		.047146	mg/L	94	90	110			
WG484777ICB	ICB	10/24/19 15:30				U	mg/L	2.	-0.000176				
WG484777LFB	LFB	10/24/19 15:32	MS191023-3	.05005		.045763	mg/L	91	85	115			
L55257-05AS	AS	10/24/19 15:43	MS191023-3	.05005	U	.048506	mg/L	97	70	130			
L55257-05ASD	ASD	10/24/19 15:44	MS191023-3	.05005	U	.047314	mg/L	95	70	130	2	20	
Cadmium, diss	olved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484777													
WG484777ICV	ICV	10/24/19 15:28	MS191014-8	.05		.049298	mg/L	99	90	110			
WG484777ICB	ICB	10/24/19 15:30		100		U	mg/L		-0.00011	0.00011			
WG484777LFB	LFB	10/24/19 15:32	MS191023-3	.05005		.047458	mg/L	95	85	115			
L55257-05AS	AS	10/24/19 15:43	MS191023-3	.05005	.00062	.048093	mg/L	95	70	130			
L55257-05ASD	ASD	10/24/19 15:44	MS191023-3	.05005	.00062	.04719	mg/L	93	70	130	2	20	
Calcium, disso	lved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785		, i i i i i i i i i i i i i i i i i i i											
		40/04/40 00:05	II191017-1	400		07.70	ma/l	00	05	105			
WG484785ICV	ICV	10/24/19 22:25	11191017-1	100		97.76	mg/L mg/L	98	95	105			
WG484785ICB WG484785LFB	ICB LFB	10/24/19 22:31 10/24/19 22:43	II191011-4	69 01207		U 67.15	mg/L	99	-0.3 85	0.3 115			
L55257-01AS	AS	10/24/19 22:43	II191011-4 II191011-4	68.01207 68.01207	13.9	80.34	mg/L	99 98	85	115			
L55257-01AS	AS	10/24/19 23:20	II191011-4	68.01207 68.01207	13.9	81.2	mg/L	90 99	85	115	1	20	
L55341-06AS	ASD	10/25/19 0:06	II191011-4	68.01207 68.01207	84.3	147.9	mg/L	99 94	85	115	1	20	
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	68.01207	84.3	147.7	mg/L	93	85	115	0	20	
Chloride			SM4500										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484666	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,			Campio		0			oppoi			
WG484666ICB	ICB	10/23/19 9:58				U	mg/L		-1.5	1.5			
WG484666ICV	ICB	10/23/19 9:58	WI190501-1	54.835		54.54	mg/L	99	-1.5 90	1.5			
WG484666LFB1	LFB	10/23/19 9.58	WI190301-1 WI190812-3	54.835 30		54.54 30.59	mg/L	99 102	90 90	110			
L55255-02DUP	DUP	10/23/19 13:37	WII50012-3	30	21.1	30.59 20.82	mg/L	102	90	110	1	20	
L55255-02DUP	DUP	10/23/19 13:37			21.1 .6	20.82 .57	mg/L				5	20 20	RA
L55257-06DUP L55257-07AS	AS		WI190812-3	30	.o .6	.57 31.17	mg/L	102	90	110	5	20	RΑ
		10/23/19 13:39 10/23/19 13:41	WI190812-3 WI190812-3		.0		mg/L						
WG484666LFB2 L55255-03AS	LFB AS	10/23/19 13:41 10/23/19 14:20	50XCL	30 30	1860	30.84 1990	mg/L	103 433	90 90	110 110			M3
LUUZUU-UUAU	AO	10/23/19 14.20	JUNCE	30	1000	1990	my/L	400	90	110			GIVI

### **CRG Mining, LLC**

## ACZ Project ID: L55257

Chromium, disso	lved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484777													
WG484777ICV	ICV	10/24/19 15:28	MS191014-8	.05		.04915	mg/L	98	90	110			
WG484777ICB	ICB	10/24/19 15:30				U	mg/L		-0.0011	0.0011			
WG484777LFB	LFB	10/24/19 15:32	MS191023-3	.05005		.04481	mg/L	90	85	115			
L55257-05AS	AS	10/24/19 15:43	MS191023-3	.05005	U	.04389	mg/L	88	70	130			
L55257-05ASD	ASD	10/24/19 15:44	MS191023-3	.05005	U	.04279	mg/L	85	70	130	3	20	
Cobalt, dissolved	ł		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484832													
WG484832ICV	ICV	10/25/19 17:13	II191017-1	2.002		1.942	mg/L	97	95	105			
WG484832ICB	ICB	10/25/19 17:19				U	mg/L		-0.03	0.03			
WG484832LFB	LFB	10/25/19 17:31	II191011-4	.5		.52	mg/L	104	85	115			
L55257-01AS	AS	10/25/19 18:16	II191011-4	.5	U	.509	mg/L	102	85	115			
L55257-01ASD	ASD	10/25/19 18:20	II191011-4	.5	U	.517	mg/L	103	85	115	2	20	
L55341-06AS	AS	10/25/19 18:58	II191011-4	.5	U	.505	mg/L	101	85	115			
L55341-06ASD	ASD	10/25/19 19:01	II191011-4	.5	U	.514	mg/L	103	85	115	2	20	
Conductivity @28	5C		SM2510E	3									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484563													
WG484563LCSW2	LCSW	10/22/19 17:13	PCN59515	1408		1420	umhos/cm	101	90	110			
L55262-01DUP	DUP	10/22/19 19:15			923	926	umhos/cm				0	20	
WG484563LCSW5	LCSW	10/22/19 21:21	PCN59515	1408		1420	umhos/cm	101	90	110			
WG484563LCSW8	LCSW	10/23/19 0:48	PCN59515	1408		1410	umhos/cm	100	90	110			
WG484563LCSW11	LCSW	10/23/19 5:09	PCN59515	1408		1400	umhos/cm	99	90	110			
WG484563LCSW14	LCSW	10/23/19 8:54	PCN59515	1408		1390	umhos/cm	99	90	110			
Copper, dissolve	d		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													
WG484785ICV	ICV	10/24/19 22:25	II191017-1	2		1.911	mg/L	96	95	105			
WG484785ICB	ICB	10/24/19 22:31				U	mg/L		-0.03	0.03			
WG484785LFB	LFB	10/24/19 22:43	II191011-4	.5005		.515	mg/L	103	85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4	.5005	U	.524	mg/L	105	85	115			
L55257-01ASD	ASD	10/24/19 23:29	II191011-4	.5005	U	.522	mg/L	104	85	115	0	20	
L00207-01A0D					-		5				-	-	
L55341-06AS	AS	10/25/19 0:06	II191011-4	.5005	U	.519	mg/L	104	85	115			

### CRG Mining, LLC

## ACZ Project ID: L55257

Cyanide, total			M335.4 -	Colorimetri	c w/ distil	lation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484442													
WG484442ICV	ICV	10/21/19 14:43	WI191014-5	.3		.2925	mg/L	98	90	110			
WG484442ICB	ICB	10/21/19 14:44				U	mg/L		-0.003	0.003			
WG484467													
WG484400LRB	LRB	10/21/19 16:31				U	mg/L		-0.003	0.003			
WG484400LFB	LFB	10/21/19 16:31	WI191014-7	.2		.1866	mg/L	93	90	110			
L55244-01LFM	LFM	10/21/19 16:45	WI191014-7	.2	U	.1894	mg/L	95	90	110			
L55244-02DUP	DUP	10/21/19 16:47			U	U	mg/L				0	20	RA
WG484761													
WG484761ICV	ICV	10/24/19 12:26	WI191014-5	.3		.2886	mg/L	96	90	110			
WG484761ICB	ICB	10/24/19 12:27		.0		.2000 U	mg/L	00	-0.003	0.003			
						-	0						
WG484770		10/04/40 10 00					ma//		0.000	0.000			
WG484741LRB		10/24/19 13:33	W/101014 7	0		U	mg/L	00	-0.003	0.003			
WG484741LFB	LFB	10/24/19 13:33	WI191014-7	.2		.1981	mg/L	99	90	110	0	20	
L55257-04DUP L55257-05LFM	DUP LFM	10/24/19 13:36 10/24/19 13:38	WI191014-7	.2	U U	U .1677	mg/L mg/L	84	90	110	0	20	RA M2
		10/24/19 13:30		.2	0	.1077	ing/E	04	90	110			IVIZ
Iron, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													
WG484785ICV	ICV	10/24/19 22:25	II191017-1	2		1.929	mg/L	96	95	105			
WG484785ICB	ICB	10/24/19 22:31				U	mg/L		-0.09	0.09			
WG484785LFB	LFB	10/24/19 22:43	II191011-4	1.0018		1.085	mg/L	108	85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4	1.0018	U	1.089	mg/L	109	85	115			
L55257-01ASD	ASD	10/24/19 23:29	II191011-4	1.0018	U	1.083	mg/L	108	85	115	1	20	
L55341-06AS	AS	10/25/19 0:06	II191011-4	1.0018	U	1.067	mg/L	107	85	115			
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	1.0018	U	1.086	mg/L	108	85	115	2	20	
Lead, dissolved			M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484777													
WG484777ICV	ICV	10/24/19 15:28	MS191014-8	.05		.04695	mg/L	94	90	110			
WG484777ICB	ICB	10/24/19 15:30				U	mg/L		-0.00022				
WG484777LFB	LFB	10/24/19 15:32	MS191023-3	.05005		.0455	mg/L	91	85	115			
L55257-05AS	AS	10/24/19 15:43	MS191023-3	.05005	U	.04627	mg/L	92	70	130			
L55257-05ASD	ASD	10/24/19 15:44	MS191023-3	.05005	U	.04371	mg/L	87	70	130	6	20	
Magnesium, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													- Content
		10/04/10 00:05	1101017 4	100		05.00	m~//	05	05	105			
WG484785ICV	ICV	10/24/19 22:25	II191017-1	100		95.38	mg/L	95	95	105			
WG484785ICB	ICB	10/24/19 22:31	1101011 4	40.00000		U 47	mg/L	04	-0.6	0.6			
WG484785LFB	LFB	10/24/19 22:43	II191011-4	49.99809	4.0	47 52.10	mg/L	94 05	85 85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4 II191011-4	49.99809	4.8	52.19	mg/L	95 06	85 85	115	1	20	
L55257-01ASD L55341-06AS	ASD AS	10/24/19 23:29 10/25/19 0:06	II 191011-4 II 191011-4	49.99809 49.99809	4.8 15.9	52.82 64.92	mg/L mg/L	96 98	85 85	115 115	1	20	
L55341-06AS L55341-06ASD	AS ASD	10/25/19 0:08	II 191011-4 II 191011-4	49.99809	15.9	64.92 64.25	mg/L	96 97	ор 85	115	1	20	
2000- 1-00AOD	AGD	10/20/19 0.09		-9.99009	10.9	04.20		31	00	113		20	

## CRG Mining, LLC

#### ACZ Project ID: L55257

Manganese, dis	solved		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													
WG484785ICV	ICV	10/24/19 22:25	II191017-1	2		2.003	mg/L	100	95	105			
WG484785ICB	ICB	10/24/19 22:31				U	mg/L		-0.03	0.03			
WG484785LFB	LFB	10/24/19 22:43	II191011-4	.5015		.549	mg/L	109	85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4	.5015	U	.549	mg/L	109	85	115			
L55257-01ASD	ASD	10/24/19 23:29	II191011-4	.5015	U	.546	mg/L	109	85	115	1	20	
L55341-06AS	AS	10/25/19 0:06	II191011-4	.5015	.02	.562	mg/L	108	85	115			
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	.5015	.02	.569	mg/L	109	85	115	1	20	
Mercury, total			M245.1 C	VAA									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484584													
WG484584ICV	ICV	10/24/19 16:20	HG190911-3	.004995		.00481	mg/L	96	95	105			
WG484584ICB	ICB	10/24/19 16:21				U	mg/L		-0.0002	0.0002			
WG484627													
WG484627LRB	LRB	10/24/19 17:15				U	mg/L		-0.00044	0.00044			
WG484627LFB	LFB	10/24/19 17:16	HG191015-4	.002002		.00186	mg/L	93	85	115			
L55257-01LFM	LFM	10/24/19 17:18	HG191015-4	.002002	U	.00188	mg/L	94	85	115			
L55257-01LFMD	LFMD	10/24/19 17:19	HG191015-4	.002002	U	.0019	mg/L	95	85	115	1	20	
Nickel, dissolve	d		M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													
WG484785ICV	ICV	10/24/19 22:25	II191017-1	2.004		1.9475	mg/L	97	95	105			
WG484785ICB	ICB	10/24/19 22:31				U	mg/L		-0.024	0.024			
WG484785LFB	LFB	10/24/19 22:43	II191011-4	.501		.5087	mg/L	102	85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4	.501	U	.5102	mg/L	102	85	115			
L55257-01ASD	ASD	10/24/19 23:29	II191011-4	.501	U	.4978	mg/L	99	85	115	2	20	
L55341-06AS	AS	10/25/19 0:06	II191011-4	.501	U	.4955	mg/L	99	85	115			
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	.501	U	.5035	mg/L	100	85	115	2	20	
Nitrate/Nitrite as	s N, diss	olved	M353.2 -	Automated	d Cadmiun	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484013													
WG484013ICV	ICV	10/15/19 22:39	WI190809-1	2.416		2.419	mg/L	100	90	110			
WG484013ICB	ICB	10/15/19 22:41				U	mg/L		-0.02	0.02			
WG484013LFB1	LFB	10/15/19 22:46	WI191004-3	2		2	mg/L	100	90	110			
WG484013LFB2	LFB	10/15/19 23:26	WI191004-3	2		2.015	mg/L	101	90	110			
L55257-05AS	AS	10/15/19 23:33	WI191004-3	2	.03	2.112	mg/L	104	90	110			
	DUP	10/15/19 23:35			.08	.08	mg/L				0	20	RA
L55257-06DUP		· · · · ·					-						-
L55257-06DUP L55255-02AS	AS	10/15/19 23:43	WI191004-3	10	5.8	15.23	mg/L	94	90	110			

#### **CRG Mining, LLC**

#### ACZ Project ID: L55257

Nitrite as N, disso	olved		M353.2 -	Automated	l Cadmiur	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484013													
WG484013ICV	ICV	10/15/19 22:39	WI190809-1	.609		.601	mg/L	99	90	110			
WG484013ICB	ICB	10/15/19 22:41				U	mg/L		-0.01	0.01			
WG484013LFB1	LFB	10/15/19 22:46	WI191004-3	1		.967	mg/L	97	90	110			
L55255-02AS	AS	10/15/19 23:08	WI191004-3	1	U	.982	mg/L	98	90	110			
L55255-03DUP	DUP	10/15/19 23:10			U	U	mg/L				0	20	RA
WG484013LFB2	LFB	10/15/19 23:26	WI191004-3	1		.895	mg/L	90	90	110			
L55257-05AS	AS	10/15/19 23:33	WI191004-3	1	U	1.071	mg/L	107	90	110			
L55257-06DUP	DUP	10/15/19 23:35			U	U	mg/L				0	20	RA
pH (lab)			SM4500	H+ B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484563													
WG484563LCSW1	LCSW	10/22/19 17:11	PCN58053	6		6	units	100	5.9	6.1			
L55262-01DUP	DUP	10/22/19 19:15			8.1	8.1	units				0	20	
WG484563LCSW4	LCSW	10/22/19 21:18	PCN58053	6		6.1	units	102	5.9	6.1			
WG484563LCSW7	LCSW	10/23/19 0:46	PCN58053	6		6.1	units	102	5.9	6.1			
WG484563LCSW10	LCSW	10/23/19 5:07	PCN58053	6		6.1	units	102	5.9	6.1			
WG484563LCSW13	LCSW	10/23/19 8:52	PCN58053	6		6.1	units	102	5.9	6.1			
Potassium, disso	lved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													
WG484785ICV	ICV	10/24/19 22:25	II191017-1	20		19.73	mg/L	99	95	105			
WG484785ICB	ICB	10/24/19 22:31				U	mg/L		-0.6	0.6			
WG484785LFB	LFB	10/24/19 22:43	II191011-4	99.95064		97.78	mg/L	98	85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4	99.95064	.6	102.5	mg/L	102	85	115			
L55257-01ASD	ASD	10/24/19 23:29	II191011-4	99.95064	.6	104.5	mg/L	104	85	115	2	20	
L55341-06AS	AS	10/25/19 0:06	II191011-4	99.95064	8.7	116.8	mg/L	108	85	115			
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	99.95064	8.7	115.1	mg/L	106	85	115	1	20	
Residue, Filterab	le (TDS	) @180C	SM2540	С									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484078													
WG484078PBW	PBW	10/16/19 11:15				U	mg/L		-40	40			
WG484078LCSW	LCSW	10/16/19 11:17	PCN59809	1000		998	mg/L	100	80	120			
	DUP	10/16/19 11:46			52	50	mg/L				4	10	RA
L55269-14DUP													
WG484128	PBW	10/16/19 15:15				U	mg/L		-40	40			
L55269-14DUP <b>WG484128</b> WG484128PBW WG484128LCSW	PBW LCSW	10/16/19 15:15 10/16/19 15:16	PCN59809	1000		U 980	mg/L mg/L	98	-40 80	40 120			

## CRG Mining, LLC

## ACZ Project ID: L55257

Sodium, dissolv	ved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													
WG484785ICV	ICV	10/24/19 22:25	II191017-1	100		97.31	mg/L	97	95	105			
WG484785ICB	ICB	10/24/19 22:31				U	mg/L		-0.6	0.6			
WG484785LFB	LFB	10/24/19 22:43	II191011-4	100.0109		96.03	mg/L	96	85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4	100.0109	2.1	103	mg/L	101	85	115			
L55257-01ASD	ASD	10/24/19 23:29	II191011-4	100.0109	2.1	104.8	mg/L	103	85	115	2	20	
L55341-06AS	AS	10/25/19 0:06	II191011-4	100.0109	11.1	117.4	mg/L	106	85	115	_		
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	100.0109	11.1	116.1	mg/L	105	85	115	1	20	
Sulfate			D516-02	/-07 - Turbio	dimetric								
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG484508													
WG484508ICB	ICB	10/22/19 9:37				U	mg/L		-3	3			
WG484508ICV	ICV	10/22/19 9:37	WI191008-2	20		20.8	mg/L	104	90	110			
WG484508LFB	LFB	10/22/19 9:53	WI190801-3	10.01		10.2	mg/L	102	90	110			
L55257-01DUP	DUP	10/22/19 10:06			5	5.1	mg/L		20		2	20	RA
L55257-02AS	AS	10/22/19 10:06	WI190801-3	10.01	26.8	36	mg/L	92	90	110	-	20	
WG484509													
WG484509ICB	ICB	10/22/19 9:37				U	mg/L		-3	3			
WG484509ICV	ICV	10/22/19 9:37	WI191008-2	20		20.8	mg/L	104	90	110			
WG484509LFB	LFB	10/22/19 10:31	WI190801-3	10.01		10.1	mg/L	104	90	110			
L55257-09DUP	DUP	10/22/19 10:31		10.01	7.6	7.5	mg/L	101	30	110	1	20	RA
L55269-01AS	AS	10/22/19 10:31	WI190801-3	10.01	9.1	21.4	mg/L	123	90	110		20	M1
Vanadium, diss			M200.7 I										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Unite	Rec%	Lower	Upper	RPD	Limit	Qua
	rype	Analyzeu	FCN/SCN	QU	Sample	Found	Units	Rec /0	Lower	Opper	RFD	Liiiiit	Qua
WG484832													
WG484832ICV	ICV	10/25/19 17:13	II191017-1	2		2.0075	mg/L	100	95	105			
WG484832ICB	ICB	10/25/19 17:19				U	mg/L		-0.015	0.015			
WG484832LFB	LFB	10/25/19 17:31	II191011-4	.5005		.5054	mg/L	101	85	115			
L55257-01AS	AS	10/25/19 18:16	II191011-4	.5005	U	.5126	mg/L	102	85	115			
L55257-01ASD	ASD	10/25/19 18:20	II191011-4	.5005	U	.5232	mg/L	105	85	115	2	20	
L55341-06AS	AS	10/25/19 18:58	II191011-4	.5005	U	.5402	mg/L	108	85	115			
L55341-06ASD	ASD	10/25/19 19:01	II191011-4	.5005	U	.5294	mg/L	106	85	115	2	20	
Zinc, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qua
WG484832													
WG484832ICV	ICV	10/25/19 17:13	II191017-1	2		1.982	mg/L	99	95	105			
WG484832ICB	ICB	10/25/19 17:19				U	mg/L		-0.03	0.03			
WG484832LFB	LFB	10/25/19 17:31	II191011-4	.50075		.511	mg/L	102	85	115			
L55257-01AS	AS	10/25/19 18:16	II191011-4	.50075	U	.521	mg/L	104	85	115			
L55257-01ASD	ASD	10/25/19 18:20	II191011-4	.50075	U	.537	mg/L	107	85	115	3	20	
			II191011-4	.50075	U	.551	mg/L	110	85	115			
L55341-06AS	AS	10/25/19 18:58	11131011=4	.50075	0	.551	mg/L	110	05	110			

## 4C **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

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#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55257-01	NG484666	Chloride	SM4500CI-E	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484467	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484013	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG484078	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484508	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L55257-02	NG484785	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484666	Chloride	SM4500CI-E	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484467	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484013	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG484078	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484508	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

## 4C **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

(800) 334-5493

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55257-03	NG484785	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484666	Chloride	SM4500CI-E	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484467	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484013	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG484078	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484508	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L55257-04	NG484785	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484666	Chloride	SM4500CI-E	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484770	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484013	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG484128	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484508	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

## 40 **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

(800) 334-5493

## Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55257-05	NG484785	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484666	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484770	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484013	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG484128	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484508	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L55257-06	NG484785	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484666	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484770	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484013	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG484128	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484508	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

# 40 **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

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## Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55257-07	NG484785	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484666	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484770	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484013	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG484128	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484508	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L55257-08	NG484785	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484666	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484770	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484013	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG484128	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484508	Sulfate	D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

# 40 **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

(800) 334-5493

## Inorganic Extended Qualifier Report

#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55257-09	NG484785	Aluminum, dissolved	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG484666	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484770	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484013	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG484128	Residue, Filterable (TDS) @180C	SM2540C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG484509	Sulfate	D516-02/-07 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02/-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



ACZ Project ID: L55257

No certification qualifiers associated with this analysis

ACZ	Laboratories, Inc.
	Steamboat Springs, CO 80487 (800) 334-5493

## Sample Receipt

ACZ Project ID: L55257 Date Received: 10/15/2019 10:56 Received By: Date Printed: 10/16/2019

Receipt Verification			
	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			Х
2) Is the Chain of Custody form or other directive shipping papers present?	Х		
3) Does this project require special handling procedures such as CLP protocol?		Х	
4) Are any samples NRC licensable material?			Х
5) If samples are received past hold time, proceed with requested short hold time analyses?	? X		
6) Is the Chain of Custody form complete and accurate?	Х		
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the sample	s? X		
A change was made in the Report to and Invoice to Address section prior to ACZ custody.			

#### Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	Х		
9) Are all labels on containers and are they intact and legible?	Х		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	Х		
11) For preserved bottle types, was the pH checked and within limits? $^{1}$	Х		
12) Is there sufficient sample volume to perform all requested work?	Х		
13) Is the custody seal intact on all containers?			Х
14) Are samples that require zero headspace acceptable?			Х
15) Are all sample containers appropriate for analytical requirements?	Х		
16) Is there an Hg-1631 trip blank present?			Х
17) Is there a VOA trip blank present?			Х
18) Were all samples received within hold time?	Х		
	NA indica	tes Not Ap	plicable

#### Chain of Custody Related Remarks

#### **Client Contact Remarks**

#### **Shipping Containers**

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
5181	5.3	<=6.0	16	N/A

#### Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.



Sample Receipt

CRG Mining, LLC

ACZ Project ID: L55257 Date Received: 10/15/2019 10:56 Received By: Date Printed: 10/16/2019

<sup>1</sup> The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

	Laboratories, Inc.		552	57	C	HAIN	l of C	USTO	
Report to:									
Name: JAKE Wil	Kinson		Address	: 50	Soui	ħω	SON	usin s	
Company: CRG mining LLC		]			vison				
E-mail: JWilkinSON RCr6 Mining . Com			Telepho		70-6			Ц	
Copy of Report to:									
Name:			E-mail:						
Company:		1	Telepho	ne:					
Invoice to:									
	Jilkin/Son)		Address	50	<b>D</b> 600	TI. (	ມ່ອດ	າມຽັນ ຊີ	
Company: CRG N		1	Address: 502 SOUTL WISCONSIN ST (700001500 (0 81230						
	SON D(r6 min inb. C	dm	Telepho	<u>^</u>	70-6	117	- 33	11	
If sample(s) received pas	st holding time (HT), or if insufficie	ent HT re			)	-		YES X	
analysis before expiratio	n, shall ACZ proceed with reques	ted short	HT analy	/Ses?	analyses, even <sup>id</sup>	HT is expire	d, and data w	NO	
If "NO" then ACZ will contact client for f Are samples for SDWA C		ateo, ACZ WII	Yes	in requested i	No			and an allowing a	
	te forms. Results will be reported	to PQL f	or Colora	do.		$\overline{\mathbf{X}}$			
Sampler's Name: <u>5</u> Pc	Sampler's Site Inform	nation			Zip co	de <u>8/2</u>	3 <u>30</u> 1	Fime Zone beling the time/date	
*Sampler's Signature:	tamperi	ng with the sa	mple in anywa	y, is considere	ed fraud and pur	ishable by S	State Law.		
PROJECT INFORMAT	ION			ANALYSE	S REQUESTE	D (attach l	list or use q	quote number)	
Quote #:			ers						
PO#:	PO#:								
Reporting state for complia			of Containers						
	ude NRC licensed material?	Matrix							
SAMPLE IDENTIFIC	ATION DATE:TIME								
66-7-	10-14-19-11.15	<u>6</u> w							
66-0	A 1145	++-							
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Rm-2	112-1419-12:45		+			-			
0 2	10-14-19-12:20								
<u>Rm.s</u> cm.1	10-14-19-1:00								
cm.2	10-14-19-145								
C.m.3	10-14-19-1:45								
Matrix SW (Surface W	/ater) · GW (Ground Water) · WW (Waste	e Water) - C	)W (Drinkin	g Water) · :	SL (Sludge)	· SO (Soil	l) · OL (Oil	l) · Other (Spec	
3									
REMARKS									
3									
REMARKS	Please refer to ACZ's terms & co	nditions	located o	on the re	verse side	e of this	COC.		
REMARKS		тіме		11.0	verse side CEIVED 7		COC.	DATE:	
REMARKS		TIME		11.0			COC.	DATE: V/is/4	
REMARKS	HED BY: DATE:	TIME		11.0			COC.		
REMARKS	HED BY: DATE:	TIME		11.0			COC.		



February 06, 2020

Report to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231

cc: Paul Wolfe

Bill to: Jake Wilkinson CRG Mining, LLC 510 S Wisconsin St Gunnison, CO 80231

Project ID: ACZ Project ID: L57111

Jake Wilkinson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 28, 2020. This project has been assigned to ACZ is project number, L57111. Please reference this number in all future inquiries.

All analyses were performed according to ACZ<sup>S</sup> Quality Assurance Plan. The enclosed results relate only to the samples received under L57111. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ<sup>S</sup> current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after March 07, 2020. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZS stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.

Max janicely

Max Janicek has reviewed and approved this report.







Project ID: Sample ID: GL-01

# Inorganic Analytical Results

ACZ Sample ID: **L57111-01** Date Sampled: 01/27/20 09:44 Date Received: 01/28/20 Sample Matrix: Surface Water

Inorganic Prep										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-						01/30/20 13:15	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A								01/30/20 12:33	slm
Metals Analysis										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U		mg/L	0.05	0.3	01/31/20 20:51	jlw
Antimony, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0004	0.002	01/31/20 15:32	enb
Arsenic, dissolved	M200.8 ICP-MS	5		U	*	mg/L	0.001	0.005	02/03/20 13:28	enb
Barium, dissolved	M200.7 ICP	1	0.012	В		mg/L	0.007	0.04	01/31/20 20:51	jlw
Beryllium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00008	0.0003	01/31/20 15:32	enb
Cadmium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	01/31/20 15:32	enb
Calcium, dissolved	M200.7 ICP	1	14.1			mg/L	0.1	0.5	01/31/20 20:51	jlw
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	01/31/20 15:32	enb
Cobalt, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	01/31/20 20:51	jlw
Copper, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	01/31/20 20:51	jlw
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.03	0.08	01/31/20 20:51	jlw
Lead, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	01/31/20 15:32	enb
Magnesium, dissolved	M200.7 ICP	1	4.9			mg/L	0.2	1	01/31/20 20:51	jlw
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	01/31/20 20:51	jlw
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	01/30/20 13:57	slm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	01/31/20 20:51	jlw
Potassium, dissolved	M200.7 ICP	1	0.6	В		mg/L	0.2	1	01/31/20 20:51	jlw
Sodium, dissolved	M200.7 ICP	1	2.2			mg/L	0.2	1	01/31/20 20:51	jlw
Vanadium, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	01/31/20 20:51	jlw
Zinc, dissolved	M200.7 ICP	1	0.01	В		mg/L	0.01	0.05	01/31/20 20:51	jlw



Project ID: Sample ID: GL-01

# Inorganic Analytical Results

ACZ Sample ID: **L57111-01** Date Sampled: 01/27/20 09:44 Date Received: 01/28/20 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	71.4			mg/L	2	20	01/29/20 0:00	eep
Carbonate as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Hydroxide as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Total Alkalinity		1	71.4			mg/L	2	20	01/29/20 0:00	eep
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-11.1			%			02/06/20 0:00	calc
Sum of Anions			1.5			meq/L			02/06/20 0:00	calc
Sum of Cations			1.2			meq/L			02/06/20 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	02/05/20 13:01	wtc
Conductivity @25C	SM2510B	1	123			umhos/cm	1	10	01/29/20 4:06	eep
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	01/30/20 16:44	wtc
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		55			mg/L	0.2	5	02/06/20 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							01/29/20 11:18	ick j
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.14			mg/L	0.02	0.1	02/06/20 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.14		*	mg/L	0.02	0.1	01/28/20 22:14	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:14	pjb
pH (lab)	SM4500H+ B									
pН		1	8.1	н		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.7			С	0.1	0.1	01/29/20 0:00	eep
Residue, Filterable (TDS) @180C	SM2540C	1	66			mg/L	20	40	01/29/20 15:07	jck
Sulfate	D516-02/-07/-11 - Turbidimetri	c 1	3.2	В	*	mg/L	1	5	01/30/20 17:15	i rbt



Project ID: Sample ID: GL-02

# Inorganic Analytical Results

ACZ Sample ID: **L57111-02** Date Sampled: 01/27/20 09:23 Date Received: 01/28/20 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					01/30/20 13:26	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/30/20 12:33	slm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	01/31/20 20:54	jlw
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/31/20 15:36	enb
Arsenic, dissolved	M200.8 ICP-MS	1	0.0025		mg/L	0.0002	0.001	01/31/20 15:36	enb
Barium, dissolved	M200.7 ICP	1	0.010	В	mg/L	0.007	0.04	01/31/20 20:54	jlw
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	01/31/20 15:36	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0025		mg/L	0.00005	0.0003	01/31/20 15:36	enb
Calcium, dissolved	M200.7 ICP	1	23.6		mg/L	0.1	0.5	01/31/20 20:54	jlw
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/31/20 15:36	enb
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 20:54	jlw
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 20:54	jlw
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	01/31/20 20:54	jlw
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	01/31/20 15:36	enb
Magnesium, dissolved	M200.7 ICP	1	7.1		mg/L	0.2	1	01/31/20 20:54	jlw
Manganese, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	01/31/20 20:54	jlw
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	01/30/20 13:58	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/31/20 20:54	jlw
Potassium, dissolved	M200.7 ICP	1	0.8	В	mg/L	0.2	1	01/31/20 20:54	jlw
Sodium, dissolved	M200.7 ICP	1	4.1		mg/L	0.2	1	01/31/20 20:54	jlw
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/31/20 20:54	jlw
Zinc, dissolved	M200.7 ICP	1	0.25		mg/L	0.01	0.05	01/31/20 20:54	jlw



Project ID: Sample ID: GL-02

# Inorganic Analytical Results

ACZ Sample ID: **L57111-02** Date Sampled: 01/27/20 09:23 Date Received: 01/28/20 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	71.1			mg/L	2	20	01/29/20 0:00	eep
Carbonate as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Hydroxide as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Total Alkalinity		1	71.1			mg/L	2	20	01/29/20 0:00	eep
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			02/06/20 0:00	calc
Sum of Anions			2.0			meq/L			02/06/20 0:00	calc
Sum of Cations			2			meq/L			02/06/20 0:00	calc
Chloride	SM4500CI-E	1	0.6	В		mg/L	0.5	2	02/05/20 13:01	wtc
Conductivity @25C	SM2510B	1	200			umhos/cm	1	10	01/29/20 4:16	eep
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	01/30/20 16:45	wtc
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		88			mg/L	0.2	5	02/06/20 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							01/29/20 11:21	jck
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.10			mg/L	0.02	0.1	02/06/20 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.10		*	mg/L	0.02	0.1	01/28/20 22:16	i pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:16	j pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	22.1			С	0.1	0.1	01/29/20 0:00	eep
Residue, Filterable (TDS) @180C	SM2540C	1	112			mg/L	20	40	01/29/20 15:10	jck
Sulfate	D516-02/-07/-11 - Turbidimetrie	c 1	28.4		*	mg/L	1	5	01/30/20 17:15	rbt

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Project ID: Sample ID: GL-03

# Inorganic Analytical Results

ACZ Sample ID: L57111-03 Date Sampled: 01/27/20 10:11 Date Received: 01/28/20 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					01/30/20 13:37	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/30/20 12:33	slm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	01/31/20 20:58	jlw
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/31/20 15:39	enb
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	01/31/20 15:39	enb
Barium, dissolved	M200.7 ICP	1	0.012	В	mg/L	0.007	0.04	01/31/20 20:58	jlw
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	01/31/20 15:39	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.00023	В	mg/L	0.00005	0.0003	01/31/20 15:39	enb
Calcium, dissolved	M200.7 ICP	1	14.9		mg/L	0.1	0.5	01/31/20 20:58	jlw
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/31/20 15:39	enb
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 20:58	jlw
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 20:58	jlw
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	01/31/20 20:58	jlw
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	01/31/20 15:39	enb
Magnesium, dissolved	M200.7 ICP	1	5.0		mg/L	0.2	1	01/31/20 20:58	jlw
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 20:58	jlw
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	01/30/20 14:01	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/31/20 20:58	jlw
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	01/31/20 20:58	jlw
Sodium, dissolved	M200.7 ICP	1	2.3		mg/L	0.2	1	01/31/20 20:58	jlw
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/31/20 20:58	jlw
Zinc, dissolved	M200.7 ICP	1	0.05		mg/L	0.01	0.05	01/31/20 20:58	jlw



Project ID: Sample ID: GL-03

# Inorganic Analytical Results

ACZ Sample ID: L57111-03 Date Sampled: 01/27/20 10:11 Date Received: 01/28/20 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	72.8			mg/L	2	20	01/29/20 0:00	еер
Carbonate as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Hydroxide as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Total Alkalinity		1	72.8			mg/L	2	20	01/29/20 0:00	eep
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-10.3			%			02/06/20 0:00	calc
Sum of Anions			1.6			meq/L			02/06/20 0:00	calc
Sum of Cations			1.3			meq/L			02/06/20 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	02/05/20 13:01	wtc
Conductivity @25C	SM2510B	1	127			umhos/cm	1	10	01/29/20 4:52	eep
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	01/30/20 16:46	wtc
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		58			mg/L	0.2	5	02/06/20 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							01/29/20 11:24	jck
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.13			mg/L	0.02	0.1	02/06/20 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.13		*	mg/L	0.02	0.1	01/28/20 22:17	, pjp
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:17	' pjb
pH (lab)	SM4500H+ B									
pН		1	8.1	н		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.8			С	0.1	0.1	01/29/20 0:00	eep
Residue, Filterable (TDS) @180C	SM2540C	1	66			mg/L	20	40	01/29/20 15:13	ick j
Sulfate	D516-02/-07/-11 - Turbidimetri	c 1	6.1		*	mg/L	1	5	01/30/20 17:15	i rbt

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Project ID: Sample ID: RM-01

# Inorganic Analytical Results

ACZ Sample ID: L57111-04 Date Sampled: 01/27/20 10:21 Date Received: 01/28/20 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					01/30/20 13:48	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/30/20 12:33	slm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	01/31/20 21:01	jlw
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/31/20 15:48	enb
Arsenic, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0002	0.001	01/31/20 15:48	enb
Barium, dissolved	M200.7 ICP	1	0.012	В	mg/L	0.007	0.04	01/31/20 21:01	jlw
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	01/31/20 15:48	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.00019	В	mg/L	0.00005	0.0003	01/31/20 15:48	enb
Calcium, dissolved	M200.7 ICP	1	16.3		mg/L	0.1	0.5	01/31/20 21:01	jlw
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/31/20 15:48	enb
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:01	jlw
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:01	jlw
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	01/31/20 21:01	jlw
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	01/31/20 15:48	enb
Magnesium, dissolved	M200.7 ICP	1	5.4		mg/L	0.2	1	01/31/20 21:01	jlw
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:01	jlw
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	01/30/20 14:02	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/31/20 21:01	jlw
Potassium, dissolved	M200.7 ICP	1	0.6	В	mg/L	0.2	1	01/31/20 21:01	jlw
Sodium, dissolved	M200.7 ICP	1	2.2		mg/L	0.2	1	01/31/20 21:01	jlw
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/31/20 21:01	jlw
Zinc, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	01/31/20 21:01	jlw



Project ID: Sample ID: RM-01

# Inorganic Analytical Results

ACZ Sample ID: L57111-04 Date Sampled: 01/27/20 10:21 Date Received: 01/28/20 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	62.0			mg/L	2	20	01/29/20 0:00	еер
Carbonate as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Hydroxide as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Total Alkalinity		1	62.0			mg/L	2	20	01/29/20 0:00	eep
Cation-Anion Balance	Calculation									
Cation-Anion Balance			3.7			%			02/06/20 0:00	calc
Sum of Anions			1.3			meq/L			02/06/20 0:00	calc
Sum of Cations			1.4			meq/L			02/06/20 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	02/05/20 13:01	wtc
Conductivity @25C	SM2510B	1	135			umhos/cm	1	10	01/29/20 5:02	eep
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	01/30/20 16:46	wtc
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		63			mg/L	0.2	5	02/06/20 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							01/29/20 11:28	jck
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.14			mg/L	0.02	0.1	02/06/20 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.14		*	mg/L	0.02	0.1	01/28/20 22:23	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:23	pjb
pH (lab)	SM4500H+ B									
рН		1	8.2	н		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.7			С	0.1	0.1	01/29/20 0:00	eep
Residue, Filterable (TDS) @180C	SM2540C	1	72			mg/L	20	40	01/29/20 15:15	jck
Sulfate	D516-02/-07/-11 - Turbidimetri	c 1	4.0	В	*	mg/L	1	5	01/30/20 17:15	rbt



Project ID: Sample ID: RM-02

# Inorganic Analytical Results

ACZ Sample ID:	L57111-05
Date Sampled:	01/27/20 11:02
Date Received:	01/28/20
Sample Matrix:	Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					01/30/20 13:59	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/30/20 12:33	slm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	01/31/20 21:17	jlw
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/31/20 15:52	enb
Arsenic, dissolved	M200.8 ICP-MS	1	0.008		mg/L	0.0002	0.001	01/31/20 15:52	enb
Barium, dissolved	M200.7 ICP	1		U	mg/L	0.007	0.04	01/31/20 21:17	jlw
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	01/31/20 15:52	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.00052		mg/L	0.00005	0.0003	01/31/20 15:52	enb
Calcium, dissolved	M200.7 ICP	1	14.5		mg/L	0.1	0.5	01/31/20 21:17	jlw
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/31/20 15:52	enb
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:17	jlw
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:17	jlw
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	01/31/20 21:17	jlw
Lead, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0001	0.0005	01/31/20 15:52	enb
Magnesium, dissolved	M200.7 ICP	1	3.3		mg/L	0.2	1	01/31/20 21:17	jlw
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:17	jlw
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	01/30/20 14:05	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/31/20 21:17	jlw
Potassium, dissolved	M200.7 ICP	1	1.0		mg/L	0.2	1	01/31/20 21:17	jlw
Sodium, dissolved	M200.7 ICP	1	4.1		mg/L	0.2	1	01/31/20 21:17	jlw
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/31/20 21:17	jlw
Zinc, dissolved	M200.7 ICP	1	0.06		mg/L	0.01	0.05	01/31/20 21:17	jlw



Project ID: Sample ID: RM-02

# Inorganic Analytical Results

ACZ Sample ID: L57111-05 Date Sampled: 01/27/20 11:02 Date Received: 01/28/20 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	41.8			mg/L	2	20	01/29/20 0:00	еер
Carbonate as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Hydroxide as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Total Alkalinity		1	41.8			mg/L	2	20	01/29/20 0:00	eep
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			02/06/20 0:00	calc
Sum of Anions			1.2			meq/L			02/06/20 0:00	calc
Sum of Cations			1.2			meq/L			02/06/20 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	02/05/20 13:01	wtc
Conductivity @25C	SM2510B	1	124			umhos/cm	1	10	01/29/20 5:12	eep
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	01/30/20 16:47	/ wtc
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		50			mg/L	0.2	5	02/06/20 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							01/29/20 11:31	jck
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	02/06/20 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	01/28/20 22:24	l pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:24	l pjb
pH (lab)	SM4500H+ B									
pН		1	8.1	н		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.6			С	0.1	0.1	01/29/20 0:00	eep
Residue, Filterable (TDS) @180C	SM2540C	1	74			mg/L	20	40	01/29/20 15:18	3 jck
Sulfate	D516-02/-07/-11 - Turbidimetri	c 1	18.8		*	mg/L	1	5	01/30/20 17:15	5 rbt



Project ID: Sample ID: RM-03

# Inorganic Analytical Results

ACZ Sample ID: **L57111-06** Date Sampled: 01/27/20 10:36 Date Received: 01/28/20 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					01/30/20 14:21	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/30/20 12:33	slm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	01/31/20 21:20	jlw
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/31/20 16:01	enb
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	В	mg/L	0.0002	0.001	01/31/20 16:01	enb
Barium, dissolved	M200.7 ICP	1	0.011	В	mg/L	0.007	0.04	01/31/20 21:20	jlw
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	01/31/20 16:01	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.00005	0.0003	01/31/20 16:01	enb
Calcium, dissolved	M200.7 ICP	1	17.3		mg/L	0.1	0.5	01/31/20 21:20	jlw
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/31/20 16:01	enb
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:20	jlw
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:20	jlw
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	01/31/20 21:20	jlw
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	01/31/20 16:01	enb
Magnesium, dissolved	M200.7 ICP	1	5.6		mg/L	0.2	1	01/31/20 21:20	jlw
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:20	jlw
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	01/30/20 14:06	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/31/20 21:20	jlw
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	01/31/20 21:20	jlw
Sodium, dissolved	M200.7 ICP	1	2.5		mg/L	0.2	1	01/31/20 21:20	jlw
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/31/20 21:20	jlw
Zinc, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	01/31/20 21:20	jlw



Project ID: Sample ID: RM-03

# Inorganic Analytical Results

ACZ Sample ID: L57111-06 Date Sampled: 01/27/20 10:36 Date Received: 01/28/20 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	60.7			mg/L	2	20	01/29/20 0:00	еер
Carbonate as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Hydroxide as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Total Alkalinity		1	60.7			mg/L	2	20	01/29/20 0:00	eep
Cation-Anion Balance	Calculation									
Cation-Anion Balance			3.4			%			02/06/20 0:00	calc
Sum of Anions			1.4			meq/L			02/06/20 0:00	calc
Sum of Cations			1.5			meq/L			02/06/20 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	02/05/20 13:01	wtc
Conductivity @25C	SM2510B	1	134			umhos/cm	1	10	01/29/20 5:22	eep
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	01/30/20 16:49	) wtc
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		66			mg/L	0.2	5	02/06/20 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							01/29/20 11:35	5 jck
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.14			mg/L	0.02	0.1	02/06/20 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.14		*	mg/L	0.02	0.1	01/28/20 22:25	5 pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:25	5 pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	Н		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.6			С	0.1	0.1	01/29/20 0:00	eep
Residue, Filterable (TDS) @180C	SM2540C	1	74			mg/L	20	40	01/29/20 15:20	) jck
Sulfate	D516-02/-07/-11 - Turbidimetri	c 1	7.1		*	mg/L	1	5	01/30/20 17:15	5 rbt



Project ID: Sample ID: CM-01

# Inorganic Analytical Results

ACZ Sample ID: L57111-07 Date Sampled: 01/27/20 11:12 Date Received: 01/28/20 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					01/30/20 14:43	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/30/20 12:33	slm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	01/31/20 21:24	jlw
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/31/20 16:04	enb
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	В	mg/L	0.0002	0.001	01/31/20 16:04	enb
Barium, dissolved	M200.7 ICP	1	0.011	В	mg/L	0.007	0.04	01/31/20 21:24	jlw
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	01/31/20 16:04	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.00005	0.0003	01/31/20 16:04	enb
Calcium, dissolved	M200.7 ICP	1	16.9		mg/L	0.1	0.5	01/31/20 21:24	jlw
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/31/20 16:04	enb
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:24	jlw
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:24	jlw
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	01/31/20 21:24	jlw
Lead, dissolved	M200.8 ICP-MS	1	0.0002	В	mg/L	0.0001	0.0005	01/31/20 16:04	enb
Magnesium, dissolved	M200.7 ICP	1	5.4	*	mg/L	0.2	1	01/31/20 21:24	jlw
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:24	jlw
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	01/30/20 14:07	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/31/20 21:24	jlw
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	01/31/20 21:24	jlw
Sodium, dissolved	M200.7 ICP	1	2.4	*	mg/L	0.2	1	01/31/20 21:24	jlw
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/31/20 21:24	jlw
Zinc, dissolved	M200.7 ICP	1	0.03	В	mg/L	0.01	0.05	01/31/20 21:24	jlw



Project ID: Sample ID: CM-01

# Inorganic Analytical Results

ACZ Sample ID: L57111-07 Date Sampled: 01/27/20 11:12 Date Received: 01/28/20 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	60.5			mg/L	2	20	01/29/20 0:00	еер
Carbonate as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Hydroxide as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Total Alkalinity		1	60.5		*	mg/L	2	20	01/29/20 0:00	eep
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			02/06/20 0:00	calc
Sum of Anions			1.4			meq/L			02/06/20 0:00	calc
Sum of Cations			1.4			meq/L			02/06/20 0:00	calc
Chloride	SM4500CI-E	1		U		mg/L	0.5	2	02/05/20 13:01	wtc
Conductivity @25C	SM2510B	1	136		*	umhos/cm	1	10	01/29/20 5:40	eep
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	01/30/20 16:51	wtc
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		64			mg/L	0.2	5	02/06/20 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							01/29/20 11:38	ick j
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.11			mg/L	0.02	0.1	02/06/20 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.11		*	mg/L	0.02	0.1	01/28/20 22:26	i pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:26	6 pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.7			С	0.1	0.1	01/29/20 0:00	eep
Residue, Filterable (TDS) @180C	SM2540C	1	84			mg/L	20	40	01/30/20 13:35	i mlh
Sulfate	D516-02/-07/-11 - Turbidimetri	c 1	7.7		*	mg/L	1	5	01/30/20 17:15	i rbt



Project ID: Sample ID: CM-02

# Inorganic Analytical Results

ACZ Sample ID: L57111-08 Date Sampled: 01/27/20 11:42 Date Received: 01/28/20 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual X	(Q Un	its MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					01/30/20 14:54	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/30/20 12:33	slm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual X	(Q Un	its MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg	/L 0.05	0.3	01/31/20 21:27	jlw
Antimony, dissolved	M200.8 ICP-MS	1		U	mg	L 0.0004	0.002	01/31/20 16:08	enb
Arsenic, dissolved	M200.8 ICP-MS	1	0.0017		mg	L 0.0002	0.001	01/31/20 16:08	enb
Barium, dissolved	M200.7 ICP	1	0.011	В	mg	L 0.007	0.04	01/31/20 21:27	jlw
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg	L 0.00008	0.0003	01/31/20 16:08	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.00013	В	mg	L 0.00005	0.0003	01/31/20 16:08	enb
Calcium, dissolved	M200.7 ICP	1	18.7		mg	′L 0.1	0.5	01/31/20 21:27	jlw
Chromium, dissolved	M200.8 ICP-MS	1		U	mg	L 0.0005	0.002	01/31/20 16:08	enb
Cobalt, dissolved	M200.7 ICP	1		U	mg	/L 0.01	0.05	01/31/20 21:27	jlw
Copper, dissolved	M200.7 ICP	1		U	mg	/L 0.01	0.05	01/31/20 21:27	jlw
Iron, dissolved	M200.7 ICP	1		U	mg	/L 0.03	0.08	01/31/20 21:27	jlw
Lead, dissolved	M200.8 ICP-MS	1		U	mg	L 0.0001	0.0005	01/31/20 16:08	enb
Magnesium, dissolved	M200.7 ICP	1	3.5		* mg	/L 0.2	1	01/31/20 21:27	jlw
Manganese, dissolved	M200.7 ICP	1		U	mg	/L 0.01	0.05	01/31/20 21:27	jlw
Mercury, total	M245.1 CVAA	1		U	mg	L 0.0002	0.001	01/30/20 14:08	slm
Nickel, dissolved	M200.7 ICP	1		U	mg	L 0.008	0.04	01/31/20 21:27	jlw
Potassium, dissolved	M200.7 ICP	1	0.5	В	mg	/L 0.2	1	01/31/20 21:27	jlw
Sodium, dissolved	M200.7 ICP	1	6.1		* mg	/L 0.2	1	01/31/20 21:27	jlw
Vanadium, dissolved	M200.7 ICP	1		U	mg	L 0.005	0.03	01/31/20 21:27	jlw
Zinc, dissolved	M200.7 ICP	1		U	mg	/L 0.01	0.05	01/31/20 21:27	jlw



Project ID: Sample ID: CM-02

# Inorganic Analytical Results

ACZ Sample ID: L57111-08 Date Sampled: 01/27/20 11:42 Date Received: 01/28/20 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	53.2			mg/L	2	20	01/29/20 0:00	еер
Carbonate as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Hydroxide as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Total Alkalinity		1	53.2		*	mg/L	2	20	01/29/20 0:00	eep
Cation-Anion Balance	Calculation									
Cation-Anion Balance			3.4			%			02/06/20 0:00	calc
Sum of Anions			1.4			meq/L			02/06/20 0:00	calc
Sum of Cations			1.5			meq/L			02/06/20 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	02/05/20 13:01	wtc
Conductivity @25C	SM2510B	1	150		*	umhos/cm	1	10	01/29/20 5:50	eep
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	01/30/20 16:51	wtc
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		61			mg/L	0.2	5	02/06/20 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							01/29/20 11:42	2 jck
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	В		mg/L	0.02	0.1	02/06/20 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.03	В	*	mg/L	0.02	0.1	01/28/20 22:28	3 pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:28	8 pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	н		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.6			С	0.1	0.1	01/29/20 0:00	eep
Residue, Filterable (TDS) @180C	SM2540C	1	94			mg/L	20	40	01/30/20 13:38	8 mlh
Sulfate	D516-02/-07/-11 - Turbidimetri	c 1	14.9		*	mg/L	1	5	01/30/20 17:15	5 rbt



Project ID: Sample ID: CM-03

# Inorganic Analytical Results

ACZ Sample ID: **L57111-09** Date Sampled: 01/27/20 11:55 Date Received: 01/28/20 Sample Matrix: Surface Water

Inorganic Prep									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-					01/30/20 15:05	ttg
Lab Filtration (0.45um) & Acidification	M200.7/200.8/3005A							01/30/20 12:33	slm
Metals Analysis									
Parameter	EPA Method	Dilution	Result	Qual XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	mg/L	0.05	0.3	01/31/20 21:30	jlw
Antimony, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0004	0.002	01/31/20 16:11	enb
Arsenic, dissolved	M200.8 ICP-MS	1	0.0008	В	mg/L	0.0002	0.001	01/31/20 16:11	enb
Barium, dissolved	M200.7 ICP	1	0.011	В	mg/L	0.007	0.04	01/31/20 21:30	jlw
Beryllium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.00008	0.0003	01/31/20 16:11	enb
Cadmium, dissolved	M200.8 ICP-MS	1	0.00014	В	mg/L	0.00005	0.0003	01/31/20 16:11	enb
Calcium, dissolved	M200.7 ICP	1	17.1		mg/L	0.1	0.5	01/31/20 21:30	jlw
Chromium, dissolved	M200.8 ICP-MS	1		U	mg/L	0.0005	0.002	01/31/20 16:11	enb
Cobalt, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:30	jlw
Copper, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:30	jlw
Iron, dissolved	M200.7 ICP	1		U	mg/L	0.03	0.08	01/31/20 21:30	jlw
Lead, dissolved	M200.8 ICP-MS	1	0.0001	В	mg/L	0.0001	0.0005	01/31/20 16:11	enb
Magnesium, dissolved	M200.7 ICP	1	5.2	*	mg/L	0.2	1	01/31/20 21:30	jlw
Manganese, dissolved	M200.7 ICP	1		U	mg/L	0.01	0.05	01/31/20 21:30	jlw
Mercury, total	M245.1 CVAA	1		U	mg/L	0.0002	0.001	01/30/20 14:08	slm
Nickel, dissolved	M200.7 ICP	1		U	mg/L	0.008	0.04	01/31/20 21:30	jlw
Potassium, dissolved	M200.7 ICP	1	0.7	В	mg/L	0.2	1	01/31/20 21:30	jlw
Sodium, dissolved	M200.7 ICP	1	3.1	*	mg/L	0.2	1	01/31/20 21:30	jlw
Vanadium, dissolved	M200.7 ICP	1		U	mg/L	0.005	0.03	01/31/20 21:30	jlw
Zinc, dissolved	M200.7 ICP	1	0.02	В	mg/L	0.01	0.05	01/31/20 21:30	jlw



Project ID: Sample ID: CM-03

# Inorganic Analytical Results

ACZ Sample ID: **L57111-09** Date Sampled: 01/27/20 11:55 Date Received: 01/28/20 Sample Matrix: Surface Water

Wet Chemistry										
Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	60.7			mg/L	2	20	01/29/20 0:00	eep
Carbonate as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Hydroxide as CaCO3		1		U		mg/L	2	20	01/29/20 0:00	eep
Total Alkalinity		1	60.7		*	mg/L	2	20	01/29/20 0:00	eep
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			02/06/20 0:00	calc
Sum of Anions			1.4			meq/L			02/06/20 0:00	calc
Sum of Cations			1.4			meq/L			02/06/20 0:00	calc
Chloride	SM4500CI-E	1		U	*	mg/L	0.5	2	02/05/20 13:01	wtc
Conductivity @25C	SM2510B	1	140		*	umhos/cm	1	10	01/29/20 6:00	eep
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	01/30/20 16:54	wtc
Hardness as CaCO3 (dissolved)	SM2340B - Calculation		64			mg/L	0.2	5	02/06/20 0:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							01/29/20 11:45	5 jck
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.10			mg/L	0.02	0.1	02/06/20 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.10		*	mg/L	0.02	0.1	01/28/20 22:29	) pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:29	) pjb
pH (lab)	SM4500H+ B									
pН		1	8.2	Н		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.8			С	0.1	0.1	01/29/20 0:00	eep
Residue, Filterable (TDS) @180C	SM2540C	1	88			mg/L	20	40	01/30/20 13:41	mlh
Sulfate	D516-02/-07/-11 - Turbidimetri	c 1	8.3		*	mg/L	1	5	01/30/20 17:15	5 rbt



Inorganic Reference

eport Header	r Explanations		
Batch	A distinct set of samples analyzed at a specific time		
Found	Value of the QC Type of interest		
Limit	Upper limit for RPD, in %.		
Lower	Lower Recovery Limit, in % (except for LCSS, mg/Kg)		
MDL	Method Detection Limit. Same as Minimum Reporting Limit un	nless omitted or e	qual to the PQL (see comment #5).
	Allows for instrument and annual fluctuations.		
PCN/SCN	A number assigned to reagents/standards to trace to the man	ufacturers certific	ate of analysis
PQL	Practical Quantitation Limit. Synonymous with the EPA term "	minimum level".	
QC	True Value of the Control Sample or the amount added to the	Spike	
Rec	Recovered amount of the true value or spike added, in % (exc	ept for LCSS, mg	/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC	C Types	
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)		
Sample	Value of the Sample of interest		
C Sample Ty	pes		
AS	Analytical Spike (Post Digestion)	LCSWD	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	LFB	Laboratory Fortified Blank
ССВ	Continuing Calibration Blank	LFM	Laboratory Fortified Matrix
CCV	Continuing Calibration Verification standard	LFMD	Laboratory Fortified Matrix Duplicate
DUP	Sample Duplicate	LRB	Laboratory Reagent Blank
ICB	Initial Calibration Blank	MS	Matrix Spike
ICV	Initial Calibration Verification standard	MSD	Matrix Spike Duplicate
ICSAB	Inter-element Correction Standard - A plus B solutions	PBS	Prep Blank - Soil
LCSS	Laboratory Control Sample - Soil	PBW	Prep Blank - Water
			•
I CSSD	Laboratory Control Sample - Soil Duplicate	POV	Practical Quantitation Verification standard
LCSSD LCSW	Laboratory Control Sample - Soil Duplicate Laboratory Control Sample - Water	PQV SDL	Practical Quantitation Verification standard Serial Dilution
LCSW	Laboratory Control Sample - Water		
<i>LCSW</i> C Sample Ty	Laboratory Control Sample - Water pe Explanations	SDL	Serial Dilution
<i>LCSW</i> C Sample Ty Blanks	Laboratory Control Sample - Water pe Explanations Verifies that there is no or minimal co	SDL	Serial Dilution
LCSW C Sample Tyj Blanks Control Sar	Laboratory Control Sample - Water         pe Explanations         Verifies that there is no or minimal comples         Verifies the accuracy of the method,	SDL ontamination in the including the prep	Serial Dilution
LCSW C Sample Ty Blanks Control Sar Duplicates	Laboratory Control Sample - Water         pe Explanations         Verifies that there is no or minimal comples         Verifies the accuracy of the method,         Verifies the precision of the instrume	SDL ontamination in the including the prep nt and/or method.	Serial Dilution
LCSW C Sample Tyj Blanks Control Sar	Laboratory Control Sample - Water         pe Explanations         Verifies that there is no or minimal comples         Verifies the accuracy of the method,         Verifies the precision of the instrume	SDL ontamination in the including the prep nt and/or method. ces, if any.	Serial Dilution
LCSW C Sample Typ Blanks Control Sar Duplicates Spikes/Fort Standard	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method,         Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferen         Verifies the validity of the calibration.	SDL ontamination in the including the prep nt and/or method. ces, if any.	Serial Dilution
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method,         Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferen         Verifies the validity of the calibration.	SDL ontamination in the including the prep nt and/or method. ces, if any.	Serial Dilution
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B	Laboratory Control Sample - Water         pe Explanations         weifies that there is no or minimal comples         Verifies the accuracy of the method,         Verifies the precision of the instrume         tified Matrix         Determines sample matrix interferen         Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F	SDL ontamination in the including the prep nt and/or method. ces, if any.	Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity.
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H	Laboratory Control Sample - Water         pe Explanations         weifies that there is no or minimal comples         Verifies the accuracy of the method,         Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferen         Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F         Analysis exceeded method hold time. pH is a field test with an analysis	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t	Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity.
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method, Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferent         Verifies the validity of the calibration.         state       Verifies the validity of the calibration.	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t gative threshold.	Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time.
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H	Laboratory Control Sample - Water         pe Explanations         weifies that there is no or minimal comples         Verifies the accuracy of the method,         Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferen         Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F         Analysis exceeded method hold time. pH is a field test with an analysis	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t gative threshold. e level of the assoc	Serial Dilution  e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. pciated value.
LCSW C Sample Typ Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L U	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method, Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferent         Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F         Analysis exceeded method hold time. pH is a field test with ar         Target analyte response was below the laboratory defined neg         The material was analyzed for, but was not detected above the         The associated value is either the sample quantitation limit or	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t gative threshold. e level of the assoc	Serial Dilution  e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. pciated value.
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method, Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferent         Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F         Analysis exceeded method hold time. pH is a field test with ar         Target analyte response was below the laboratory defined neg         The material was analyzed for, but was not detected above the         The associated value is either the sample quantitation limit or	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associate n immediate hold to gative threshold. e level of the associate the sample detect	Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. time. pociated value. tion limit.
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L U U	Laboratory Control Sample - Water         pe Explanations         mples       Verifies that there is no or minimal comples         Verifies the accuracy of the method, Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferent         Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F         Analyte response was below the laboratory defined neg         The material was analyzed for, but was not detected above the         The associated value is either the sample quantitation limit or the	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t gative threshold. e level of the associat the sample detect	Serial Dilution  e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. bciated value. tion limit. th 1983.
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L U U	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method, Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferent         Verifies the validity of the calibration.         c(Qual)         Analyte concentration detected at a value between MDL and F         Analyte concentration detected at a value between MDL and F         Analyte response was below the laboratory defined neg         The material was analyzed for, but was not detected above the         The associated value is either the sample quantitation limit or         EPA 600/4-83-020. Methods for Chemical Analysis of Water and the sample complexity of the sampl	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t gative threshold. e level of the asso the sample detect and Wastes, Marc nic Substances in l	Serial Dilution  e prep method or calibration procedure. p procedure.  ted value is an estimated quantity. time. ciated value. tion limit. th 1983. Environmental Samples, August 1993.
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L U u ethod Refere (1) (2)	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method, Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferent         Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F         Analyte concentration detected at a value between MDL and F         Analysis exceeded method hold time. pH is a field test with and         Target analyte response was below the laboratory defined nego         The material was analyzed for, but was not detected above the         The associated value is either the sample quantitation limit or         ences         EPA 600/4-83-020. Methods for Chemical Analysis of Water at         EPA 600/R-93-100. Methods for the Determination of Inorgan	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t gative threshold. e level of the asso the sample detect and Wastes, Marc nic Substances in l	Serial Dilution  e prep method or calibration procedure. p procedure.  ted value is an estimated quantity. time. ciated value. tion limit. th 1983. Environmental Samples, August 1993.
LCSW C Sample Typ Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L U ethod Refere (1) (2) (3)	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix         Determines sample matrix interferent Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with ar Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or ences         EPA 600/4-83-020. Methods for Chemical Analysis of Water a EPA 600/R-93-100. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for the Determination of Metals	SDL entamination in the including the prep nt and/or method. ces, if any. PQL. The associate n immediate hold to gative threshold. e level of the associate the sample detect and Wastes, Marc in Environmental s	Serial Dilution  e prep method or calibration procedure. p procedure.  ted value is an estimated quantity. time. ciated value. tion limit. th 1983. Environmental Samples, August 1993.
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LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L U ethod Refere (1) (2) (3) (4) (5)	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix         Determines sample matrix interferent Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with ar Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or EPA 600/R-93-100. Methods for Chemical Analysis of Water a EPA 600/R-93-100. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for the Determination of Metals EPA SW-846. Test Methods for Evaluating Solid Waste.	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t gative threshold. e level of the associat the sample detect and Wastes, Marc in Environmental s ater.	Serial Dilution  e prep method or calibration procedure. p procedure.  ted value is an estimated quantity. time. bciated value. tion limit. bciated value. tion limit. bciated value. tion limit. bciated value. tion limit. bciated value. bciated va
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L U ethod Refere (1) (2) (3) (4) (5)	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix         Determines sample matrix interferen Verifies the validity of the calibration.         c(Qual)         Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with an Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or         mces         EPA 600/R-93-100. Methods for Chemical Analysis of Water an EPA 600/R-94-111. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wasteward         QC results calculated from raw data. Results may vary slightly	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t gative threshold. e level of the associat the sample detect and Wastes, Marc nic Substances in l in Environmental s ater.	Serial Dilution  e prep method or calibration procedure. p procedure.  ted value is an estimated quantity. time. beiated value. tion limit. beiated value. tion limit. beiated value. tion limit. beiated value. beiated
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LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L U ethod Refere (1) (2) (3) (4) (5) comments (1) (2) (3)	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal or         mples       Verifies the accuracy of the method,         Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferen         Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F         Analysis exceeded method hold time. pH is a field test with ar         Target analyte response was below the laboratory defined neg         The material was analyzed for, but was not detected above the         The associated value is either the sample quantitation limit or         PRCES         EPA 600/R-93-100. Methods for Chemical Analysis of Water and         EPA 600/R-93-100. Methods for the Determination of Inorgan         EPA 600/R-94-111. Methods for Evaluating Solid Waste.         Standard Methods for the Examination of Water and Wastewa         QC results calculated from raw data. Results may vary slightly         Soil, Sludge, and Plant matrices for Inorganic analyses are reported on an "as	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t gative threshold. e level of the associat the sample detect and Wastes, Marc nic Substances in l in Environmental s ater.	Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. time. botated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations. eight basis.
LCSW C Sample Typ Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L U ethod Refere (1) (2) (3) (4) (5) omments (1) (2)	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal comples         Verifies the accuracy of the method, Verifies the precision of the instrume tified Matrix         Determines sample matrix interferent Verifies the validity of the calibration.         (Qual)         Analyte concentration detected at a value between MDL and F Analysis exceeded method hold time. pH is a field test with ar Target analyte response was below the laboratory defined neg The material was analyzed for, but was not detected above the The associated value is either the sample quantitation limit or EPA 600/R-93-100. Methods for Chemical Analysis of Water at EPA 600/R-93-100. Methods for the Determination of Inorgan EPA 600/R-94-111. Methods for the Determination of Metals EPA SW-846. Test Methods for Evaluating Solid Waste. Standard Methods for the Examination of Water and Wastewar         QC results calculated from raw data. Results may vary slightly Soil, Sludge, and Plant matrices for Inorganic analyses are reported.	SDL ontamination in the including the prep nt and/or method. ces, if any. PQL. The associat n immediate hold t gative threshold. e level of the associat the sample detect and Wastes, Marc nic Substances in l in Environmental s ater.	Serial Dilution e prep method or calibration procedure. procedure. ted value is an estimated quantity. time. botated value. tion limit. ch 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations. eight basis.
LCSW C Sample Ty Blanks Control Sar Duplicates Spikes/Fort Standard CZ Qualifiers B H L U ethod Refere (1) (2) (3) (4) (5) comments (1) (2) (3)	Laboratory Control Sample - Water         pe Explanations         Werifies that there is no or minimal or         mples       Verifies the accuracy of the method,         Verifies the precision of the instrume         tified Matrix       Determines sample matrix interferen         Verifies the validity of the calibration.         c(Qual)         Analyte concentration detected at a value between MDL and F         Analysis exceeded method hold time. pH is a field test with ar         Target analyte response was below the laboratory defined neg         The material was analyzed for, but was not detected above the         The associated value is either the sample quantitation limit or         PRCes         EPA 600/R-93-100. Methods for Chemical Analysis of Water at         EPA 600/R-93-111. Methods for the Determination of Inorgan         EPA 600/R-94-111. Methods for Evaluating Solid Waste.         Standard Methods for the Examination of Water and Wasteward         QC results calculated from raw data. Results may vary slightly         Soil, Sludge, and Plant matrices for Inorganic analyses are reported on an "as         An asterisk in the "XQ" column indicates there is an extended	SDL ontamination in the including the prep int and/or method. ces, if any. PQL. The associate in immediate hold to gative threshold. e level of the associate the sample detect and Wastes, Marco in Environmental s ater. y if the rounded vas ported on a dry we received" basis. qualifier and/or ce	Serial Dilution e prep method or calibration procedure. p procedure. ted value is an estimated quantity. time. ciated value. tion limit. th 1983. Environmental Samples, August 1993. Samples - Supplement I, May 1994. alues are used in the calculations. tight basis. entification qualifier

https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

REP001.03.15.02

# AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

### **CRG Mining, LLC**

### ACZ Project ID: L57111

Alkalinity as CaC	O3		SM23208	3 - Titration									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490784													
WG490784PBW1	PBW	01/28/20 18:21				7.8	mg/L		-20	20			
WG490784LCSW3	LCSW	01/28/20 18:39	WC200123-2	820.0001		796	mg/L	97	90	110			
WG490784LCSW6	LCSW	01/28/20 22:09	WC200123-2	820.0001		802	mg/L	98	90	110			
WG490784PBW2	PBW	01/28/20 22:18				U	mg/L		-20	20			
WG490784LCSW9	LCSW	01/29/20 1:10	WC200123-2	820.0001		806	mg/L	98	90	110			
WG490784PBW3	PBW	01/29/20 1:19				U	mg/L		-20	20			
WG490784LCSW12	LCSW	01/29/20 4:34	WC200123-2	820.0001		796	mg/L	97	90	110			
WG490784PBW4	PBW	01/29/20 4:42				U	mg/L		-20	20			
L57111-06DUP	DUP	01/29/20 5:31			60.7	60.5	mg/L				0	20	
L57120-02DUP	DUP	01/29/20 7:45			U	U	mg/L				0	20	RA
WG490784LCSW15	LCSW	01/29/20 8:31	WC200123-2	820.0001		822	mg/L	100	90	110			
Aluminum, disso	lved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	2		1.959	mg/L	98	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.15	0.15			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	1.0012		.983	mg/L	98	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	1.0012	U	.964	mg/L	96	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	1.0012	U	1.007	mg/L	101	85	115	4	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	1.0012	U	1.023	mg/L	102	85	115			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	1.0012	U	1.021	mg/L	102	85	115	0	20	
Antimony, dissol	ved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491012													
WG491012ICV	ICV	01/31/20 15:07	MS200114-2	.02004		.01952	mg/L	97	90	110			
WG491012ICB	ICB	01/31/20 15:10				U	mg/L		-0.00088	0.00088			
WG491012LFB	LFB	01/31/20 15:14	MS200120-3	.01		.01038	mg/L	104	85	115			
L57111-05AS	AS	01/31/20 15:55	MS200120-3	.01	U	.00964	mg/L	96	70	130			
L57111-05ASD	ASD	01/31/20 15:58	MS200120-3	.01	U	.0097	mg/L	97	70	130	1	20	
L57126-02AS	AS	01/31/20 16:36	MS200120-3	.01	U	.00952	mg/L	95	70	130			
L57126-02ASD	ASD	01/31/20 16:39	MS200120-3	.01	U	.00996	mg/L	100	70	130	5	20	

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### **CRG Mining, LLC**

#### ACZ Project ID: L57111

AC2 ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RF           WG491012         WG491012[CV         ICV         01/31/20 15:07         MS200114-2         .05         .05015         mg/L         100         90         110           WG491012[FB         LFB         01/31/20 15:10         WS200120-3         .05005         .06263         mg/L         107         85         115           L57111-05ASD         ASD         01/31/20 15:56         MS200120-3         .05005         .008         .06263         mg/L         109         70         130         L57126-02AS         AS         01/31/20 15:58         MS200120-3         .05005         .05402         mg/L         108         70         130         L57126-02AS         AS         01/31/20 16:39         MS200120-3         .05005         .05617         mg/L         102         90         110         WG491088         WG491088ICV         ICV         02/03/20 13:03         MS200114-2         .05         .05093         mg/L         102         90         110           WG491088ICV         ICV         02/03/20 13:03         MS200120-3         .05005         .05065	20 20 20	
WG491012ICV         ICV         01/31/20 15:07         MS200114-2         .0.5        50515         mg/L         100         90         110           WG491012ICB         ICB         01/31/20 15:10         III         IIII         -0.00044         0.00044         0.00044           WG491012LFB         LFB         01/31/20 15:55         MS200120-3         0.5005         .008         0.6263         mg/L         109         70         130         IIII           L57111-05AS         AS         01/31/20 15:56         MS200120-3         0.5005         .008         0.6263         mg/L         109         70         130         0           L57126-02AS         AS         01/31/20 16:36         MS200120-3         0.5005         .05617         mg/L         102         90         110           L57126-02AS         AS         01/31/20 16:30         MS200114-2         .05         .05603         mg/L         102         90         110           VG491088ICV         ICV         02/03/20 13:03         MS200112-3         .05005         .0505         mg/L         101         85         115           L57107-10AS         AS         02/03/20 13:22         MS200120-3         .05005         U         .0565 </th <th>20</th> <th>Qual</th>	20	Qual
WG491012ICB         ICB         01/31/20         15:10         U         mg/L         -0.00044         0.00044           WG491012LFB         LFB         01/31/20         15:14         MS200120-3         .05005         .008         .06263         mg/L         107         85         115           L57111-05AS         AS         01/31/20         15:55         MS200120-3         .05005         .008         .06263         mg/L         109         70         130         0           L57111-05ASD         ASD         01/31/20         16:36         MS200120-3         .05005         .008         .06245         mg/L         109         70         130         0           L57126-02AS         ASD         01/31/20         16:36         MS200120-3         .05005         .05617         mg/L         108         70         130         0           L57126-02ASD         ASD         01/31/20         16:36         MS200120-3         .05005         .05617         mg/L         102         90         110           WG491088ICF         ICB         02/03/20         13:08         .05005         .05055         mg/L         101         85         115           L57107-10ASD         ASD <t< td=""><td>20</td><td>Qual</td></t<>	20	Qual
WG491012LFB       LFB       01/31/20 15:14       MS200120-3       .05005       .05343       mg/L       107       85       115         L57111-05AS       AS       01/31/20 15:55       MS200120-3       .05005       .008       .06263       mg/L       109       70       130         L57111-05ASD       ASD       01/31/20 16:56       MS200120-3       .05005       .008       .06245       mg/L       109       70       130       0         L57126-02AS       AS       01/31/20 16:36       MS200120-3       .05005       .05617       mg/L       108       70       130       0         L57126-02ASD       ASD       01/31/20 16:39       MS200120-3       .05005       .05617       mg/L       102       90       110         WG491088LF8       LFB       02/03/20 13:03       MS200120-3       .05005       .00029       mg/L       101       85       115         L57107-10AS       AS       02/03/20 13:22       MS200120-3       .05005       U       .0536       mg/L       107       70       130       2         Barium, dissolved       ASD       02/03/20 13:22       MS200120-3       .05005       U       .0536       mg/L       109       70       <	20	Qual
L57111-05AS AS 01/31/20 15:55 MS200120-3 .05005 .008 .06263 mg/L 109 70 130 L57111-05ASD ASD 01/31/20 15:58 MS200120-3 .05005 .008 .06245 mg/L 109 70 130 0 L57126-02AS AS 01/31/20 16:36 MS200120-3 .05005 .05617 mg/L 108 70 130 4 WG491088 WG491088 WG491088ICV ICV 02/03/20 13:03 MS200114-2 .05 .05093 mg/L 102 90 110 WG491088ICB ICB 02/03/20 13:06 .00029 mg/L -0.00044 0.00044 WG491088LFB LFB 02/03/20 13:06 .05005 U .0556 mg/L 101 85 115 L57107-10AS AS 02/03/20 13:22 MS200120-3 .05005 U .0556 mg/L 101 85 115 L57107-10AS AS 02/03/20 13:25 MS200120-3 .05005 U .0556 mg/L 101 85 115 L57107-10ASD ASD 02/03/20 13:25 MS200120-3 .05005 U .0556 mg/L 109 70 130 2 Barium, dissolvet M2007 ICP AC2 ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RF WG491014ICV ICV 01/31/20 20:22 U U mg/L -0.021 0.021 WG491014LFB LFB 01/31/20 20:35 II200123-3 .5005 .012 .4989 mg/L 98 85 115 L57111-04AS AS 01/31/20 20:35 II200123-3 .5005 .012 .4989 mg/L 97 85 115 L57111-04AS AS 01/31/20 21:64 II200123-3 .5005 .012 .4989 mg/L 97 85 115 L57111-04AS AS 01/31/20 21:57 II200123-3 .5005 .012 .4989 mg/L 98 85 115 L57111-04AS AS 01/31/20 21:57 II200123-3 .5005 .012 .4989 mg/L 97 85 115 L57111-04AS AS 01/31/20 21:57 II200123-3 .5005 .012 .4989 mg/L 97 85 115 L57111-04AS AS 01/31/20 21:57 II200123-3 .5005 .277 .7552 mg/L 96 85 115 . L57121-04AS AS 01/31/20 21:57 II200123-3 .5005 .277 .7552 mg/L 96 85 115 . L57121-04AS AS 01/31/20 21:57 II200123-3 .5005 .277 .7552 mg/L 96 85 115 . L57121-04AS AS 01/31/20 21:57 II200123-3 .5005 .277 .7552 mg/L 96 85 115 . L57121-04AS AS 01/31/20 21:57 II200123-3 .5005 .277 .7552 mg/L 96 85 115 . L57121-04AS AS 01/31/20 21:57 II200123-3 .5005 .277 .7552 mg/L 96 85 115 . L57121-04AS AS 01/31/20 21:57 II200123-3 .5005 .277 .7552 mg/L 96 85 115 . L57121-04AS AS 01/31/20 21:57 II200123-3 .5005 .277 .7552 mg/L 96 85 115 .	20	Qual
L57111-05ASD       ASD       01/31/20 15:58       MS200120-3       .05005       .008       .06245       mg/L       109       70       130       0         L57126-02AS       AS       01/31/20 16:36       MS200120-3       .05005       .05402       mg/L       108       70       130       4         WG491088       WG491088       WG491088       WS200120-3       .05005       .05093       mg/L       102       90       110       4         WG491088       ICF       02/03/20 13:03       MS200120-3       .05005       .05093       mg/L       102       90       110         WG491088ICB       ICB       02/03/20 13:09       MS200120-3       .05005       .05055       mg/L       101       85       115         L57107-10AS       AS       02/03/20 13:22       MS200120-3       .05005       U       .0536       mg/L       107       70       130       2         Barium, dissolvet       M200.7 ICP         MG491014ICV       ICV       01/31/20 20:16       II200122-1       2       2.0035       mg/L       100       95       105         WG491014LFB       LFB       01/31/20 20:16       II200123-3       .5005       .012	20	Qual
L57126-02AS       AS       01/31/20 16:36       MS200120-3       .05005       .05402       mg/L       108       70       130         L57126-02ASD       ASD       01/31/20 16:39       MS200120-3       .05005       .05617       mg/L       112       70       130       4         WG491088       W       MS200120-13       .05005       .05093       mg/L       102       90       110       4         WG491088ICW       ICV       02/03/20 13:00       MS200120-3       .05005       .05093       mg/L       102       90       110       4         WG491088ICB       ICB       02/03/20 13:09       MS200120-3       .05005       .05055       mg/L       101       85       115         L57107-10AS       AS       02/03/20 13:25       MS200120-3       .05005       U       .05459       mg/L       109       70       130       2         Barium, dissolvet       M200.7 ICP         MC491014         VCV       01/31/20 20:21       M2       2       2.0035       mg/L       100       95       105         WG491014       ICV       01/31/20 20:22       U       mg/L       100       95       105       115 <td>20</td> <td>Qual</td>	20	Qual
L57126-02ASD       ASD       01/31/20 16:39       MS200120-3       .05005       .05617       mg/L       112       70       130       4         WG491088       WG491088ICV       ICV       02/03/20 13:03       MS200114-2       .05       .05093       mg/L       102       90       110       WG491088ICS         WG491088ICV       ICV       02/03/20 13:03       MS200120-3       .05005       .05093       mg/L       102       90       110       WG491088ICS         WG491088ICS       ICB       02/03/20 13:09       MS200120-3       .05005       U       .0536       mg/L       101       85       115         L57107-10AS       AS       02/03/20 13:22       MS200120-3       .05005       U       .0536       mg/L       107       70       130       2         Barium, dissolved       MS200120-3       .05005       U       .05459       mg/L       109       70       130       2         Barium, dissolved       MS200120-3       .05005       U       .05459       mg/L       100       95       105       100       92       130       2         WG491014       Ksoo1/31/20 20:16       II200122-1       2       2.0035       mg/L       100 <td>20</td> <td>Qual</td>	20	Qual
WG491088         WG491088ICV       ICV       02/03/20 13:03       MS200114-2       .05       .05093       mg/L       102       90       110         WG491088ICB       ICB       02/03/20 13:06       .05005       .00029       mg/L       -0.00044       0.00044         WG491088LFB       LFB       02/03/20 13:09       MS200120-3       .05005       .0505       mg/L       101       85       115         L57107-10AS       AS       02/03/20 13:22       MS200120-3       .05005       U       .05366       mg/L       107       70       130       2         L57107-10AS       AS       02/03/20 13:25       MS200120-3       .05005       U       .05459       mg/L       109       70       130       2         MZ00.7 ICP         AcZ ID       Ype       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RF         WG491014I       ICV       ICV       01/31/20 20:22       U       mg/L       -0.021       0.021       0.021         WG491014LFB       ILFB       01/31/20 21:04       II200123-3       .5005       .012       .4927       mg/L	20	Qual
WG491088ICV       ICV       02/03/20 13:03       MS200114-2       .05       .05093       mg/L       102       90       110         WG491088ICB       ICB       02/03/20 13:06       .05005       .05005       mg/L       101       85       115         L57107-10AS       AS       02/03/20 13:22       MS200120-3       .05005       U       .0536       mg/L       107       70       130       2         L57107-10AS       AS       02/03/20 13:25       MS200120-3       .05005       U       .05459       mg/L       109       70       130       2         L57107-10ASD       ASD       02/03/20 13:25       MS200120-3       .05005       U       .05459       mg/L       109       70       130       2         Barium, dissolvet       M200.7 ICP       M200.7 ICP       M2017       CP       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RF         WG491014       ICV       ICV       01/31/20 20:26       U       mg/L       100       95       105         .57111-04AS       AS       01/31/20 20:35       II200123-3       .5005       .012       .4989       mg/L		Qual
WG491088ICB       ICB       02/03/20 13:06       .00029       mg/L       -0.00044       0.00044         WG491088LFB       LFB       02/03/20 13:09       MS200120-3       .05005       U       .0505       mg/L       101       85       115         .57107-10AS       AS       02/03/20 13:22       MS200120-3       .05005       U       .0536       mg/L       107       70       130       2         Barium, dissolved       M200.7 ICP       M200.7 ICP       V       AcZ ID       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       Rf         WG491014ICV       ICV       01/31/20 20:16       II200122-1       2       2.0035       mg/L       100       95       105		Qual
WG491088LFB L57107-10AS       LFB AS       02/03/20 13:22       MS200120-3 MS200120-3       .05005       U       .0505       mg/L       101       85       115         .57107-10AS       AS       02/03/20 13:22       MS200120-3       .05005       U       .0536       mg/L       107       70       130       2         .57107-10ASD       ASD       02/03/20 13:25       MS200120-3       .05005       U       .05459       mg/L       109       70       130       2         Barium, dissolved       M200.7 ICP       M200.7 ICP       M200120-1       QC       Sample       Found       Units       Rec%       Lower       Upper       RF         WG491014I       ICV       01/31/20 20:16       II200122-1       2       2.0035       mg/L       100       95       105       M20021       MS200120-3       .0021 <td></td> <td>Qual</td>		Qual
L57107-10AS       AS       02/03/20 13:22       MS200120-3       .05005       U       .0536       mg/L       107       70       130         L57107-10ASD       ASD       02/03/20 13:25       MS200120-3       .05005       U       .05459       mg/L       109       70       130       2         Barium, dissolvet       M200.7 ICP         ACZ ID       Type       Analyzed       PCN/SCN       QC       Sample       Found       Units       Rec%       Lower       Upper       RF         WG491014L       ICV       01/31/20 20:16       II200122-1       2       2.0035       mg/L       100       95       105       V         NG491014ICB       ICB       01/31/20 20:22       II200123-3       .5005       .012       .4927       mg/L       98       85       115       0.0211       100       95       105       105       .57111-04AS       AS       01/31/20 21:04       II200123-3       .5005       .012       .4989       mg/L       97       85       115       0.57121-04AS       AS       01/31/20 21:14       II200123-3       .5005       .012       .5006       mg/L       98       85       115       0.57121-04AS       AS       01/31/20 21:5		Qual
ASD       02/03/20 13:25       MS200120-3       .05005       U       .05459       mg/L       109       70       130       2         Barium, dissolved       M200.7 ICP       M200.7 ICP       MC2       Sample       Found       Units       Rec%       Lower       Upper       RF         MC491014       VG491014ICV       ICV       01/31/20 20:16       II200122-1       2       2.0035       mg/L       100       95       105       MG491014ICV         NG491014ICV       ICV       01/31/20 20:22       II200122-1       2       2.0035       mg/L       100       95       105       MG491014ICB       ICB       01/31/20 20:22       U       mg/L       -0.021       0.021		Qual
Barium, dissolved         M200.7 ICP           ACZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RF           WG491014I         WG491014ICV         ICV         01/31/20 20:16         II200122-1         2         2.0035         mg/L         100         95         105           WG491014ICV         ICV         01/31/20 20:22         U         mg/L         -0.021         0.021         0.021           WG491014LFB         ICB         01/31/20 20:35         II200123-3         .5005         .4927         mg/L         98         85         115           L57111-04AS         AS         01/31/20 21:04         II200123-3         .5005         .012         .4989         mg/L         97         85         115           L57111-04AS         AS         01/31/20 21:14         II200123-3         .5005         .012         .5006         mg/L         98         85         115         0           L57121-04AS         AS         01/31/20 21:53         II200123-3         .5005         .277         .7552         mg/L         96         85         115         1           L57121-04ASD		Qual
ACZ ID         Type         Analyzed         PCN/SCN         QC         Sample         Found         Units         Rec%         Lower         Upper         RF           WG491014         WG491014ICV         ICV         01/31/20 20:16         II200122-1         2         2.0035         mg/L         100         95         105           WG491014ICB         ICB         01/31/20 20:22         U         mg/L         -0.021         0.021         0.021           WG491014ICB         ICB         01/31/20 20:35         II200123-3         .5005         .4927         mg/L         98         85         115           L57111-04AS         AS         01/31/20 21:04         II200123-3         .5005         .012         .4989         mg/L         97         85         115           L57111-04AS         AS         01/31/20 21:14         II200123-3         .5005         .012         .5006         mg/L         98         85         115         0           L57121-04AS         AS         01/31/20 21:53         II200123-3         .5005         .277         .7552         mg/L         96         85         115         1           L57121-04ASD         ASD         01/31/20 21:57         II200123-3	D Limit	Qual
WG491014       ICV       01/31/20 20:16       II200122-1       2       2.0035       mg/L       100       95       105         NG491014ICV       ICB       01/31/20 20:22       U       mg/L       -0.021       0.021         NG491014LFB       ICB       01/31/20 20:35       II200123-3       .5005       .4927       mg/L       98       85       115         .57111-04AS       AS       01/31/20 21:04       II200123-3       .5005       .012       .4989       mg/L       97       85       115         .57111-04AS       ASD       01/31/20 21:14       II200123-3       .5005       .012       .5006       mg/L       98       85       115       0         .57121-04AS       AS       01/31/20 21:53       II200123-3       .5005       .277       .7552       mg/L       96       85       115         .57121-04ASD       ASD       01/31/20 21:57       II200123-3       .5005       .277       .7498       mg/L       94       85       115       1	PD Limit	Qual
NG491014ICV         ICV         01/31/20         20:16         II200122-1         2         2.0035         mg/L         100         95         105           NG491014ICB         ICB         01/31/20         20:22         U         mg/L         -0.021         0.021           NG491014LFB         LFB         01/31/20         20:35         II200123-3         .5005         .4927         mg/L         98         85         115           .57111-04AS         AS         01/31/20         21:04         II200123-3         .5005         .012         .4989         mg/L         97         85         115           .57111-04AS         ASD         01/31/20         21:14         II200123-3         .5005         .012         .5006         mg/L         98         85         115         0           .57121-04AS         AS         01/31/20         21:53         II200123-3         .5005         .277         .7552         mg/L         96         85         115           .57121-04ASD         ASD         01/31/20         21:57         II200123-3         .5005         .277         .7498         mg/L         94         85         115         1		
WG491014ICB         ICB         01/31/20 20:22         U         mg/L         -0.021         0.021           NG491014LFB         LFB         01/31/20 20:35         II200123-3         .5005         .4927         mg/L         98         85         115           .57111-04AS         AS         01/31/20 21:04         II200123-3         .5005         .012         .4989         mg/L         97         85         115           .57111-04ASD         ASD         01/31/20 21:14         II200123-3         .5005         .012         .5006         mg/L         98         85         115         0           .57121-04AS         AS         01/31/20 21:53         II200123-3         .5005         .277         .7552         mg/L         96         85         115           .57121-04ASD         ASD         01/31/20 21:57         II200123-3         .5005         .277         .7498         mg/L         94         85         115         1		
WG491014LFB         LFB         01/31/20 20:35         II200123-3         .5005         .4927         mg/L         98         85         115           .57111-04AS         AS         01/31/20 21:04         II200123-3         .5005         .012         .4989         mg/L         97         85         115           .57111-04ASD         ASD         01/31/20 21:14         II200123-3         .5005         .012         .5006         mg/L         98         85         115         0           .57121-04AS         AS         01/31/20 21:53         II200123-3         .5005         .277         .7552         mg/L         96         85         115           .57121-04ASD         ASD         01/31/20 21:57         II200123-3         .5005         .277         .7552         mg/L         94         85         115         1		
L57111-04AS         AS         01/31/20 21:04         II200123-3         .5005         .012         .4989         mg/L         97         85         115           .57111-04ASD         ASD         01/31/20 21:14         II200123-3         .5005         .012         .5006         mg/L         98         85         115         0           .57121-04AS         AS         01/31/20 21:53         II200123-3         .5005         .277         .7552         mg/L         96         85         115           .57121-04ASD         ASD         01/31/20 21:57         II200123-3         .5005         .277         .7498         mg/L         94         85         115         1		
L57111-04ASD         ASD         01/31/20         21:14         II200123-3         .5005         .012         .5006         mg/L         98         85         115         0           .57121-04AS         AS         01/31/20         21:53         II200123-3         .5005         .277         .7552         mg/L         96         85         115         115           .57121-04ASD         ASD         01/31/20         21:57         II200123-3         .5005         .277         .7498         mg/L         94         85         115         1		
.57121-04AS         AS         01/31/20 21:53         II200123-3         .5005         .277         .7552         mg/L         96         85         115           .57121-04ASD         ASD         01/31/20 21:57         II200123-3         .5005         .277         .7498         mg/L         94         85         115         1		
_57121-04ASD ASD 01/31/20 21:57 II200123-3 .5005 .277 .7498 mg/L 94 85 115 1	20	
Beryllium, dissolved M200.8 ICP-MS	20	
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RF	PD Limit	Qual
WG491012		
NG491012ICV ICV 01/31/2015:07 MS200114-2 .05 .04792 mg/L 96 90 110		
NG491012ICB ICB 01/31/20 15:10 U mg/L -0.000176 0.000176		
NG491012LFB LFB 01/31/20 15:14 MS200120-3 .05005 .05116 mg/L 102 85 115		
.57111-05AS AS 01/31/20 15:55 MS200120-3 .05005 U .05328 mg/L 106 70 130		
.57111-05ASD ASD 01/31/20 15:58 MS200120-3 .05005 U .05317 mg/L 106 70 130 0	20	
_57126-02AS AS 01/31/20 16:36 MS200120-3 .05005 U .04979 mg/L 99 70 130		
.57126-02ASD ASD 01/31/20 16:39 MS200120-3 .05005 U .05044 mg/L 101 70 130 1	20	
Cadmium, dissolved M200.8 ICP-MS		
ACZ ID Type Analyzed PCN/SCN QC Sample Found Units Rec% Lower Upper RF	PD Limit	Qual
WG491012		
NG491012ICV ICV 01/31/2015:07 MS200114-2 .05 .04841 mg/L 97 90 110		
NG491012ICB ICB 01/31/20 15:10 U mg/L -0.00011 0.00011		
NG491012LFB LFB 01/31/20 15:14 MS200120-3 .05005 .05135 mg/L 103 85 115		
_57111-05AS AS 01/31/20 15:55 MS200120-3 .05005 .00052 .05158 mg/L 102 70 130		
_57111-05ASD ASD 01/31/20 15:58 MS200120-3 .05005 .00052 .05135 mg/L 102 70 130 0	20	
.57126-02AS AS 01/31/20 16:36 MS200120-3 .05005 U .05015 mg/L 100 70 130		
_57126-02ASD ASD 01/31/20 16:39 MS200120-3 .05005 U .05102 mg/L 102 70 130 2		

# ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

## **CRG Mining, LLC**

### ACZ Project ID: L57111

Calcium, dissol	ved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	100		99.51	mg/L	100	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.3	0.3			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	68.00334		68.54	mg/L	101	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	68.00334	16.3	82.32	mg/L	97	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	68.00334	16.3	83.89	mg/L	99	85	115	2	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	68.00334	126	185.2	mg/L	87	85	115			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	68.00334	126	183.6	mg/L	85	85	115	1	20	
Chloride			SM45000	CI-E									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491265													
WG491265ICB	ICB	02/05/20 9:50				U	mg/L		-1.5	1.5			
WG491265ICV	ICV	02/05/20 9:50	WI190501-1	54.835		57.22	mg/L	104	90	110			
WG491265LFB1	LFB	02/05/20 12:20	WI190812-3	30		32.07	mg/L	107	90	110			
L57120-05AS	AS	02/05/20 13:03	WI190812-3	30	24.6	35.32	mg/L	36	90	110			M2
L57106-11DUP	DUP	02/05/20 13:11			243	245.3	mg/L				1	20	
L57106-12AS	AS	02/05/20 13:11	10XCL	30	245	275.7	mg/L	102	90	110			
WG491265LFB2	LFB	02/05/20 13:43	WI190812-3	30		31.98	mg/L	107	90	110			
L57121-04DUP	DUP	02/05/20 14:33			4820	4659	mg/L				3	20	
Chromium, diss	solved		M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491012													
WG491012ICV	ICV	01/31/20 15:07	MS200114-2	.05		.05357	mg/L	107	90	110			
WG491012ICB	ICB	01/31/20 15:10		.00		.00007 U	mg/L	107	-0.0011	0.0011			
WG491012LFB	LFB	01/31/20 15:14	MS200120-3	.05005		.0533	mg/L	106	85	115			
L57111-05AS	AS	01/31/20 15:55	MS200120-3	.05005	U	.05103	mg/L	102	70	130			
L57111-05ASD	ASD	01/31/20 15:58	MS200120-3	.05005	U	.05207	mg/L	104	70	130	2	20	
L57126-02AS	AS	01/31/20 16:36	MS200120-3	.05005	U	.05101	mg/L	102	70	130	-		
L57126-02ASD	ASD	01/31/20 16:39	MS200120-3	.05005	U	.05175	mg/L	103	70	130	1	20	
Cobalt, dissolve	ed		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	2.002		1.912	mg/L	96	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.03	0.03			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	.5		.491	mg/L	98	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	.5	U	.488	mg/L	98	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	.5	U	.482	mg/L	96	85	115	1	20	
	AS	01/31/20 21:53	II200123-3	.5	.01	.484	mg/L	95	85	115			
L57121-04AS	AO	01/01/2021.00						00					

# AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

### **CRG Mining, LLC**

#### ACZ Project ID: L57111

Conductivity @2	5C		SM2510B										
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490784													
WG490784LCSW2	LCSW	01/28/20 18:27	PCN60028	1408		1450	umhos/cm	103	90	110			
WG490784LCSW5	LCSW	01/28/20 21:57	PCN60028	1408		1450	umhos/cm	103	90	110			
WG490784LCSW8	LCSW	01/29/20 0:58	PCN60028	1408		1440	umhos/cm	102	90	110			
WG490784LCSW11	LCSW	01/29/20 4:22	PCN60028	1408		1440	umhos/cm	102	90	110			
L57111-06DUP	DUP	01/29/20 5:31			134	135	umhos/cm				1	20	
L57120-02DUP	DUP	01/29/20 7:45			2	7.9	umhos/cm				119	20	RA
WG490784LCSW14	LCSW	01/29/20 8:19	PCN60028	1408		1430	umhos/cm	102	90	110			
Copper, dissolve	d		M200.7 IC	P									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	2		1.957	mg/L	98	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.03	0.03			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	.502		.497	mg/L	99	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	.502	U	.491	mg/L	98	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	.502	U	.498	mg/L	99	85	115	1	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	.502	.02	.517	mg/L	99	85	115			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	.502	.02	.518	mg/L	99	85	115	0	20	
Cyanide, total			M335.4 -	Colorimetr	ic w/ distill	lation							
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490942													
WG490942 WG490942ICV	ICV	01/30/20 16:05	WI200129-10	.3		.2936	mg/L	98	90	110			
	ICV ICB	01/30/20 16:05 01/30/20 16:06	WI200129-10	.3		.2936 U	mg/L mg/L	98	90 -0.003	110 0.003			
WG490942ICV			WI200129-10	.3			-	98					
WG490942ICV WG490942ICB WG490966	ICB	01/30/20 16:06	WI200129-10	.3			-	98	-0.003	0.003			
WG490942ICV WG490942ICB			WI200129-10 WI200129-7	.3 .2		U	mg/L	98 92					
WG490942ICV WG490942ICB <b>WG490966</b> WG490911LRB	ICB LRB	01/30/20 16:06			U	U	mg/L		-0.003 -0.003	0.003	0	20	RA
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LFB	ICB LRB LFB	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35			U U	U U .1848	mg/L mg/L mg/L		-0.003 -0.003	0.003	0	20	RA
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LFB L57042-01DUP	ICB LRB LFB DUP	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:36	WI200129-7	.2		U U .1848 U	mg/L mg/L mg/L mg/L	92	-0.003 -0.003 90	0.003 0.003 110	0	20 20	RA RA
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LFB L57042-01DUP L57042-02LFM	ICB LRB LFB DUP LFM	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:36 01/30/20 16:38	WI200129-7	.2	U	U .1848 U .1802	mg/L mg/L mg/L mg/L	92	-0.003 -0.003 90	0.003 0.003 110			
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LFB L57042-01DUP L57042-02LFM L57111-05DUP	ICB LRB LFB DUP LFM DUP	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:36 01/30/20 16:38 01/30/20 16:48	WI200129-7 WI200129-7	.2 .2 .2	U U	U .1848 U .1802 U	mg/L mg/L mg/L mg/L mg/L	92 90	-0.003 -0.003 90 90	0.003 0.003 110 110			
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LFB L57042-01DUP L57042-02LFM L57111-05DUP L57111-06LFM	ICB LRB LFB DUP LFM DUP	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:36 01/30/20 16:38 01/30/20 16:48	WI200129-7 WI200129-7 WI200129-7	.2 .2 .2	U U	U .1848 U .1802 U	mg/L mg/L mg/L mg/L mg/L	92 90	-0.003 -0.003 90 90	0.003 0.003 110 110			
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LFB L57042-01DUP L57042-02LFM L57111-05DUP L57111-06LFM Iron, dissolved	ICB LRB DUP LFM DUP LFM	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:36 01/30/20 16:38 01/30/20 16:48 01/30/20 16:50	WI200129-7 WI200129-7 WI200129-7 M200.7 IC	.2 .2 .2 CP	U U U	U .1848 U .1802 U .1894	mg/L mg/L mg/L mg/L mg/L mg/L	92 90 95	-0.003 -0.003 90 90 90	0.003 0.003 110 110 110	0	20	RA
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LFB L57042-01DUP L57042-02LFM L57111-05DUP L57111-06LFM Iron, dissolved ACZ ID	ICB LRB DUP LFM DUP LFM	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:36 01/30/20 16:38 01/30/20 16:48 01/30/20 16:50	WI200129-7 WI200129-7 WI200129-7 M200.7 IC	.2 .2 .2 CP	U U U	U .1848 U .1802 U .1894	mg/L mg/L mg/L mg/L mg/L mg/L	92 90 95	-0.003 -0.003 90 90 90	0.003 0.003 110 110 110	0	20	RA
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LFB L57042-01DUP L57042-02LFM L57111-05DUP L57111-06LFM Iron, dissolved ACZ ID WG491014	ICB LRB LFB DUP LFM DUP LFM	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:36 01/30/20 16:38 01/30/20 16:48 01/30/20 16:50 Analyzed	WI200129-7 WI200129-7 WI200129-7 M200.7 IC PCN/SCN	.2 .2 .2 CP QC	U U U	U .1848 U .1802 U .1894	mg/L mg/L mg/L mg/L mg/L mg/L mg/L	92 90 95 Rec%	-0.003 -0.003 90 90 90 Lower	0.003 0.003 110 110 110 Upper	0	20	RA
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LFB L57042-01DUP L57042-02LFM L57111-05DUP L57111-06LFM Iron, dissolved ACZ ID WG491014 WG491014ICV	ICB LRB LFB DUP LFM DUP LFM Type	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:38 01/30/20 16:48 01/30/20 16:50 Analyzed	WI200129-7 WI200129-7 WI200129-7 M200.7 IC PCN/SCN	.2 .2 .2 CP QC	U U U	U .1848 U .1802 U .1894 Found	mg/L mg/L mg/L mg/L mg/L mg/L	92 90 95 Rec%	-0.003 -0.003 90 90 90 Lower 95	0.003 0.003 110 110 110 Upper 105	0	20	RA
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LRB L57042-01DUP L57042-02LFM L57111-05DUP L57111-06LFM Iron, dissolved ACZ ID WG491014ICV WG491014ICS	ICB LRB LFB DUP LFM DUP LFM Type	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:38 01/30/20 16:48 01/30/20 16:50 Analyzed 01/31/20 20:16 01/31/20 20:22	WI200129-7 WI200129-7 WI200129-7 M200.7 IC PCN/SCN II200122-1	.2 .2 .2 CP QC 2	U U U	U .1848 U .1802 U .1894 Found	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	92 90 95 <b>Rec%</b> 97	-0.003 -0.003 90 90 90 Lower 95 -0.09	0.003 0.003 110 110 110 Upper 105 0.09	0	20	RA
WG490942ICV WG490942ICB WG490966 WG490911LRB WG490911LRB L57042-01DUP L57042-02LFM L57111-05DUP L57111-06LFM Iron, dissolved ACZ ID WG491014ICV WG491014ICV WG491014LFB	ICB LRB LFB DUP LFM DUP LFM Type ICV ICB LFB	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:38 01/30/20 16:48 01/30/20 16:50 <b>Analyzed</b> 01/31/20 20:16 01/31/20 20:22 01/31/20 20:35	WI200129-7 WI200129-7 WI200129-7 M200.7 IC PCN/SCN II200122-1 II200123-3	.2 .2 .2 CP QC 2 1.0018	U U Sample	U .1848 U .1802 U .1894 Found	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	92 90 95 <b>Rec%</b> 97	-0.003 90 90 90 Lower 95 -0.09 85	0.003 0.003 110 110 110 Upper 105 0.09 115	0	20	RA
WG490942ICV WG490942ICB WG490942ICB WG490911LRB WG490911LRB L57042-01DUP L57042-02LFM L57111-05DUP L57111-06LFM Iron, dissolved MG491014ICP WG491014ICP WG491014ICB WG491014LFB L57111-04AS	ICB LRB LFB DUP LFM DUP LFM LFM ICW ICV ICB LFB AS	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:36 01/30/20 16:48 01/30/20 16:50 <b>Analyzed</b> 01/31/20 20:16 01/31/20 20:22 01/31/20 20:35 01/31/20 21:04	WI200129-7 WI200129-7 WI200129-7 M200.7 IC PCN/SCN II200122-1 II200123-3 II200123-3	.2 .2 .2 CP QC 2 1.0018 1.0018	U U Sample	U .1848 U .1802 U .1894 <b>Found</b> 1.946 U .998 .992	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	92 90 95 <b>Rec%</b> 97 100 99	-0.003 90 90 90 Lower 95 -0.09 85 85	0.003 0.003 110 110 110 110 Upper 105 0.09 115 115	0 RPD	20 Limit	RA
WG490942ICV WG490942ICB WG490942ICB WG490911LRB WG490911LRB L57042-01DUP L57042-02LFM L57111-05DUP L57111-06LFM Iron, dissolved MG491014 WG491014ICP WG491014ICB WG491014LFB L57111-04AS	ICB LRB LFB DUP LFM LFM LFM ICV ICB LFB AS ASD	01/30/20 16:06 01/30/20 16:34 01/30/20 16:35 01/30/20 16:38 01/30/20 16:48 01/30/20 16:50 01/30/20 16:50 01/31/20 20:16 01/31/20 20:22 01/31/20 20:35 01/31/20 21:04 01/31/20 21:14	WI200129-7 WI200129-7 WI200129-7 M200.7 IC PCN/SCN II200122-1 II200123-3 II200123-3 II200123-3	.2 .2 .2 CP QC 2 1.0018 1.0018 1.0018 1.0018	U U Sample U U	U .1848 U .1802 U .1894 .1894 .1894 .1894 .1894 .1994 .998 .992 .991	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	92 90 95 <b>Rec%</b> 97 100 99 99	-0.003 90 90 90 <b>Lower</b> 95 -0.09 85 85 85	0.003 0.003 110 110 110 Upper 105 0.09 115 115 115 115	0 RPD	20 Limit	RA

# ACZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

## CRG Mining, LLC

## ACZ Project ID: L57111

Lead, dissolved			M200.8 I	CP-MS									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491012													
WG491012ICV	ICV	01/31/20 15:07	MS200114-2	.05		.04736	mg/L	95	90	110			
WG491012ICB	ICB	01/31/20 15:10				U	mg/L		-0.00022	0.00022			
WG491012LFB	LFB	01/31/20 15:14	MS200120-3	.05005		.04825	mg/L	96	85	115			
L57111-05AS	AS	01/31/20 15:55	MS200120-3	.05005	U	.04713	mg/L	94	70	130			
L57111-05ASD	ASD	01/31/20 15:58	MS200120-3	.05005	U	.04741	mg/L	95	70	130	1	20	
L57126-02AS	AS	01/31/20 16:36	MS200120-3	.05005	U	.04804	mg/L	96	70	130			
L57126-02ASD	ASD	01/31/20 16:39	MS200120-3	.05005	U	.04786	mg/L	96	70	130	0	20	
Magnesium, dis	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	100		97.86	mg/L	98	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.6	0.6			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	49.99771		48.99	mg/L	98	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	49.99771	5.4	52.91	mg/L	95	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	49.99771	5.4	54.32	mg/L	98	85	115	3	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	49.99771	178	217.4	mg/L	79	85	115			M3
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	49.99771	178	214.9	mg/L	74	85	115	1	20	M3
Manganese, dise	solved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	2		1.971	mg/L	99	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.03	0.03			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	.5015		.519	mg/L	103	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	.5015	U	.514	mg/L	102	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	.5015	U	.516	mg/L	103	85	115	0	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	.5015	.35	.836	mg/L	97	85	115			
	AS ASD	01/31/20 21:53 01/31/20 21:57	II200123-3 II200123-3	.5015 .5015	.35 .35	.836 .829	mg/L mg/L		85 85	115 115	1	20	
				.5015			-	97			1	20	
L57121-04AS L57121-04ASD Mercury, total ACZ ID			II200123-3	.5015			-	97			1 RPD	20 Limit	Qual
L57121-04ASD Mercury, total	ASD	01/31/20 21:57	II200123-3 M245.1 (	.5015 CVAA	.35	.829	mg/L	97 96	85	115			Qual
L57121-04ASD Mercury, total ACZ ID WG490862	ASD Type	01/31/20 21:57 Analyzed	II200123-3 M245.1 ( PCN/SCN	.5015 CVAA QC	.35	.829 Found	mg/L Units	97 96 Rec%	85 Lower	115 Upper			Qual
L57121-04ASD Mercury, total ACZ ID WG490862 WG490862ICV	ASD Type ICV	01/31/20 21:57 Analyzed 01/30/20 13:40	II200123-3 M245.1 (	.5015 CVAA	.35	.829 Found .00499	mg/L Units mg/L	97 96	85 Lower 95	115 Upper 105			Qual
L57121-04ASD Mercury, total ACZ ID WG490862 WG490862ICV WG490862ICB	ASD Type ICV ICB	01/31/20 21:57 Analyzed 01/30/20 13:40 01/30/20 13:41	II200123-3 M245.1 ( PCN/SCN	.5015 CVAA QC	.35	.829 Found .00499 U	mg/L Units mg/L mg/L	97 96 Rec%	85 Lower 95 -0.0002	115 Upper 105 0.0002			Qual
L57121-04ASD Mercury, total ACZ ID WG490862 WG490862ICV	ASD Type ICV ICB LRB	01/31/20 21:57 Analyzed 01/30/20 13:40 01/30/20 13:41 01/30/20 13:43	II200123-3 M245.1 ( PCN/SCN	.5015 CVAA QC .004995	.35	.829 Found .00499 U U	mg/L Units mg/L mg/L mg/L	97 96 Rec%	85 Lower 95 -0.0002 -0.00044	115 Upper 105 0.0002 0.00044			Qual
L57121-04ASD Mercury, total ACZ ID WG490862 WG490862ICV WG490862ICB WG490862LRB WG490862LFB	ASD Type ICV ICB LRB LFB	01/31/20 21:57 Analyzed 01/30/20 13:40 01/30/20 13:41 01/30/20 13:43 01/30/20 13:44	II200123-3 M245.1 ( PCN/SCN HG191211-3 HG200127-4	.5015 CVAA QC .004995 .002002	.35 Sample	.829 Found .00499 U U .00194	mg/L Units mg/L mg/L mg/L	97 96 Rec% 100 97	85 Lower 95 -0.0002 -0.00044 85	115 Upper 105 0.0002 0.00044 115			Qual
L57121-04ASD Mercury, total ACZ ID WG490862 WG490862ICV WG490862ICB WG490862LRB WG490862LFB L50237-47LFM	ASD Type ICV ICB LRB LFB LFM	01/31/20 21:57 Analyzed 01/30/20 13:40 01/30/20 13:41 01/30/20 13:43 01/30/20 13:44 01/30/20 13:44	II200123-3 M245.1 ( PCN/SCN HG191211-3 HG200127-4 HG200127-4	.5015 CVAA QC .004995 .002002 .002002	.35 Sample U	.829 Found .00499 U U .00194 .00193	mg/L Units mg/L mg/L mg/L mg/L	97 96 <b>Rec%</b> 100 97 96	85 Lower -0.0002 -0.00044 85 85	115 Upper 105 0.0002 0.00044 115 115	RPD	Limit	Qual
L57121-04ASD Mercury, total ACZ ID WG490862 WG490862ICV WG490862ICB WG490862LRB WG490862LFB	ASD Type ICV ICB LRB LFB	01/31/20 21:57 Analyzed 01/30/20 13:40 01/30/20 13:41 01/30/20 13:43 01/30/20 13:44	II200123-3 M245.1 ( PCN/SCN HG191211-3 HG200127-4	.5015 CVAA QC .004995 .002002	.35 Sample	.829 Found .00499 U U .00194	mg/L Units mg/L mg/L mg/L	97 96 Rec% 100 97	85 Lower 95 -0.0002 -0.00044 85	115 Upper 105 0.0002 0.00044 115			Qual

# AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

## **CRG Mining, LLC**

### ACZ Project ID: L57111

Nickel, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	2		1.9788	mg/L	99	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.024	0.024			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	.501		.5034	mg/L	100	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	.501	U	.4981	mg/L	99	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	.501	U	.5021	mg/L	100	85	115	1	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	.501	U	.4874	mg/L	97	85	115			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	.501	U	.4981	mg/L	99	85	115	2	20	
Nitrate/Nitrite as N	l, disso	olved	M353.2 -	Automated	Cadmiun	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490787													
WG490787ICV	ICV	01/28/20 22:03	WI191112-1	2.416		2.441	mg/L	101	90	110			
	ICB	01/28/20 22:05				U	mg/L		-0.02	0.02			
	LFB	01/28/20 22:10	WI191004-3	2		1.967	mg/L	98	90	110			
	AS	01/28/20 22:12	WI191004-3	2	U	1.93	mg/L	97	90	110			
L57111-01DUP	DUP	01/28/20 22:15			.14	.144	mg/L				3	20	RA
Nitrite as N, disso	lved		M353.2 -	Automated	Cadmiun	n Reduc	tion						
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490787													
WG490787ICV	ICV	01/28/20 22:03	WI191112-1	.609		.598	mg/L	98	90	110			
WG490787ICB	ICB	01/28/20 22:05				U	mg/L		-0.01	0.01			
WG490787LFB	LFB	01/28/20 22:10	WI191004-3	1		.973	mg/L	97	90	110			
L57100-01AS	AS	01/28/20 22:12	WI191004-3	1	U	.959	mg/L	96	90	110			
L57111-01DUP	DUP	01/28/20 22:15			U	U	mg/L				0	20	RA
pH (lab)			SM4500	H+ B									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490784													
WG490784LCSW1	LCSW	01/28/20 18:25	PCN59370	6		6	units	100	5.9	6.1			
WG490784LCSW4	LCSW	01/28/20 21:55	PCN59370	6		6.1	units	102	5.9	6.1			
WG490784LCSW7	LCSW	01/29/20 0:56	PCN59370	6		6.1	units	102	5.9	6.1			
WG490784LCSW10	LCSW	01/29/20 4:20	PCN59370	6		6.1	units	102	5.9	6.1			
L57111-06DUP	DUP	01/29/20 5:31			8.2	8.2	units				0	20	
L57120-02DUP	DUP	01/29/20 7:45			6.4	6.9	units				8	20	
WG490784LCSW13	LCSW	01/29/20 8:17	PCN59370	6		6.1	units	102	5.9	6.1			
Potassium, dissol	ved		M200.7 I	СР									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	20		19.91	mg/L	100	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.6	0.6			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	99.95798		99.65	mg/L	100	85	115			
	AS	01/31/20 21:04	II200123-3	99.95798	.6	97.56	mg/L	97	85	115			
L57111-04AS	AS	0 1/0 1/20 2 110 1											
	ASD	01/31/20 21:14	II200123-3	99.95798	.6	100.5	mg/L	100	85	115	3	20	
L57111-04ASD					.6 13.2		mg/L mg/L	100 102	85 85	115 115	3	20	

### ACZ Project ID: L57111

Residue, Filterable	(TDS)	) @180C	SM2540C	:									
ACZ ID T	Гуре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490854													
WG490854PBW P	PBW	01/29/20 15:00				U	mg/L		-40	40			
WG490854LCSW L	.CSW	01/29/20 15:02	PCN60404	963		1000	mg/L	104	80	120			
L57128-03DUP D	DUP	01/29/20 15:31			1650	1660	mg/L				1	10	
WG490939													
WG490939PBW P	PBW	01/30/20 13:30				U	mg/L		-40	40			
WG490939LCSW L	.CSW	01/30/20 13:32	PCN60404	963		998	mg/L	104	80	120			
L57127-04DUP D	OUP	01/30/20 14:04			326	322	mg/L				1	10	
Sodium, dissolved			M200.7 IC	P									
ACZ ID T	Гуре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV IC	CV	01/31/20 20:16	II200122-1	100		99.22	mg/L	99	95	105			
WG491014ICB IO	СВ	01/31/20 20:22				U	mg/L		-0.6	0.6			
WG491014LFB L	.FB	01/31/20 20:35	II200123-3	100.0046		99.1	mg/L	99	85	115			
L57111-04AS A	AS	01/31/20 21:04	II200123-3	100.0046	2.2	98.38	mg/L	96	85	115			
L57111-04ASD A	ASD	01/31/20 21:14	II200123-3	100.0046	2.2	101.5	mg/L	99	85	115	3	20	
L57121-04AS A	AS	01/31/20 21:53	II200123-3	100.0046	2630	2611	mg/L	-19	85	115			M3
L57121-04ASD A	ASD	01/31/20 21:57	II200123-3	100.0046	2630	2556	mg/L	-74	85	115	2	20	M3
Sulfate			D516-02/-	07/-11 - Tu	urbidimetr	ic							
ACZ ID T	Гуре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490958													
WG490958ICB IC	СВ	01/30/20 9:24				U	mg/L		-3	3			
	CV	01/30/20 9:24	WI200117-2	20		19.8	mg/L	99	90	110			
WG490958LFB L	.FB	01/30/20 16:40	WI190801-3	10.01		9.5	mg/L	95	90	110			
L57111-01AS A	AS	01/30/20 17:15	WI190801-3	10.01	3.2	14.4	mg/L	112	90	110			M1
L57111-02DUP D	DUP	01/30/20 17:15			28.4	29.6	mg/L				4	20	
Vanadium, dissolve	ed		M200.7 IC	P									
ACZ ID T	Гуре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV IC	CV	01/31/20 20:16	II200122-1	2		1.997	mg/L	100	95	105			
WG491014ICB IC	СВ	01/31/20 20:22				U	mg/L		-0.015	0.015			
WG491014LFB L	.FB	01/31/20 20:35	II200123-3	.4995		.5049	mg/L	101	85	115			
L57111-04AS A	AS	01/31/20 21:04	II200123-3	.4995	U	.4876	mg/L	98	85	115			
L57111-04ASD A	ASD	01/31/20 21:14	II200123-3	.4995	U	.5039	mg/L	101	85	115	3	20	
L57121-04AS A	AS	01/31/20 21:53	II200123-3	.4995	U	.4974	mg/L	100	85	115			
	ASD	01/31/20 21:57	II200123-3	.4995	U	.5028	mg/L	101	85	115	1	20	

# AGZ Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

### **CRG Mining, LLC**

### ACZ Project ID: L57111

Zinc, dissolved			M200.7 I	CP									
ACZ ID	Туре	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	2		1.96	mg/L	98	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.03	0.03			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	.50075		.514	mg/L	103	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	.50075	.02	.528	mg/L	101	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	.50075	.02	.537	mg/L	103	85	115	2	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	.50075	.1	.606	mg/L	101	85	115			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	.50075	.1	.618	mg/L	103	85	115	2	20	

# 4C **AGZ** Laboratories, Inc. 2773 Downhill Drive Steamboat Springs, CO 80487

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#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57111-01	NG491088	Arsenic, dissolved	M200.8 ICP-MS	DB	Sample required dilution due to low bias result.
			M200.8 ICP-MS	EA	Concentration estimated. Analytical result was less than the negative MDL due to matrix interferences.
	WG490966	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG490787	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG490958	Sulfate	D516-02/-07/-11 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L57111-02	NG490966	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG490787	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG490958	Sulfate	D516-02/-07/-11 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L57111-03	NG490966	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG490787	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG490958	Sulfate	D516-02/-07/-11 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

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#### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57111-04	NG490966	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG490787	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG490958	Sulfate	D516-02/-07/-11 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L57111-05	NG490966	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG490787	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG490958	Sulfate	D516-02/-07/-11 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L57111-06	NG490966	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG490787	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG490958	Sulfate	D516-02/-07/-11 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

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## Inorganic Extended Qualifier Report

### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57111-07	NG490784	Conductivity @25C	SM2510B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG490966	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG491014	Magnesium, dissolved	M200.7 ICP	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490787	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction		Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction		Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG491014	Sodium, dissolved	M200.7 ICP	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490958	Sulfate	D516-02/-07/-11 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490784	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
L57111-08	NG491265	Chloride	SM4500CI-E	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490784	Conductivity @25C	SM2510B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG490966	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG491014	Magnesium, dissolved	M200.7 ICP	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490787	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG491014	Sodium, dissolved	M200.7 ICP	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490958	Sulfate	D516-02/-07/-11 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490784	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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## Inorganic Extended Qualifier Report

### **CRG Mining, LLC**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57111-09	NG491265	Chloride	SM4500CI-E	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490784	Conductivity @25C	SM2510B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG490966	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG491014	Magnesium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490787	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
			M353.2 - Automated Cadmium Reduction	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG491014	Sodium, dissolved	M200.7 ICP	М3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490958	Sulfate	D516-02/-07/-11 - Turbidimetric	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG490784	Total Alkalinity	SM2320B - Titration	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).



ACZ Project ID: L57111

No certification qualifiers associated with this analysis

ACZ	Laboratories, Inc.
2773 Downhill Drive	Steamboat Springs, CO 80487 (800) 334-5493

CRG Mining, LLC	ACZ Proje	ect ID:		L57111
	Date Rec	eived: 0	1/28/202	20 10:07
	Receive	ed By:		
	Date Pr	inted:	1/	29/2020
Receipt Verification				
		YES	NO	NA
1) Is a foreign soil permit included for applicable samples?				X
2) Is the Chain of Custody form or other directive shipping papers present?		Х		
3) Does this project require special handling procedures such as CLP protocol?			Х	
4) Are any samples NRC licensable material?				Х
5) If samples are received past hold time, proceed with requested short hold time	e analyses?	Х		
6) Is the Chain of Custody form complete and accurate?		Х		
7) Were any changes made to the Chain of Custody form prior to ACZ receiving	the samples?		Х	
Samples/Containers				
		YES	NO	NA
8) Are all containers intact and with no leaks?		Х		
9) Are all labels on containers and are they intact and legible?		Х		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date	, and Time?	Х		
11) For preserved bottle types, was the pH checked and within limits? $ ^{1}$		Х		
12) Is there sufficient sample volume to perform all requested work?		Х		
13) Is the custody seal intact on all containers?				Х
14) Are samples that require zero headspace acceptable?				Х
15) Are all sample containers appropriate for analytical requirements?		Х		
16) Is there an Hg-1631 trip blank present?				Х
17) Is there a VOA trip blank present?				Х
18) Were all samples received within hold time?		Х		
		NA indica	tes Not Ap	oplicable

## Chain of Custody Related Remarks

**Client Contact Remarks** 

#### **Shipping Containers**

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
2395	1.7	<=6.0	14	Yes

#### Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

Client must contact an ACZ Project Manager if analysis should not proceed for samples received outside of their thermal preservation acceptance criteria.



Sample Receipt

CRG Mining, LLC

ACZ Project ID: L57111 Date Received: 01/28/2020 10:07 Received By: Date Printed: 1/29/2020

<sup>1</sup> The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na2S2O3 preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

Report to: Name: TAKE (A):ILK Company: CRG	@CRGMINING.Com	Ad Tel	lephone: G	UNISON 170-417 UFECUS	7- <u>331)</u> STOM16	21230	
Copy of Report to: Name: Auc んん Company: CRG Invoice to:		E-r	mail: مرک	UFECU	stom16		
Name: PAUL WOLF Company: CRG Invoice to:	-E	E-r Tei	mail: <u>محکی</u> lephone: <b>9</b>	UFECU.	stom16	DUTIME	
Company: CRG Invoice to:	E	E-r Tei	<u>ا (لـر) : mail</u> lephone: <b>Q</b>	U-ECU:	stom26		<i>.</i>
Invoice to:		Te	ieonone. <b>u</b>	111.111.1	11112		COP
		•		10-40-			
Name: JAKE WILKI					1.6.1	car)	
Company C R t = M	NSON	Ad	-		JUSCON	JON 1720	
Company: CRG M E-mail: TG ULKIN(S	NACRGMINING.COM	Те	lephone: C	<u>UNNISON</u>	<u>V (0 01</u> 7- 2511		
	olding time (HT), or if insufficient	-		<del>/ * ( · ·</del>		YES V	<u> </u>
	shall ACZ proceed with requested		-	4. d	full is surgical and d		
Are samples for SDWA Con	er instruction. If neither "YES" nor "NO" is indicated, pliance Monitoring?	ACZ WIII proce		NO	r H i is expired, and d	ata wili be qualified	<del></del>
If yes, please include state	forms. Results will be reported to	PQL for C	colorado.				
Sampler's Name: PAUL V			ite <u>COLORA</u>		de <u>8630</u>		
*Sampler's Signature:	tampering wi		in anyway, is consi	idered fraud and pur	ishable by State Law		enocation
PROJECT INFORMATIO				SES REQUESTE	D (attach list or u	se quote number)	
Quote #:	· · · · · · · · · · · · · · · · · · ·						
PO#:							
Reporting state for compliance Check box if samples include		č	3				
SAMPLE IDENTIFICAT			ō     #				
G1-01	1-27-20/9:44Ams		-		<u> </u>		
G1-02		50 5					
GL-03	1-27-20/10/1 AM 5	SW 5	-				
RM-DI		$\omega$ 5					
RM-02	1-27-20/11:02 AM 9	w S	5				
RM-03	12720/10:36AM S	$\omega \overline{5}$					
CM-DI		<u>sw (5</u>					_
CM-62		sw s					
01-03	<u>  12 (20 / 11 35 AM</u>	<u>50 E</u>	2				-
Matrix SW (Surface Water	) GW (Ground Water) WW (Waste Wat	ter) · DW/ (D	)rinking Water	) · St. (Sludge) ·	SO (Soil) : OL (	Oil) · Other (Spec	ifv)
REMARKS				) 02 (0.00g0)	00 (001) 02 (		<b>,</b> )

FRMAD050.06.14.14 L57111-2002061113



2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493

#### Account: CRG/CRG Mining, LLC

Bottle Order: BO44136

# Bottle Order Packing List

Bill to Account: Bill to ACZ Ship Date Requested: 01/20/2020 Request Placed at: 01/17/2020 08:52 Service Requested: UPS Ground

### Sampling supplies

PACK Qt	y ACZ ID	Туре	Description
1	COC	Chain of Custody	Chain of Custody, 1 for 10 samples.
2	SEAL	Custody Seal	Custody seals for cooler, two for each cooler.
1	RETURN	Return Address	Return Address label, one for each cooler.
45	5 LABELS	Sample Labels	ACZ supplied labels for sample containers

### **ACZ Coolers**

PACK	Qty 1	ACZ ID 2395	Size Large	Weight 13	UPS Tracking Number 1Z8101300326283586
Quote nu	umbe	r: BASEL	INE-SW	-QTRLY	2 Surface water samples quarterly, client is not field filtering
					FILT products in quote. A FILT sticker affixed to a sample container indicates the laboratory will perform filtration.
PACK	Qty	Туре	Size	Filter/Raw/Preserv	e Instructions
	1	GREEN PC	125 ML	Green pre-cleaned Filtered/Nitiric	Metals (dissolved including ICPMS) - This is a filtered sample. Completely fill container.
	1	PURPLE	250 ML	Raw/NaOH	Cyanide - Do not overfill as there is Sodium Hydroxide in the bottle.
	1	RAW	500 ML	Raw	Wet Chemistry (analyses that do not require preservative or filtration) - Completely fill container.
	1	RED	250 ML	Raw/Nitric	Metals (total except ICPMS) - Do not overfill as there is Nitric Acid in the bottle.
	1	WHITE	250 ML	Filtered	Wet chemistry (dissolved) - This is a filtered sample. Completely fill container.