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

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 Janicek has reviewed and approved this report.

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

Case Narrative

CRG Mining, LLC

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.

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: RM1

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	B		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	B		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

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: RM1

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	SM4500Cl-E	1	0.7	B	*	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	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	B		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	B	*	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									
pH		1	8.2	H	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.2		*	C	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	B	*	mg/L	1	5	07/06/18 13:20	wtc

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: RM2

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	B		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

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: RM2

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	SM4500Cl-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	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	B		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	B	*	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									
pH		1	8.0	H	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.2		*	C	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

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: RM3

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	B		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	B		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	B		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	B		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

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: RM3

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	SM4500Cl-E	1	0.6	B	*	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	B		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	B	*	mg/L	0.02	0.1	06/28/18 22:34	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	06/28/18 22:34	pjb
pH (lab)	SM4500H+ B									
pH		1	8.2	H	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.1		*	C	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	wtc

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: CM1

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: CM1

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.2	H	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.1		*	C	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

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: CM2

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	B		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	B		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

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: CM2

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	SM4500Cl-E	1	0.6	B	*	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	B		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	B	*	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									
pH		1	8.1	H	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.2		*	C	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

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: CM3

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID: Raymond Carter Water
Sample ID: CM3

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	SM4500Cl-E	1	0.7	B	*	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	B		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	B	*	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									
pH		1	8.2	H	*	units	0.1	0.1	07/06/18 0:00	enb
pH measured at		1	20.2		*	C	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	B	*	mg/L	1	5	07/06/18 13:22	wtc

Report Header 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 equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate 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 % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	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
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	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.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(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

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

CRG Mining, LLC

ACZ Project ID: ***L45240***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	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			
WG451044LCSW6	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			
L45242-01DUP	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, dissolved M200.7 ICP

ACZ ID	Type	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			
L45240-01AS	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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				U	mg/L		-0.00044	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, dissolved M200.7 ICP

ACZ ID	Type	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	

CRG Mining, LLC

ACZ Project ID: ***L45240***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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 SM4500Cl-E

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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			
WG451600LFB	LFB	07/12/18 20:00	MS180621-2	.05005		.05091	mg/L	102	85	115			
L45231-03AS	AS	07/12/18 20:30	MS180621-2	.05005	U	.04978	mg/L	99	70	130			
L45231-03ASD	ASD	07/12/18 20:31	MS180621-2	.05005	U	.05117	mg/L	102	70	130	3	20	

CRG Mining, LLC

ACZ Project ID: ***L45240***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	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 @25C SM2510B

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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	

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451200													
WG451200ICV	ICV	07/07/18 0:23	WI180628-3	.3		.2887	mg/L	96	90	110			
WG451200ICB	ICB	07/07/18 0:24				U	mg/L		-0.003	0.003			
WG450994LRB	LRB	07/07/18 0:26				U	mg/L		-0.003	0.003			
WG450994LFB	LFB	07/07/18 0:26	WI180622-4	.2		.21	mg/L	105	90	110			
L45231-01LFM	LFM	07/07/18 0:29	WI180622-4	.2	U	.2001	mg/L	100	90	110			
L45231-02DUP	DUP	07/07/18 0:31			U	U	mg/L				0	20	RA

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	2		1.934	mg/L	97	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-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			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	1.0018	U	1.008	mg/L	101	85	115	0	20	

CRG Mining, LLC

ACZ Project ID: ***L45240***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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	Type	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, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG451013													
WG451013ICV	ICV	07/05/18 17:15	II180703-2	2.004		1.978	mg/L	99	95	105			
WG451013ICB	ICB	07/05/18 17:21				U	mg/L		-0.024	0.024			
WG451013LFB	LFB	07/05/18 17:33	II180704-3	.5015		.5101	mg/L	102	85	115			
L45240-01AS	AS	07/05/18 17:48	II180704-3	.5015	U	.4989	mg/L	99	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	.5015	U	.5013	mg/L	100	85	115	0	20	

CRG Mining, LLC

ACZ Project ID: ***L45240***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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) SM4500H+ B

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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			
L45240-01AS	AS	07/05/18 17:48	II180704-3	99.72934	.5	101.9	mg/L	102	85	115			
L45240-01ASD	ASD	07/05/18 17:51	II180704-3	99.72934	.5	101.6	mg/L	101	85	115	0	20	

CRG Mining, LLC

ACZ Project ID: ***L45240***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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 - Turbidimetric

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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 ICP

ACZ ID	Type	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 Project ID: ***L45240***

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	SM4500Cl-E	Q6	Sample was received above recommended temperature.
			SM4500Cl-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	pH	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 Project ID: ***L45240***

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	SM4500Cl-E	Q6	Sample was received above recommended temperature.
			SM4500Cl-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	pH	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 Project ID: ***L45240***

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	SM4500Cl-E	Q6	Sample was received above recommended temperature.
			SM4500Cl-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	pH	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 Project ID: ***L45240***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L45240-04	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	SM4500Cl-E	Q6	Sample was received above recommended temperature.
			SM4500Cl-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	pH	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.
			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 Project ID: ***L45240***

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	SM4500Cl-E	Q6	Sample was received above recommended temperature.
			SM4500Cl-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	pH	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 Project ID: ***L45240***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L45240-06	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	SM4500Cl-E	Q6	Sample was received above recommended temperature.
			SM4500Cl-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	pH	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.

Certification Qualifiers

CRG Mining, LLC

ACZ Project ID: ***L45240***

No certification qualifiers associated with this analysis

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

Sample Receipt

CRG Mining, LLC
Raymond Carter Water

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

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?	X		
3) Does this project require special handling procedures such as CLP protocol?		X	
4) Are any samples NRC licensable material?			X
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	

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?		X	

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

NA indicates Not Applicable

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

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

Sample Receipt

CRG Mining, LLC
Raymond Carter Water

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

[1] 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 Laboratories, Inc.

2773 Downhill Drive Steamboat Springs, CO 80487 (800) 334-5493 L45240

CHAIN of CUSTODY

Report to:

Name: Jake Wilkinson	Address: 510 S. Wisconsin St
Company: CRG Mining LLC	Gunnison, CO 81230
E-mail: GoldLinks1987@Gmail.com	Telephone: 970-417-3311

Copy of Report to:

Name: Ben Morin	E-mail: BMorin@CRGmining.com
Company: CRG Mining	Telephone:

Invoice to:

Name: Jake Wilkinson	Address: 510 S. Wisconsin St
Company: CRG Mining LLC	Gunnison, CO 81230
E-mail: GoldLinks1987@Gmail.com	Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [X] NO [ ]

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes [ ] No [X]

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Jake Wilkinson **Sampler's Site Information** **State** CO **Zip code** 81237 **Time Zone** MS

***Sampler's Signature:** [signature]

"I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #: ACZ ID 2338

PO#: Raymond Canteen Water

Reporting state for compliance testing: CO

Check box if samples include NRC licensed material? [ ]

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	
RM1	11:15 AM	SW	5	Base Line - SW - Qtrly
RM 2	11:30 AM	SW	5	
RM 3	11:50 AM	SW	5	
CM 1	12:20 PM	SW	5	
CM 2	12:40 PM	SW	5	
CM 3	12:55 PM	SW	5	

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

There was not a Custody Seal w/ the cooler. Please note my initials on the tape seal. JW

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	6/27/18 2:10pm	[signature]	6.28.18 10:42

ACZ Laboratories, Inc.

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

Bottle Order
Bottle List

Account: CRG/CRG Mining, LLC
Bottle Order: BO40059

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

Sampling supplies

PACK	Qty	ACZ ID	Type	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	ACZ ID	Size	Weight	UPS Tracking Number
	1	2338	Large	15	1Z8101300317197731

Quote number: BASELINE-SW-QTRLY
2 Surface water samples quarterly, client is not field filtering

Sample Quantity: 10 6
ACZ is responsible for necessary sample filtering

PACK	Qty	Type	Size	Filter/Raw/Preserve	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: _____

mjj

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

Analytical Report

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 Janicek has reviewed and approved this report.

CRG Mining, LLC
Project ID: QTR32018
Sample ID: GL1

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: GL1

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	SM4500Cl-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	B	*	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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.5			C	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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: GL2

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	XQ	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	XQ	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	B		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	B		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	B		mg/L	0.005	0.03	10/01/18 21:13	aeh
Mercury, total	M245.1 CVAA	1		U	*	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	B		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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: GL2

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	SM4500Cl-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	B	*	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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.4			C	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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: GL3

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	B		mg/L	0.0002	0.001	10/01/18 22:15	bsu
Barium, dissolved	M200.7 ICP	1	0.014	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	10/01/18 21:16	aeh

CRG Mining, LLC
Project ID: QTR32018
Sample ID: GL3

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.3			C	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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: RM1

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	B		mg/L	0.0002	0.001	10/01/18 22:24	bsu
Barium, dissolved	M200.7 ICP	1	0.014	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	10/01/18 21:19	aeh

CRG Mining, LLC
Project ID: QTR32018
Sample ID: RM1

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.1			C	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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: RM2

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: RM2

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.1	H		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.1			C	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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: RM3

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	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	10/01/18 21:26	aeh

CRG Mining, LLC
Project ID: QTR32018
Sample ID: RM3

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	20.9			C	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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: CM1

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	B		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	B		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	B		mg/L	0.02	0.05	10/01/18 21:29	aeh
Lead, dissolved	M200.8 ICP-MS	1	0.0004	B		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	B		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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: CM1

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	SM4500Cl-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									
pH		1	8.2	H		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.0			C	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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: CM2

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	B		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	B		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	B		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	B		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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: CM2

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.1	H		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.4			C	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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: CM3

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	B		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	B		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	B		mg/L	0.02	0.05	10/01/18 21:42	aeh
Lead, dissolved	M200.8 ICP-MS	1	0.0004	B		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	B		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

CRG Mining, LLC
Project ID: QTR32018
Sample ID: CM3

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	SM4500Cl-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									
pH		1	8.2	H		units	0.1	0.1	09/26/18 0:00	mh
pH measured at		1	21.7			C	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

Report Header 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 equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate 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 % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	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
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	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.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(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

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

CRG Mining, LLC

ACZ Project ID: ***L47004***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457113													
WG457113PBW1	PBW	09/25/18 17:19				U	mg/L		-20	20			
WG457113LCSW3	LCSW	09/25/18 17:35	WC180913-7	820.0001		813	mg/L	99	90	110			
WG457113LCSW6	LCSW	09/25/18 20:33	WC180913-7	820.0001		821	mg/L	100	90	110			
WG457113PBW2	PBW	09/25/18 20:38				U	mg/L		-20	20			
WG457113LCSW9	LCSW	09/26/18 0:07	WC180913-7	820.0001		850	mg/L	104	90	110			
WG457113PBW3	PBW	09/26/18 0:13				U	mg/L		-20	20			
L47004-05DUP	DUP	09/26/18 2:19			45.1	45.6	mg/L				1	20	
WG457113LCSW12	LCSW	09/26/18 4:12	WC180913-7	820.0001		813	mg/L	99	90	110			
WG457113PBW4	PBW	09/26/18 4:18				U	mg/L		-20	20			
WG457113LCSW15	LCSW	09/26/18 7:38	WC180913-7	820.0001		833	mg/L	102	90	110			
WG457210													
WG457210PBW1	PBW	09/26/18 14:53				U	mg/L		-20	20			
WG457210LCSW3	LCSW	09/26/18 15:11	WC180913-7	820.0001		820	mg/L	100	90	110			
L47016-01DUP	DUP	09/26/18 16:40			25.9	25.8	mg/L				0	20	
WG457210LCSW6	LCSW	09/26/18 18:35	WC180913-7	820.0001		822	mg/L	100	90	110			
WG457210PBW2	PBW	09/26/18 18:40				2.3	mg/L		-20	20			
WG457210LCSW9	LCSW	09/26/18 21:38	WC180913-7	820.0001		844	mg/L	103	90	110			
WG457210PBW3	PBW	09/26/18 21:43				U	mg/L		-20	20			
WG457210LCSW12	LCSW	09/27/18 0:14	WC180913-7	820.0001		825	mg/L	101	90	110			
WG457210PBW4	PBW	09/27/18 0:20				U	mg/L		-20	20			
WG457210LCSW15	LCSW	09/27/18 3:34	WC180913-7	820.0001		832	mg/L	101	90	110			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG457544													
WG457544ICV	ICV	10/01/18 20:15	II180914-1	2		1.981	mg/L	99	95	105			
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 20:47	II180926-3	1.0019	U	.985	mg/L	98	85	115			
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	1.01	mg/L	101	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
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			
L47004-03ASD	ASD	10/01/18 22:23	MS180830-2	.01	U	.0076	mg/L	76	70	130	0	20	

CRG Mining, LLC

ACZ Project ID: ***L47004***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Arsenic, dissolved M200.8 ICP-MS

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	.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, dissolved M200.7 ICP

ACZ ID	Type	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, dissolved M200.8 ICP-MS

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	.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, dissolved M200.8 ICP-MS

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	.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, dissolved M200.7 ICP

ACZ ID	Type	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			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	67.92974	U	66.15	mg/L	97	85	115	0	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	67.92974	16.9	83.42	mg/L	98	85	115			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	67.92974	16.9	82.56	mg/L	97	85	115	1	20	

CRG Mining, LLC

ACZ Project ID: ***L47004***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG456966													
WG456966ICB	ICB	09/24/18 8:51				U	mg/L		-1.5	1.5			
WG456966ICV	ICV	09/24/18 8:51	WI180530-1	54.89		55.27	mg/L	101	90	110			
L47004-03DUP	DUP	09/24/18 10:10			U	U	mg/L				0	20	RA
L47004-04AS	AS	09/24/18 10:10	WI171229-5	30.03	U	33.7	mg/L	112	90	110			M1
WG456966LFB2	LFB	09/24/18 10:12	WI171229-5	30.03		32.42	mg/L	108	90	110			
WG456966LFB1	LFB	09/24/18 10:45	WI171229-5	30.03		32.75	mg/L	109	90	110			
L46907-01DUP	DUP	09/24/18 10:45			36.4	36.43	mg/L				0	20	
L46907-02AS	AS	09/24/18 10:45	WI171229-5	30.03	32.1	59.09	mg/L	90	90	110			

Chromium, dissolved M200.8 ICP-MS

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	.05		.05124	mg/L	102	90	110			
WG457555ICB	ICB	10/01/18 21:40				U	mg/L		-0.0011	0.0011			
WG457555LFB	LFB	10/01/18 21:42	MS180830-2	.05005		.0483	mg/L	97	85	115			
L47004-03AS	AS	10/01/18 22:17	MS180830-2	.05005	U	.0458	mg/L	92	70	130			
L47004-03ASD	ASD	10/01/18 22:23	MS180830-2	.05005	U	.04687	mg/L	94	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
WG457641													
WG457641ICV	ICV	10/02/18 19:05	II180914-1	2.002		1.92	mg/L	96	95	105			
WG457641ICB	ICB	10/02/18 19:12				U	mg/L		-0.03	0.03			
WG457641LFB	LFB	10/02/18 19:25	II180926-3	.501		.489	mg/L	98	85	115			
L46991-03AS	AS	10/02/18 19:38	II180926-3	.501	U	.489	mg/L	98	85	115			
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			
L47004-07ASD	ASD	10/02/18 20:26	II180926-3	.501	U	.483	mg/L	96	85	115	1	20	

Conductivity @25C SM2510B

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			
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				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			
WG457113LCSW14	LCSW	09/26/18 7:26	PCN56415	1410		1390	umhos/cm	99	90	110			

CRG Mining, LLC

ACZ Project ID: ***L47004***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Copper, dissolved M200.7 ICP

ACZ ID	Type	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 - Colorimetric w/ distillation

ACZ ID	Type	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 ICP

ACZ ID	Type	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 M200.8 ICP-MS

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	.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***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	.5	U	.4924	mg/L	98	85	115	3	20	

CRG Mining, LLC

ACZ Project ID: ***L47004***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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+ B

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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			
L46991-03ASD	ASD	10/01/18 20:50	II180926-3	100.7068	U	96.46	mg/L	96	85	115	0	20	
L47004-07AS	AS	10/01/18 21:32	II180926-3	100.7068	.6	99.91	mg/L	99	85	115			
L47004-07ASD	ASD	10/01/18 21:35	II180926-3	100.7068	.6	98.81	mg/L	98	85	115	1	20	

CRG Mining, LLC

ACZ Project ID: ***L47004***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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 - Turbidimetric

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Zinc, dissolved M200.7 ICP

ACZ ID	Type	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	

CRG Mining, LLC ACZ Project ID: ***L47004***

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	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500Cl-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.

CRG Mining, LLC

ACZ Project ID: ***L47004***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47004-03	WG456966	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500Cl-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	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500Cl-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.

CRG Mining, LLC ACZ Project ID: ***L47004***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47004-05	WG456966	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500Cl-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	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500Cl-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.

CRG Mining, LLC ACZ Project ID: ***L47004***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47004-07	WG456966	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500Cl-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.
L47004-08	WG456966	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500Cl-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).

CRG Mining, LLC

ACZ Project ID: ***L47004***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L47004-09	WG456966	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500Cl-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).

CRG Mining, LLC 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

CRG Mining, LLC
QTR32018

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

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?	X		
3) Does this project require special handling procedures such as CLP protocol?		X	
4) Are any samples NRC licensable material?			X
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	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]	X		
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

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

Sample Receipt

CRG Mining, LLC
QTR32018

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

[1] 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 Laboratories, Inc. L47004

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

CHAIN of CUSTODY

Report to:

Name: Jake Wilkinson	Address: 510 S. Wisconsin
Company: CRG Mining LLC	Gunnison, CO 81230
E-mail: GoldLinks1987@Gmail.com	Telephone: 970-417-3311

Copy of Report to:

Name:	E-mail:
Company:	Telephone:

Invoice to:

Name:	Address:
Company: CRG Mining LLC	
E-mail: GoldLinks1987@Gmail.com	Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ✓ NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes No ✓

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Jake Wilkinson **Sampler's Site Information** **State** CO **Zip code** 81230 **Time Zone** MS

***Sampler's Signature:** [signature]

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:

PO#: QRM3 2018

Reporting state for compliance testing: CO

Check box if samples include NRC licensed material?

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	
GL1	9/18/18 9:55am	SW	5	Baseline - SW - Quarterly
GL2	9/18/18 10:15am	SW	5	
GL3	9/18/18 10:35am	SW	5	
RM1	9/18/18 10:55am	SW	5	
RM2	9/18/18 11:20am	SW	5	
RM3	9/18/18 11:40am	SW	5	
CM1	9/18/18 12:00pm	SW	5	
CM2	9/18/18 12:15pm	SW	5	
CM3	9/18/18 12:35pm	SW	5	

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	9/18/18 2:00pm	JSC	9-19-18 11:42

L47004 Chain of Cust.pdf

ACZ Laboratories, Inc.

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

Bottle Order
Bottle List

Account: CRG/CRG Mining, LLC
Bottle Order: BO40683

Bill to Account: Bill to ACZ
Ship Date Requested: 09/07/2018
Request Placed at: 09/06/2018 15:31
Service Requested: UPS Ground

Sampling supplies

PACK	Qty	ACZ ID	Type	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.
	30	LABELS	Sample Labels	ACZ supplied labels for sample containers

ACZ Coolers

PACK	Qty	ACZ ID	Size	Weight	UPS Tracking Number
	1	5141	Large	13	1Z8101300317211287

Quote number: BASELINE-SW-QTRLY
Sample Quantity: 6

2 Surface water samples quarterly, client is not field filtering

ACZ is responsible for necessary sample filtering

PACK	Qty	Type	Size	Filter/Raw/Preserve	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: _____

mjj

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

Analytical Report

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 Janicek has reviewed and approved this report.

CRG Mining, LLC
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) & Acidification	M200.7/200.8/3005A								01/03/19 15:00	vg46386

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.03	B		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	B		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	B		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

CRG Mining, LLC
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*

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	SM4500Cl-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		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									
pH		1	8.3	H		units	0.1	0.1	12/28/18 0:00	emk
pH measured at		1	24.0			C	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	B	*	mg/L	1	5	12/28/18 14:19	wtc

CRG Mining, LLC
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	vg46386

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.04	B		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	B		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	B		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	B		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

CRG Mining, LLC
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*

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.3	H		units	0.1	0.1	12/28/18 0:00	emk
pH measured at		1	23.5			C	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

CRG Mining, LLC
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) & Acidification	M200.7/200.8/3005A								01/03/19 15:00	vg46386

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	B		mg/L	0.0002	0.001	01/04/19 16:23	mfm
Barium, dissolved	M200.7 ICP	1	0.013	B		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	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	01/07/19 20:47	dcm

CRG Mining, LLC
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*

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	SM4500Cl-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	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									
pH		1	8.3	H		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.4			C	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

CRG Mining, LLC
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) & Acidification	M200.7/200.8/3005A								01/03/19 15:00	vg46386

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.03	B		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	B		mg/L	0.0002	0.001	01/04/19 16:24	mfm
Barium, dissolved	M200.7 ICP	1	0.013	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	01/07/19 20:50	dcm

CRG Mining, LLC
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*

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	SM4500Cl-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	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	12/21/18 21:06	pjb
pH (lab)	SM4500H+ B									
pH		1	8.3	H		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.3			C	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

CRG Mining, LLC
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) & Acidification	M200.7/200.8/3005A								01/03/19 15:00	vg46386

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.03	B		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	B		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

CRG Mining, LLC
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*

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	SM4500Cl-E	1	0.8	B		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		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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.1			C	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

CRG Mining, LLC
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	vg46386

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.04	B		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	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	01/07/19 20:56	dcm

CRG Mining, LLC
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*

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	SM4500Cl-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									
pH		1	8.3	H		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.7			C	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

CRG Mining, LLC
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) & Acidification	M200.7/200.8/3005A								01/03/19 15:00	vg46386

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	B		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	B		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	B		mg/L	0.02	0.05	01/07/19 21:05	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0002	B		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	B		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	B		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	B		mg/L	0.01	0.05	01/07/19 21:05	dcm

CRG Mining, LLC
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*

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	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	SM4500Cl-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									
pH		1	8.3	H		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	22.4			C	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

CRG Mining, LLC
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) & Acidification	M200.7/200.8/3005A								01/03/19 15:00	vg46386

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	B		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	B		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	B		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

CRG Mining, LLC
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*

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.3			C	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

CRG Mining, LLC
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	vg46386

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	B		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	B		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	B		mg/L	0.02	0.05	01/07/19 21:17	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0001	B		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	B		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	B		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	B		mg/L	0.01	0.05	01/07/19 21:17	dcm

CRG Mining, LLC
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*

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.3	H		units	0.1	0.1	12/29/18 0:00	emk
pH measured at		1	23.6			C	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

Report Header 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 equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate 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 % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	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
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	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.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(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

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

CRG Mining, LLC

ACZ Project ID: ***L49006***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	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			
WG463612LCSW6	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			
L49006-05DUP	DUP	12/29/18 0:36			45.8	45.1	mg/L				2	20	
L49034-02DUP	DUP	12/29/18 2:09			U	U	mg/L				0	20	RA
WG463612LCSW12	LCSW	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	LCSW	12/29/18 6:14	WC181228-2	820.0001		821	mg/L	100	90	110			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	2		1.971	mg/L	99	95	105			
WG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.09	0.09			
WG464006LFB	LFB	01/07/19 19:52	II181219-2	1.0006		1.074	mg/L	107	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	1.0006	U	1.055	mg/L	105	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	1.0006	U	1.039	mg/L	104	85	115	2	20	

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463930													
WG463930ICV	ICV	01/04/19 15:52	MS181210-2	.02		.02057	mg/L	103	90	110			
WG463930ICB	ICB	01/04/19 15:54				U	mg/L		-0.00088	0.00088			
WG463930LFB	LFB	01/04/19 15:56	MS181208-2	.01		.00907	mg/L	91	85	115			
L48885-03AS	AS	01/04/19 16:03	MS181208-2	.01	U	.00904	mg/L	90	70	130			
L48885-03ASD	ASD	01/04/19 16:05	MS181208-2	.01	U	.00952	mg/L	95	70	130	5	20	
L49006-06AS	AS	01/04/19 16:30	MS181208-2	.01	U	.00861	mg/L	86	70	130			
L49006-06ASD	ASD	01/04/19 16:32	MS181208-2	.01	U	.00932	mg/L	93	70	130	8	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463930													
WG463930ICV	ICV	01/04/19 15:52	MS181210-2	.05		.04955	mg/L	99	90	110			
WG463930ICB	ICB	01/04/19 15:54				U	mg/L		-0.00044	0.00044			
WG463930LFB	LFB	01/04/19 15:56	MS181208-2	.05005		.04865	mg/L	97	85	115			
L48885-03AS	AS	01/04/19 16:03	MS181208-2	.05005	.0003	.04849	mg/L	96	70	130			
L48885-03ASD	ASD	01/04/19 16:05	MS181208-2	.05005	.0003	.04816	mg/L	96	70	130	1	20	
L49006-06AS	AS	01/04/19 16:30	MS181208-2	.05005	.0018	.05315	mg/L	103	70	130			
L49006-06ASD	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***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Barium, dissolved M200.7 ICP

ACZ ID	Type	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	II181219-2	.4995	.013	.5205	mg/L	102	85	115	3	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Chloride SM4500Cl-E

ACZ ID	Type	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			
L49000-04DUP	DUP	12/27/18 15:10			6.3	6.42	mg/L				2	20	
L49000-05AS	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			
L49039-01DUP	DUP	12/27/18 15:18			33.7	32.7	mg/L				3	20	

Chromium, dissolved M200.8 ICP-MS

ACZ ID	Type	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			
L48885-03AS	AS	01/04/19 16:03	MS181208-2	.05005	U	.04688	mg/L	94	70	130			
L48885-03ASD	ASD	01/04/19 16:05	MS181208-2	.05005	U	.0465	mg/L	93	70	130	1	20	
L49006-06AS	AS	01/04/19 16:30	MS181208-2	.05005	U	.04803	mg/L	96	70	130			
L49006-06ASD	ASD	01/04/19 16:32	MS181208-2	.05005	U	.04841	mg/L	97	70	130	1	20	

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	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			
WG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.03	0.03			
WG464006LFB	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			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	.501	U	.485	mg/L	97	85	115	3	20	

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG463612													
WG463612LCSW2	LCSW	12/28/18 15:12	PCN57191	1410		1460	umhos/cm	104	90	110			
WG463612LCSW5	LCSW	12/28/18 17:54	PCN57191	1410		1440	umhos/cm	102	90	110			
WG463612LCSW8	LCSW	12/28/18 21:28	PCN57191	1410		1430	umhos/cm	101	90	110			
L49006-05DUP	DUP	12/29/18 0:36			127	126	umhos/cm				1	20	
L49034-02DUP	DUP	12/29/18 2:09			1	1	umhos/cm				0	20	RA
WG463612LCSW11	LCSW	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, dissolved M200.7 ICP

ACZ ID	Type	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			
WG464006LFB	LFB	01/07/19 19:52	II181219-2	.5015		.496	mg/L	99	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	.5015	U	.504	mg/L	100	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	.5015	U	.493	mg/L	98	85	115	2	20	

CRG Mining, LLC

ACZ Project ID: ***L49006***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	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			
WG463605LRB	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
L49006-02LFM	LFM	12/28/18 20:56	WI181226-5	.2	U	.1991	mg/L	100	90	110			

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	2		1.946	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	.03	1.048	mg/L	102	85	115	2	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	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			
WG463930ICB	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			
L48885-03AS	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	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG464006													
WG464006ICV	ICV	01/07/19 19:34	II181211-1	100		96.02	mg/L	96	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	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, dissolved M200.7 ICP

ACZ ID	Type	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			
WG464006ICB	ICB	01/07/19 19:40				U	mg/L		-0.015	0.015			
WG464006LFB	LFB	01/07/19 19:52	II181219-2	.4995		.5051	mg/L	101	85	115			
L49006-07AS	AS	01/07/19 21:08	II181219-2	.4995	.006	.5072	mg/L	100	85	115			
L49006-07ASD	ASD	01/07/19 21:11	II181219-2	.4995	.006	.4976	mg/L	98	85	115	2	20	

CRG Mining, LLC

ACZ Project ID: ***L49006***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Mercury, total M245.1 CVAA

ACZ ID	Type	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 M200.7 ICP

ACZ ID	Type	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, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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				U	mg/L		-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) SM4500H+ B

ACZ ID	Type	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			
WG463612LCSW13	LCSW	12/29/18 5:59	PCN56769	6		6	units	100	5.9	6.1			

CRG Mining, LLC

ACZ Project ID: ***L49006***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Potassium, dissolved M200.7 ICP

ACZ ID	Type	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, Filterable (TDS) @180C SM2540C

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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 - Turbidimetric

ACZ ID	Type	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***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Vanadium, dissolved M200.7 ICP

ACZ ID	Type	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 ICP

ACZ ID	Type	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	

CRG Mining, LLC ACZ Project ID: ***L49006***

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.

CRG Mining, LLC ACZ Project ID: ***L49006***

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.

CRG Mining, LLC ACZ Project ID: ***L49006***

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.

CRG Mining, LLC ACZ Project ID: ***L49006***

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.

CRG Mining, LLC ACZ Project ID: ***L49006***

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	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.

Certification Qualifiers

CRG Mining, LLC

ACZ Project ID: ***L49006***

No certification qualifiers associated with this analysis

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

Sample Receipt

CRG Mining, LLC

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

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?	X		
3) Does this project require special handling procedures such as CLP protocol?		X	
4) Are any samples NRC licensable material?			X
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		

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

NA indicates Not Applicable

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.

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

Sample Receipt

CRG Mining, LLC

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

[1] 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 Laboratories, Inc. L49006

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

CHAIN of CUSTODY

Report to:

Name: CRG MINING LLC	Address: 502 South Wisconsin St
Company: Jake Wilkinson	Gunnison, CO 81230
E-mail: goldlinks1987@gmail.com	Telephone: 970-417-3311

Copy of Report to:

Name:	E-mail:
Company:	Telephone:

Invoice to:

Name: Jake Wilkinson	Address: 502 South Wisconsin St
Company: CRG Mining LLC	Gunnison, CO 81230
E-mail: goldlinks@gmail.com	Telephone: 970-417-3311

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ✓ NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes No ✓

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Jake Wilkinson **Sampler's Site Information** **State** CO **Zip code** 81230 **Time Zone** MS

***Sampler's Signature:** [signature]

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #: B041231

PO#:

Reporting state for compliance testing:

Check box if samples include NRC licensed material?

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers								
GL 1	12/20/18 10:55AM	SW	5								
GL 2	12/20/18 11:00AM	SW	5								
GL 3	12/20/18 11:15AM	SW	5								
RM 1	12/20/18 11:21AM	SW	5								
RM 2	12/20/18 11:45AM	SW	5								
RM 3	12/20/18 11:50AM	SW	5								
CM 1	12/20/18 12:05PM	SW	5								
CM 2	12/20/18 12:12PM	SW	5								
CM 3	12/20/18 12:32PM	SW	5								

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	12/20/18 12:40pm	[signature]	12/21/18 12:17

L49006 Chain of Custod

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

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 Janicek has reviewed and approved this report.

CRG Mining, LLC
Project ID: Q4 GL, R, C
Sample ID: GL 1

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
Aluminum, dissolved	M200.7 ICP	1		U		mg/L	0.03	0.2	03/22/19 20:37	dcm
Antimony, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0004	0.002	03/25/19 17:46	mfm
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	03/22/19 14:07	mfm
Barium, dissolved	M200.7 ICP	1	0.014	B		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	B		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

CRG Mining, LLC
Project ID: Q4 GL, R, C
Sample ID: GL 1

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	SM4500Cl-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									
pH		1	8.3	H		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	23.7			C	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	B	*	mg/L	1	5	03/25/19 14:22	ttg/mss

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

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	B		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	B		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	B		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	B		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

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

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	SM4500Cl-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	0.5		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	B		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	B	*	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									
pH		1	8.3	H		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	24.0			C	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

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

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	B		mg/L	0.0002	0.001	03/22/19 14:10	mfm
Barium, dissolved	M200.7 ICP	1	0.014	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	03/22/19 20:44	dcm

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

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	SM4500Cl-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									
pH		1	8.2	H		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	22.2			C	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

CRG Mining, LLC
Project ID: Q4 GL, R, C
Sample ID: RM 1

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	B		mg/L	0.0002	0.001	03/22/19 14:12	mfm
Barium, dissolved	M200.7 ICP	1	0.014	B		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	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	03/22/19 21:00	dcm

CRG Mining, LLC
Project ID: Q4 GL, R, C
Sample ID: RM 1

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	SM4500Cl-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									
pH		1	8.3	H		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	22.1			C	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	B		mg/L	1	5	03/25/19 14:22	ttg/mss

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

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) & 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 21:03	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	B		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	B		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	B		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

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

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.1	H		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	22.1			C	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

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

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	B		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	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	03/22/19 21:07	dcm

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

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	SM4500Cl-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									
pH		1	8.3	H		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	22.1			C	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

CRG Mining, LLC
Project ID: Q4 GL, R, C
Sample ID: CM 1

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	B		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	B		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	B		mg/L	0.02	0.05	03/22/19 21:10	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0003	B		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	B		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	B		mg/L	0.01	0.05	03/22/19 21:10	dcm

CRG Mining, LLC
Project ID: Q4 GL, R, C
Sample ID: CM 1

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	SM4500Cl-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		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									
pH		1	8.3	H		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	22.3			C	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

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

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	B		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	B		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	B		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	B		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

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

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	SM4500Cl-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		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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	23.4			C	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

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

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	B		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	B		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	B		mg/L	0.02	0.05	03/22/19 21:23	dcm
Lead, dissolved	M200.8 ICP-MS	1	0.0003	B		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	B		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	B		mg/L	0.01	0.05	03/22/19 21:23	dcm

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

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	SM4500Cl-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									
pH		1	8.3	H		units	0.1	0.1	03/16/19 0:00	enb
pH measured at		1	23.5			C	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

Report Header 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 equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate 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 % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	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
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	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.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(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

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

CRG Mining, LLC

ACZ Project ID: ***L50524***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	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, dissolved M200.7 ICP

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		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, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Barium, dissolved M200.7 ICP

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		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, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.7 ICP

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	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	
L50524-07AS	AS	03/22/19 21:13	II190312-3	68.01315	16.4	84.54	mg/L	100	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	68.01315	16.4	83.39	mg/L	98	85	115	1	20	

CRG Mining, LLC

ACZ Project ID: ***L50524***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468418													
WG468418ICB	ICB	03/20/19 12:15				U	mg/L		-1.5	1.5			
WG468418ICV	ICV	03/20/19 12:15	WI180530-1	54.89		54.48	mg/L	99	90	110			
WG468418LFB1	LFB	03/20/19 14:33	WI190111-6	30.03		32.15	mg/L	107	90	110			
WG468418LFB2	LFB	03/20/19 14:37	WI190111-6	30.03		32.28	mg/L	107	90	110			
L50520-07DUP	DUP	03/20/19 15:11			751	734.8	mg/L				2	20	
L50520-08AS	AS	03/20/19 15:12	10XCL	30	221	247.2	mg/L	87	90	110			M3
WG468494													
WG468494ICB	ICB	03/21/19 9:38				U	mg/L		-1.5	1.5			
WG468494ICV	ICV	03/21/19 9:38	WI180530-1	54.89		52.62	mg/L	96	90	110			
WG468494LFB1	LFB	03/21/19 11:32	WI190111-6	30.03		30.74	mg/L	102	90	110			
L50323-02AS	AS	03/21/19 11:32	WI190111-6	30.03	22	48.92	mg/L	90	90	110			
L50324-02DUP	DUP	03/21/19 11:32			41.2	42.01	mg/L				2	20	
WG468494LFB2	LFB	03/21/19 11:36	WI190111-6	30.03		30.39	mg/L	101	90	110			
WG468505													
WG468505ICB	ICB	03/21/19 9:38				U	mg/L		-1.5	1.5			
WG468505ICV	ICV	03/21/19 9:38	WI180530-1	54.89		52.62	mg/L	96	90	110			
WG468505LFB1	LFB	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			
L50524-06DUP	DUP	03/21/19 12:59			U	U	mg/L				0	20	RA
WG468505LFB2	LFB	03/21/19 13:03	WI190111-6	30.03		30.41	mg/L	101	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													
WG468611ICV	ICV	03/22/19 14:02	MS190225-2	.05		.05219	mg/L	104	90	110			
WG468611ICB	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 M200.7 ICP

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			
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			
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	
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	

CRG Mining, LLC

ACZ Project ID: ***L50524***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Conductivity @25C SM2510B

ACZ ID	Type	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, dissolved M200.7 ICP

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		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 - Colorimetric w/ distillation

ACZ ID	Type	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 ICP

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		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***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.7 ICP

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	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, dissolved M200.7 ICP

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		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	

Mercury, total M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468361													
WG468361ICV	ICV	03/21/19 12:54	HG190214-3	.004995		.00505	mg/L	101	95	105			
WG468361ICB	ICB	03/21/19 12:54				U	mg/L		-0.0002	0.0002			
WG468361LRB	LRB	03/21/19 12:56				U	mg/L		-0.00044	0.00044			
WG468361LFB	LFB	03/21/19 12:57	HG190315-3	.002002		.00186	mg/L	93	85	115			
L50524-05LFM	LFM	03/21/19 13:31	HG190315-3	.002002	U	.00194	mg/L	97	85	115			
L50524-05LFMD	LFMD	03/21/19 13:32	HG190315-3	.002002	U	.00189	mg/L	94	85	115	3	20	
L50533-04LFM	LFM	03/21/19 13:45	HG190315-3	.002002	U	.00203	mg/L	101	85	115			
L50533-04LFMD	LFMD	03/21/19 13:46	HG190315-3	.002002	U	.00216	mg/L	108	85	115	6	20	

CRG Mining, LLC

ACZ Project ID: ***L50524***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Nickel, dissolved M200.7 ICP

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	2.004		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, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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			
L50524-04DUP	DUP	03/15/19 21:53			U	U	mg/L				0	20	RA

pH (lab) SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468112													
WG468112LCSW1	LCSW	03/15/19 17:12	PCN56769	6		6	units	100	5.9	6.1			
WG468112LCSW4	LCSW	03/15/19 20:59	PCN56769	6		6	units	100	5.9	6.1			
WG468112LCSW7	LCSW	03/16/19 0:45	PCN56769	6		6	units	100	5.9	6.1			
L50524-02DUP	DUP	03/16/19 4:58			8.3	8.3	units				0	20	
WG468112LCSW10	LCSW	03/16/19 5:02	PCN56769	6		6	units	100	5.9	6.1			
L50545-01DUP	DUP	03/16/19 10:44			8.3	8.3	units				0	20	
WG468112LCSW13	LCSW	03/16/19 10:48	PCN56769	6		6	units	100	5.9	6.1			

CRG Mining, LLC

ACZ Project ID: ***L50524***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Potassium, dissolved M200.7 ICP

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	20		19.63	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	101.8741		100.8	mg/L	99	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	101.8741	.5	108.6	mg/L	106	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	101.8741	.5	101.3	mg/L	99	85	115	7	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	101.8741	.6	102.7	mg/L	100	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	101.8741	.6	100.8	mg/L	98	85	115	2	20	

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468325													
WG468325PBW	PBW	03/19/19 15:05				U	mg/L		-20	20			
WG468325LCSW	LCSW	03/19/19 15:07	PCN57543	260		266	mg/L	102	80	120			
L50524-02DUP	DUP	03/19/19 15:39			130	134	mg/L				3	10	
L50538-03DUP	DUP	03/19/19 16:02			4420	4360	mg/L				1	10	
WG468335													
WG468335PBW	PBW	03/19/19 16:10				16	mg/L		-20	20			
WG468335LCSW	LCSW	03/19/19 16:12	PCN57543	260		282	mg/L	108	80	120			
L50524-08DUP	DUP	03/19/19 16:41			106	100	mg/L				6	10	

Sodium, dissolved M200.7 ICP

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	100		97.78	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	100.2674		100.2	mg/L	100	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	100.2674	2.1	110	mg/L	108	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	100.2674	2.1	102.5	mg/L	100	85	115	7	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	100.2674	2.2	104.3	mg/L	102	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	100.2674	2.2	102.2	mg/L	100	85	115	2	20	

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG468717													
WG468717ICB	ICB	03/25/19 10:05				U	mg/L		-3	3			
WG468717ICV	ICV	03/25/19 10:05	WI190322-1	20		19.5	mg/L	98	90	110			
WG468717LFB	LFB	03/25/19 14:20	WI181024-4	10.03		9.9	mg/L	99	90	110			
L50524-05DUP	DUP	03/25/19 14:22			17.2	16.8	mg/L				2	20	
L50524-06AS	AS	03/25/19 14:22	WI181024-4	10.03	6.1	16.3	mg/L	102	90	110			
L50520-03AS	AS	03/25/19 14:38	SO4TURB	50	3720	3820	mg/L	200	90	110			M3
L50520-02DUP	DUP	03/25/19 14:54			420	418	mg/L				0	20	

CRG Mining, LLC

ACZ Project ID: ***L50524***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Vanadium, dissolved M200.7 ICP

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		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 ICP

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		1.909	mg/L	95	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	.4942		.518	mg/L	105	85	115			
L50524-03AS	AS	03/22/19 20:47	II190312-3	.4942	.01	.567	mg/L	113	85	115			
L50524-03ASD	ASD	03/22/19 20:57	II190312-3	.4942	.01	.529	mg/L	105	85	115	7	20	
L50524-07AS	AS	03/22/19 21:13	II190312-3	.4942	.02	.541	mg/L	105	85	115			
L50524-07ASD	ASD	03/22/19 21:16	II190312-3	.4942	.02	.532	mg/L	104	85	115	2	20	

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	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.
L50524-02	WG468418	Chloride	SM4500Cl-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.

CRG Mining, LLC

ACZ Project ID: ***L50524***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L50524-03	WG468418	Chloride	SM4500Cl-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	SM4500Cl-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.

CRG Mining, LLC

ACZ Project ID: ***L50524***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L50524-05	WG468505	Chloride	SM4500Cl-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	SM4500Cl-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.

CRG Mining, LLC

ACZ Project ID: ***L50524***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L50524-07	WG468505	Chloride	SM4500Cl-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	SM4500Cl-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.

CRG Mining, LLC

ACZ Project ID: ***L50524***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L50524-09	WG468505	Chloride	SM4500Cl-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.

CRG Mining, LLC ACZ Project ID: ***L50524***

No certification qualifiers associated with this analysis

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

Sample Receipt

CRG Mining, LLC
Q4 GL, R, C

ACZ Project ID: L50524
Date Received: 03/15/2019 10:57
Received By: mjj
Date Printed: 3/15/2019

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?	X		
3) Does this project require special handling procedures such as CLP protocol?		X	
4) Are any samples NRC licensable material?			X
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	

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

NA indicates Not Applicable

Chain of Custody Related Remarks

Client 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).

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

Sample Receipt

CRG Mining, LLC
Q4 GL, R, C

ACZ Project ID:	L50524
Date Received:	03/15/2019 10:57
Received By:	mjj
Date Printed:	3/15/2019

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

[1] 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 Laboratories, Inc. L 50524

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

CHAIN of CUSTODY

Report to:

Name: Jake Wilkinson	Address: 510 South Wisconsin St
Company: CRG Mining	Gunnison, CO 81230
E-mail: GoldLinks1987@Gmail.com	Telephone: 970-417-3311

Copy of Report to:

Name:	E-mail:
Company:	Telephone:

Invoice to:

Name: Jake Wilkinsin	Address: 510 South Wisconsin St
Company: CRG Mining	Gunnison, CO 81230
E-mail: GoldLinks1987@Gmail.com	Telephone: 970-417-3311

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [X] NO [ ]

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes [ ] No [X]

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: Jake Wilkinson **Sampler's Site Information** **State** CO **Zip code** 81230 **Time Zone** M.S.

***Sampler's Signature:** [signature]

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #: Bottle Order# B041609

PO#: Q4 GL, RM, C

Reporting state for compliance testing:

Check box if samples include NRC licensed material?

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers
GL 1 3/14/19	11:05	SW	5
GL 2 entered	10:45	SW	5
GL 3 per container	11:30	SW	5
RM 1 JJ 3/15/19	ON Bottle Order	SW	5
RM 2	12:20	SW	5
RM 3	12:45	SW	5
CM 1	13:05	SW	5
CM 2	13:20	SW	5
CM 3	13:45	SW	5
	entered per [illegible] JJ 3/15/19		

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	1:45 P.m. 3-14-19	[signature]	3/15/19 10:57

L50524 Chain of Custod

ACZ 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	Type	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

PACK	Qty	ACZ ID	Size	Weight	UPS Tracking Number
	1	5306	Large	13	1Z8101300317233601

Quote number: BASELINE-SW-QTRLY
Sample Quantity: 9

2 Surface water samples quarterly, client is not field filtering

ACZ is responsible for necessary sample filtering

PACK	Qty	Type	Size	Filter/Raw/Preserve	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: _____

mjj

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

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

CRG Mining, LLC
Project ID:
Sample ID: GL 1

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) & 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 17:17	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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: GL 1

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	SM4500Cl-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	B		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	B	*	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	H		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

CRG Mining, LLC
Project ID:
Sample ID: GL 2

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: GL 2

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	SM4500Cl-E	1	1.8	B		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	H		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

CRG Mining, LLC
Project ID:
Sample ID: GL 3

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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: GL 3

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	SM4500Cl-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	B		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	B	*	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	H		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

CRG Mining, LLC
Project ID:
Sample ID: RM 1

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: RM 1

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	SM4500Cl-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	B		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	B	*	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	H		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

CRG Mining, LLC
Project ID:
Sample ID: RM 2

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	B		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

CRG Mining, LLC
Project ID:
Sample ID: RM 2

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	SM4500Cl-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	B		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	B	*	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	H		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

CRG Mining, LLC
Project ID:
Sample ID: RM 3

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: RM 3

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	SM4500Cl-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	B		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	B	*	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	H		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

CRG Mining, LLC
Project ID:
Sample ID: CM 1

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	B		mg/L	0.0002	0.001	07/22/19 17:11	bsu
Barium, dissolved	M200.7 ICP	1	0.008	B		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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: CM 1

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	SM4500Cl-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	B		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	B	*	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	H		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

CRG Mining, LLC
Project ID:
Sample ID: CM 2

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	B		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	B		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	B		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	B		mg/L	0.01	0.05	07/24/19 13:01	aeh

CRG Mining, LLC
Project ID:
Sample ID: CM 2

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	SM4500Cl-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	B		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	B	*	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	H		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

CRG Mining, LLC
Project ID:
Sample ID: CM 3

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	B		mg/L	0.0002	0.001	07/22/19 17:15	bsu
Barium, dissolved	M200.7 ICP	1	0.008	B		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	B		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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: CM 3

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	SM4500Cl-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	H	*	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

Report Header 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 equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate 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 % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	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
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	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.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(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

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(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:
https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

CRG Mining, LLC

ACZ Project ID: ***L53166***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476948													
WG476948PBW1	PBW	07/15/19 18:42				23.3	mg/L		-20	20			B4 B7
WG476948LCSW3	LCSW	07/15/19 18:59	WC190709-1	820.0001		789	mg/L	96	90	110			
L53166-08DUP	DUP	07/15/19 22:13			59.9	60	mg/L				0	20	
WG476948LCSW6	LCSW	07/15/19 22:32	WC190709-1	820.0001		825	mg/L	101	90	110			
WG476948PBW2	PBW	07/15/19 22:39				4	mg/L		-20	20			
L53190-01DUP	DUP	07/16/19 3:03			158	147	mg/L				7	20	
WG476948LCSW9	LCSW	07/16/19 3:21	WC190709-1	820.0001		831	mg/L	101	90	110			
WG476948PBW3	PBW	07/16/19 3:27				2.7	mg/L		-20	20			
WG476948LCSW12	LCSW	07/16/19 7:06	WC190709-1	820.0001		825	mg/L	101	90	110			
WG476948PBW4	PBW	07/16/19 7:12				3.2	mg/L		-20	20			
WG476948LCSW15	LCSW	07/16/19 11:00	WC190709-1	820.0001		812	mg/L	99	90	110			

Aluminum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	2		1.998	mg/L	100	95	105			
WG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.15	0.15			
WG477627LFB	LFB	07/23/19 16:28	II190722-2	1.0006		1.022	mg/L	102	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	1.0006	U	1.044	mg/L	104	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	1.0006	U	1.031	mg/L	103	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
WG477508													
WG477508ICV	ICV	07/22/19 16:47	MS190630-2	.02		.01885	mg/L	94	90	110			
WG477508ICB	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			
L53166-03AS	AS	07/22/19 16:58	MS190719-2	.01	U	.00872	mg/L	87	70	130			
L53166-03ASD	ASD	07/22/19 17:00	MS190719-2	.01	U	.00877	mg/L	88	70	130	1	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477508													
WG477508ICV	ICV	07/22/19 16:47	MS190630-2	.05		.05026	mg/L	101	90	110			
WG477508ICB	ICB	07/22/19 16:49				U	mg/L		-0.00044	0.00044			
WG477508LFB	LFB	07/22/19 16:51	MS190719-2	.05005		.04448	mg/L	89	85	115			
L53166-03AS	AS	07/22/19 16:58	MS190719-2	.05005	U	.04879	mg/L	97	70	130			
L53166-03ASD	ASD	07/22/19 17:00	MS190719-2	.05005	U	.04848	mg/L	97	70	130	1	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	2		1.9528	mg/L	98	95	105			
WG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.021	0.021			
WG477627LFB	LFB	07/23/19 16:28	II190722-2	.4995		.4786	mg/L	96	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	.4995	.008	.4913	mg/L	97	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	.4995	.008	.4913	mg/L	97	85	115	0	20	

CRG Mining, LLC

ACZ Project ID: ***L53166***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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 SM4500Cl-E

ACZ ID	Type	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			54.1	53.57	mg/L				1	20	

Chromium, dissolved M200.8 ICP-MS

ACZ ID	Type	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				U	mg/L		-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	.04801	mg/L	96	70	130			
L53166-03ASD	ASD	07/22/19 17:00	MS190719-2	.05005	U	.04837	mg/L	97	70	130	1	20	

CRG Mining, LLC

ACZ Project ID: ***L53166***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	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 @25C SM2510B

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	2		1.929	mg/L	96	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	.5005		.484	mg/L	97	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	.5005	U	.489	mg/L	98	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	.5005	U	.49	mg/L	98	85	115	0	20	

CRG Mining, LLC

ACZ Project ID: ***L53166***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	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			
WG477047ICB	ICB	07/16/19 15:00				U	mg/L		-0.003	0.003			
WG476881LRB	LRB	07/16/19 15:00				U	mg/L		-0.003	0.003			
WG476881LFB	LFB	07/16/19 15:01	WI190715-2	.2		.2048	mg/L	102	90	110			
L53063-07DUP	DUP	07/16/19 15:15			U	U	mg/L				0	20	RA
L53063-08LFM	LFM	07/16/19 15:16	WI190715-2	.2	.009	.2081	mg/L	100	90	110			
WG477060													
WG477060ICV	ICV	07/16/19 15:46	WI190715-5	.3		.2869	mg/L	96	90	110			
WG477060ICB	ICB	07/16/19 15:47				U	mg/L		-0.003	0.003			
WG477065													
WG476977LRB	LRB	07/16/19 16:31				U	mg/L		-0.003	0.003			
WG476977LFB	LFB	07/16/19 16:31	WI190715-2	.2		.1985	mg/L	99	90	110			
L53166-02DUP	DUP	07/16/19 16:33			U	U	mg/L				0	20	RA
L53166-03LFM	LFM	07/16/19 16:35	WI190715-2	.2	U	.1937	mg/L	97	90	110			

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	2		1.918	mg/L	96	95	105			
WG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.09	0.09			
WG477627LFB	LFB	07/23/19 16:28	II190722-2	1.0018		1.009	mg/L	101	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	1.0018	U	.983	mg/L	98	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	1.0018	U	.982	mg/L	98	85	115	0	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477508													
WG477508ICV	ICV	07/22/19 16:47	MS190630-2	.05		.05102	mg/L	102	90	110			
WG477508ICB	ICB	07/22/19 16:49				U	mg/L		-0.00022	0.00022			
WG477508LFB	LFB	07/22/19 16:51	MS190719-2	.05005		.04481	mg/L	90	85	115			
L53166-03AS	AS	07/22/19 16:58	MS190719-2	.05005	U	.04996	mg/L	100	70	130			
L53166-03ASD	ASD	07/22/19 17:00	MS190719-2	.05005	U	.05067	mg/L	101	70	130	1	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	100		96.4	mg/L	96	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	50.31093		48.84	mg/L	97	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	50.31093	4.2	54.19	mg/L	99	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	50.31093	4.2	53.96	mg/L	99	85	115	0	20	

CRG Mining, LLC

ACZ Project ID: ***L53166***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG477627													
WG477627ICV	ICV	07/23/19 16:09	II190715-2	2		1.91	mg/L	96	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	.5015		.485	mg/L	97	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	.5015	U	.493	mg/L	98	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	.5015	U	.493	mg/L	98	85	115	0	20	

Mercury, total M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476995													
WG476995ICV	ICV	07/17/19 10:27	HG190716-3	.004995		.00502	mg/L	101	95	105			
WG476995ICB	ICB	07/17/19 10:28				U	mg/L		-0.0002	0.0002			
WG476995LRB	LRB	07/17/19 10:30				U	mg/L		-0.00044	0.00044			
WG476995LFB	LFB	07/17/19 10:31	HG190716-6	.002002		.00195	mg/L	97	85	115			
L50245-18LFM	LFM	07/17/19 10:32	HG190716-6	.002002	U	.00194	mg/L	97	85	115			
L50245-18LFMD	LFMD	07/17/19 10:33	HG190716-6	.002002	U	.0019	mg/L	95	85	115	2	20	
L53166-03LFM	LFM	07/17/19 10:46	HG190716-6	.002002	U	.00189	mg/L	94	85	115			
L53166-03LFMD	LFMD	07/17/19 10:47	HG190716-6	.002002	U	.00187	mg/L	93	85	115	1	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	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		1.9532	mg/L	97	95	105			
WG477627ICB	ICB	07/23/19 16:15				U	mg/L		-0.024	0.024			
WG477627LFB	LFB	07/23/19 16:28	II190722-2	.5		.496	mg/L	99	85	115			
L53166-07AS	AS	07/23/19 17:44	II190722-2	.5	U	.4871	mg/L	97	85	115			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	.5	U	.4832	mg/L	97	85	115	1	20	

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476742													
WG476742ICV	ICV	07/12/19 1:47	WI190508-3	2.416		2.408	mg/L	100	90	110			
WG476742ICB	ICB	07/12/19 1:48				U	mg/L		-0.02	0.02			
WG476742LFB	LFB	07/12/19 1:52	WI190405-9	2		2.028	mg/L	101	90	110			
L53166-01DUP	DUP	07/12/19 2:18			.03	.027	mg/L				11	20	RA
L53160-01AS	AS	07/12/19 2:35	WI190405-9	20	10.1	30.23	mg/L	101	90	110			

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG476742													
WG476742ICV	ICV	07/12/19 1:47	WI190508-3	.609		.562	mg/L	92	90	110			
WG476742ICB	ICB	07/12/19 1:48				U	mg/L		-0.01	0.01			
WG476742LFB	LFB	07/12/19 1:52	WI190405-9	1		1.004	mg/L	100	90	110			
L53160-01AS	AS	07/12/19 2:14	WI190405-9	1	.97	1.949	mg/L	98	90	110			
L53166-01DUP	DUP	07/12/19 2:18			U	U	mg/L				0	20	RA

CRG Mining, LLC

ACZ Project ID: ***L53166***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

pH (lab) SM4500H+ B

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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, Filterable (TDS) @180C SM2540C

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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			
L53166-07ASD	ASD	07/23/19 17:47	II190722-2	100.0471	1	105.1	mg/L	104	85	115	0	20	

CRG Mining, LLC

ACZ Project ID: ***L53166***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Sulfate D516-02/-07 - Turbidimetric

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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 ICP

ACZ ID	Type	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	

CRG Mining, LLC ACZ Project ID: ***L53166***

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.

CRG Mining, LLC ACZ Project ID: ***L53166***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L53166-04	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.
L53166-05	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.

CRG Mining, LLC ACZ Project ID: ***L53166***

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.

CRG Mining, LLC

ACZ Project ID: ***L53166***

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.
		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	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.

Certification Qualifiers

CRG Mining, LLC

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

CRG Mining, LLC

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

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?	X		
3) Does this project require special handling procedures such as CLP protocol?		X	
4) Are any samples NRC licensable material?			X
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	

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?		X	

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

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

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

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

Sample Receipt

CRG Mining, LLC

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.

[1] 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 Laboratories, Inc. L53166

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

CHAIN of CUSTODY

Report to:

Name: JAKE WILKINSON
Company: CRG MINING LLC
E-mail: JWILKINSON@CRGMINING.COM
Address: 501 SOUTH WISCONSIN ST
GUNNISON CO 81230
Telephone: 970-917-3311

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: JAKE WILKINSON
Company: CRG MINING LLC
E-mail: JWILKINSON@CRGMINING.COM
Address: 501 SOUTH WISCONSIN ST
GUNNISON CO 81230
Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [X] NO [ ]

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes [ ] No [X]

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: S. POTEET Sampler's Site Information State CO Zip code 81230 Time Zone MT

*Sampler's Signature: [signature]

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing:
Check box if samples include NRC licensed material? [ ]

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers								
GL 1				[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
GL 2				[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
GL 3				[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
RM 1				[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
RM 2				[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
RM 3				[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CM 1				[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CM 2				[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
CM 3				[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]
				[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]	[ ]

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	7-10-19 1:15 P.M	[signature]	7/11/19 12:40

FRMAD050.06.14.14 White - Return with sample. Yellow - Retain for your records.

L53166 Chain of Custod

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

Analytical Report

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's project number, L55257. 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 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'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 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 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 Janicek has reviewed and approved this report.

CRG Mining, LLC
Project ID:
Sample ID: GL-1

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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: GL-1

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.1	H		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.8			C	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

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: GL-2

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	SM4500Cl-E	1	0.9	B	*	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		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	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									
pH		1	8.2	H		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	22.6			C	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

CRG Mining, LLC
Project ID:
Sample ID: GL-3

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	B		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	B		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	B		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	B		mg/L	0.01	0.05	10/25/19 18:26	kja

CRG Mining, LLC
Project ID:
Sample ID: GL-3

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	SM4500Cl-E	1	0.6	B	*	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		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									
pH		1	8.1	H		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	22.0			C	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	B	*	mg/L	1	5	10/22/19 10:06	mss2

CRG Mining, LLC
Project ID:
Sample ID: RM-1

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	B		mg/L	0.0002	0.001	10/24/19 15:39	mfm
Barium, dissolved	M200.7 ICP	1	0.015	B		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	B		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	B		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	B		mg/L	0.01	0.05	10/25/19 18:29	kja

CRG Mining, LLC
Project ID:
Sample ID: RM-1

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	SM4500Cl-E	1	0.6	B	*	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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.5			C	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	eep
Sulfate	D516-02/-07 - Turbidimetric	1	5.1		*	mg/L	1	5	10/22/19 10:06	mss2

CRG Mining, LLC
Project ID:
Sample ID: RM-2

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

CRG Mining, LLC
Project ID:
Sample ID: RM-2

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	SM4500Cl-E	1	0.6	B	*	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	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	B		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	B	*	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									
pH		1	8.0	H		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.6			C	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	eep
Sulfate	D516-02/-07 - Turbidimetric	1	20.3		*	mg/L	1	5	10/22/19 10:06	mss2

CRG Mining, LLC
Project ID:
Sample ID: RM-3

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	XQ	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	XQ	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	B		mg/L	0.0002	0.001	10/24/19 15:46	mfm
Barium, dissolved	M200.7 ICP	1	0.016	B		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	B		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	B		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	B		mg/L	0.01	0.05	10/25/19 18:36	kja

CRG Mining, LLC
Project ID:
Sample ID: RM-3

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	SM4500Cl-E	1	0.6	B	*	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		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	B		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	B	*	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									
pH		1	8.1	H		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	22.1			C	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

CRG Mining, LLC
Project ID:
Sample ID: CM-1

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) & 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 23:48	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	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	10/25/19 18:39	kja

CRG Mining, LLC
Project ID:
Sample ID: CM-1

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	SM4500Cl-E	1	0.6	B	*	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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.7			C	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	eep
Sulfate	D516-02/-07 - Turbidimetric	1	6.7		*	mg/L	1	5	10/22/19 10:06	mss2

CRG Mining, LLC
Project ID:
Sample ID: CM-2

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: CM-2

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	SM4500Cl-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		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	mlh
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	B		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	B	*	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									
pH		1	8.1	H		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.7			C	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	eep
Sulfate	D516-02/-07 - Turbidimetric	1	17.9		*	mg/L	1	5	10/22/19 10:06	mss2

CRG Mining, LLC
Project ID:
Sample ID: CM-3

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	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	10/25/19 18:52	kja

CRG Mining, LLC
Project ID:
Sample ID: CM-3

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	SM4500Cl-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	B		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	B	*	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									
pH		1	8.2	H		units	0.1	0.1	10/22/19 0:00	emk
pH measured at		1	21.8			C	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	eep
Sulfate	D516-02/-07 - Turbidimetric	1	7.6		*	mg/L	1	5	10/22/19 10:31	mss2

Report Header 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 equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate 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 % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	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
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	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.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(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

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(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:
https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

CRG Mining, LLC

ACZ Project ID: ***L55257***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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				U	mg/L		-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, dissolved M200.8 ICP-MS

ACZ ID	Type	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 15:30				U	mg/L		-0.00044	0.00044			
WG484777LFB	LFB	10/24/19 15:32	MS191023-3	.05005		.045	mg/L	90	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	91	70	130	3	20	

CRG Mining, LLC

ACZ Project ID: ***L55257***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Barium, dissolved M200.7 ICP

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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		-0.000176	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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				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, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													
WG484785ICV	ICV	10/24/19 22:25	II191017-1	100		97.76	mg/L	98	95	105			
WG484785ICB	ICB	10/24/19 22:31				U	mg/L		-0.3	0.3			
WG484785LFB	LFB	10/24/19 22:43	II191011-4	68.01207		67.15	mg/L	99	85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4	68.01207	13.9	80.34	mg/L	98	85	115			
L55257-01ASD	ASD	10/24/19 23:29	II191011-4	68.01207	13.9	81.2	mg/L	99	85	115	1	20	
L55341-06AS	AS	10/25/19 0:06	II191011-4	68.01207	84.3	147.9	mg/L	94	85	115			
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	68.01207	84.3	147.7	mg/L	93	85	115	0	20	

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484666													
WG484666ICB	ICB	10/23/19 9:58				U	mg/L		-1.5	1.5			
WG484666ICV	ICV	10/23/19 9:58	WI190501-1	54.835		54.54	mg/L	99	90	110			
WG484666LFB1	LFB	10/23/19 13:37	WI190812-3	30		30.59	mg/L	102	90	110			
L55255-02DUP	DUP	10/23/19 13:37			21.1	20.82	mg/L				1	20	
L55257-06DUP	DUP	10/23/19 13:39			.6	.57	mg/L				5	20	RA
L55257-07AS	AS	10/23/19 13:39	WI190812-3	30	.6	31.17	mg/L	102	90	110			
WG484666LFB2	LFB	10/23/19 13:41	WI190812-3	30		30.84	mg/L	103	90	110			
L55255-03AS	AS	10/23/19 14:20	50XCL	30	1860	1990	mg/L	433	90	110			M3

CRG Mining, LLC

ACZ Project ID: ***L55257***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Chromium, dissolved M200.8 ICP-MS

ACZ ID	Type	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 M200.7 ICP

ACZ ID	Type	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 @25C SM2510B

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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	
L55341-06AS	AS	10/25/19 0:06	II191011-4	.5005	U	.519	mg/L	104	85	115			
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	.5005	U	.528	mg/L	105	85	115	2	20	

CRG Mining, LLC

ACZ Project ID: ***L55257***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Cyanide, total M335.4 - Colorimetric w/ distillation

ACZ ID	Type	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				U	mg/L		-0.003	0.003			
WG484770													
WG484741LRB	LRB	10/24/19 13:33				U	mg/L		-0.003	0.003			
WG484741LFB	LFB	10/24/19 13:33	WI191014-7	.2		.1981	mg/L	99	90	110			
L55257-04DUP	DUP	10/24/19 13:36			U	U	mg/L				0	20	RA
L55257-05LFM	LFM	10/24/19 13:38	WI191014-7	.2	U	.1677	mg/L	84	90	110			M2

Iron, dissolved M200.7 ICP

ACZ ID	Type	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 ICP-MS

ACZ ID	Type	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	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, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG484785													
WG484785ICV	ICV	10/24/19 22:25	II191017-1	100		95.38	mg/L	95	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	49.99809		47	mg/L	94	85	115			
L55257-01AS	AS	10/24/19 23:26	II191011-4	49.99809	4.8	52.19	mg/L	95	85	115			
L55257-01ASD	ASD	10/24/19 23:29	II191011-4	49.99809	4.8	52.82	mg/L	96	85	115	1	20	
L55341-06AS	AS	10/25/19 0:06	II191011-4	49.99809	15.9	64.92	mg/L	98	85	115			
L55341-06ASD	ASD	10/25/19 0:09	II191011-4	49.99809	15.9	64.25	mg/L	97	85	115	1	20	

CRG Mining, LLC

ACZ Project ID: ***L55257***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Manganese, dissolved M200.7 ICP

ACZ ID	Type	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 CVAA

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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 N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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			
L55257-06DUP	DUP	10/15/19 23:35			.08	.08	mg/L				0	20	RA
L55255-02AS	AS	10/15/19 23:43	WI191004-3	10	5.8	15.23	mg/L	94	90	110			
L55255-03DUP	DUP	10/15/19 23:50			U	U	mg/L				0	20	RA

CRG Mining, LLC

ACZ Project ID: ***L55257***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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) SM4500H+ B

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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, Filterable (TDS) @180C SM2540C

ACZ ID	Type	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			
L55269-14DUP	DUP	10/16/19 11:46			52	50	mg/L				4	10	RA
WG484128													
WG484128PBW	PBW	10/16/19 15:15				U	mg/L		-40	40			
WG484128LCSW	LCSW	10/16/19 15:16	PCN59809	1000		980	mg/L	98	80	120			
L55257-09DUP	DUP	10/16/19 15:38			74	72	mg/L				3	10	RA

CRG Mining, LLC

ACZ Project ID: ***L55257***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Sodium, dissolved M200.7 ICP

ACZ ID	Type	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 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
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				2	20	RA
L55257-02AS	AS	10/22/19 10:06	WI190801-3	10.01	26.8	36	mg/L	92	90	110			
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	101	90	110			
L55257-09DUP	DUP	10/22/19 10:31			7.6	7.5	mg/L				1	20	RA
L55269-01AS	AS	10/22/19 10:31	WI190801-3	10.01	9.1	21.4	mg/L	123	90	110			M1

Vanadium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
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 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
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	
L55341-06AS	AS	10/25/19 18:58	II191011-4	.50075	U	.551	mg/L	110	85	115			
L55341-06ASD	ASD	10/25/19 19:01	II191011-4	.50075	U	.54	mg/L	108	85	115	2	20	

CRG Mining, LLC ACZ Project ID: ***L55257***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55257-01	WG484666	Chloride	SM4500Cl-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).
L55257-02	WG484785	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	SM4500Cl-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).

CRG Mining, LLC ACZ Project ID: ***L55257***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55257-03	WG484785	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	SM4500Cl-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	WG484785	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	SM4500Cl-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.
	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).

CRG Mining, LLC ACZ Project ID: ***L55257***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55257-05	WG484785	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	SM4500Cl-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	WG484785	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	SM4500Cl-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).

CRG Mining, LLC ACZ Project ID: ***L55257***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55257-07	WG484785	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	SM4500Cl-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	WG484785	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	SM4500Cl-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).

Inorganic Extended Qualifier Report

CRG Mining, LLC

ACZ Project ID: ***L55257***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L55257-09	WG484785	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	SM4500Cl-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).

Certification Qualifiers

CRG Mining, LLC

ACZ Project ID: ***L55257***

No certification qualifiers associated with this analysis

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

Sample Receipt

CRG Mining, LLC

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?			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?			X
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		

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

NA indicates Not Applicable

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.

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

Sample Receipt

CRG Mining, LLC

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

[1] 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 Laboratories, Inc. L55257

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

CHAIN of CUSTODY

Report to:

Name: JAKE WILKINSON
Company: CRG MINING LLC
E-mail: JWILKINSON@CRGMINING.COM
Address: 501 SOUTH WISCONSIN ST
GUNNISON CO 81230
Telephone: 970-417-3311

Copy of Report to:

Name:
Company:
E-mail:
Telephone:

Invoice to:

Name: JAKE WILKINSON
Company: CRG MINING LLC
E-mail: JWILKINSON@CRGMINING.COM
Address: 501 SOUTH WISCONSIN ST
GUNNISON CO 81230
Telephone: 970-417-3311

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES [X] NO [ ]

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes [ ] No [X]

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: S. POTEET **Sampler's Site Information** **State** CO **Zip code** 81230 **Time Zone** MT

***Sampler's Signature:** [signature]

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing:
Check box if samples include NRC licensed material? [ ]

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers
GL-1	10-14-19 11:30	GW	
GL-2	10-14-19 11:15		
GL-3	10-14-19 11:45		
Rm-1	10-14-19 12:00		
Rm-2	10-14-19 12:45		
Rm-3	10-14-19 12:20		
Cm-1	10-14-19 1:00		
Cm-2	10-14-19 1:15		
Cm-3	10-14-19 1:45		

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
[signature]	10-14-19 3:00 PM	[signature]	10/15/19 10:36

L55257 Chain of Custod

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

Analytical Report

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's project number, L57111. 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 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'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 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 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 Janicek has reviewed and approved this report.

CRG Mining, LLC
Project ID:
Sample ID: GL-01

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	B		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	B		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	B		mg/L	0.01	0.05	01/31/20 20:51	jlw

CRG Mining, LLC
Project ID:
Sample ID: GL-01

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	SM4500Cl-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	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 22:14	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									
pH		1	8.1	H		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.7			C	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 - Turbidimetric	1	3.2	B	*	mg/L	1	5	01/30/20 17:15	rbt

CRG Mining, LLC
Project ID:
Sample ID: GL-02

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: GL-02

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	SM4500Cl-E	1	0.6	B		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	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:16	pjb
pH (lab)	SM4500H+ B									
pH		1	8.2	H		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	22.1			C	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 - Turbidimetric	1	28.4		*	mg/L	1	5	01/30/20 17:15	rbt

CRG Mining, LLC
Project ID:
Sample ID: GL-03

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	B		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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: GL-03

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	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	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	SM4500Cl-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	pjb
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									
pH		1	8.1	H		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.8			C	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	jck
Sulfate	D516-02/-07/-11 - Turbidimetric	1	6.1		*	mg/L	1	5	01/30/20 17:15	rbt

CRG Mining, LLC
Project ID:
Sample ID: RM-01

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	B		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	B		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	B		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	B		mg/L	0.01	0.05	01/31/20 21:01	jlw

CRG Mining, LLC
Project ID:
Sample ID: RM-01

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	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	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	SM4500Cl-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									
pH		1	8.2	H		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.7			C	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 - Turbidimetric	1	4.0	B	*	mg/L	1	5	01/30/20 17:15	rbt

CRG Mining, LLC
Project ID:
Sample ID: RM-02

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

CRG Mining, LLC
Project ID:
Sample ID: RM-02

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	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	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	SM4500Cl-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	B		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	B	*	mg/L	0.02	0.1	01/28/20 22:24	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:24	pjb
pH (lab)	SM4500H+ B									
pH		1	8.1	H		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.6			C	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	jck
Sulfate	D516-02/-07/-11 - Turbidimetric	1	18.8		*	mg/L	1	5	01/30/20 17:15	rbt

CRG Mining, LLC
Project ID:
Sample ID: RM-03

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	B		mg/L	0.0002	0.001	01/31/20 16:01	enb
Barium, dissolved	M200.7 ICP	1	0.011	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	01/31/20 21:20	jlw

CRG Mining, LLC
Project ID:
Sample ID: RM-03

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	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			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	SM4500Cl-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	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	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:25	pjb
pH (lab)	SM4500H+ B									
pH		1	8.2	H		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.6			C	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 - Turbidimetric	1	7.1		*	mg/L	1	5	01/30/20 17:15	rbt

CRG Mining, LLC
Project ID:
Sample ID: CM-01

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	B		mg/L	0.0002	0.001	01/31/20 16:04	enb
Barium, dissolved	M200.7 ICP	1	0.011	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	01/31/20 21:24	jlw

CRG Mining, LLC
Project ID:
Sample ID: CM-01

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	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	60.5		*	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	SM4500Cl-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	jck
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	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:26	pjb
pH (lab)	SM4500H+ B									
pH		1	8.2	H		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.7			C	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	mlh
Sulfate	D516-02/-07/-11 - Turbidimetric	1	7.7		*	mg/L	1	5	01/30/20 17:15	rbt

CRG Mining, LLC
Project ID:
Sample ID: CM-02

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	XQ	Units	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	XQ	Units	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	B		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	B		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	B		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

CRG Mining, LLC
Project ID:
Sample ID: CM-02

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	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	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	SM4500Cl-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	jck
Nitrate as N, dissolved	Calculation: NO3NO2 minus NO2		0.03	B		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	B	*	mg/L	0.02	0.1	01/28/20 22:28	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	01/28/20 22:28	pjb
pH (lab)	SM4500H+ B									
pH		1	8.2	H		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.6			C	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	mlh
Sulfate	D516-02/-07/-11 - Turbidimetric	1	14.9		*	mg/L	1	5	01/30/20 17:15	rbt

CRG Mining, LLC
Project ID:
Sample ID: CM-03

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	B		mg/L	0.0002	0.001	01/31/20 16:11	enb
Barium, dissolved	M200.7 ICP	1	0.011	B		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	B		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	B		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	B		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	B		mg/L	0.01	0.05	01/31/20 21:30	jlw

CRG Mining, LLC
Project ID:
Sample ID: CM-03

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	SM4500Cl-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	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									
pH		1	8.2	H		units	0.1	0.1	01/29/20 0:00	eep
pH measured at		1	21.8			C	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 - Turbidimetric	1	8.3		*	mg/L	1	5	01/30/20 17:15	rbt

Report Header 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 equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate 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 % (except for LCSS, mg/Kg)
RPD	Relative Percent Difference, calculation used for Duplicate QC Types
Upper	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

AS	Analytical Spike (Post Digestion)	*LCSWD*	Laboratory Control Sample - Water Duplicate
ASD	Analytical Spike (Post Digestion) Duplicate	*LFB*	Laboratory Fortified Blank
CCB	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
LCSSD	Laboratory Control Sample - Soil Duplicate	*PQV*	Practical Quantitation Verification standard
LCSW	Laboratory Control Sample - Water	*SDL*	Serial Dilution

QC Sample Type Explanations

Blanks	Verifies that there is no or minimal contamination in the prep method or calibration procedure.
Control Samples	Verifies the accuracy of the method, including the prep procedure.
Duplicates	Verifies the precision of the instrument and/or method.
Spikes/Fortified Matrix	Determines sample matrix interferences, if any.
Standard	Verifies the validity of the calibration.

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
H	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.

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(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

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(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:
https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

REP001.03.15.02

CRG Mining, LLC

ACZ Project ID: ***L57111***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Alkalinity as CaCO3 SM2320B - Titration

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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	

CRG Mining, LLC

ACZ Project ID: ***L57111***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491012													
WG491012ICV	ICV	01/31/20 15:07	MS200114-2	.05		.05015	mg/L	100	90	110			
WG491012ICB	ICB	01/31/20 15:10				U	mg/L		-0.00044	0.00044			
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 15:58	MS200120-3	.05005	.008	.06245	mg/L	109	70	130	0	20	
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	20	
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 13:09	MS200120-3	.05005		.0505	mg/L	101	85	115			
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	20	

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
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			
WG491014LFB	LFB	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			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	.5005	.012	.5006	mg/L	98	85	115	0	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	.5005	.277	.7552	mg/L	96	85	115			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	.5005	.277	.7498	mg/L	94	85	115	1	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491012													
WG491012ICV	ICV	01/31/20 15:07	MS200114-2	.05		.04792	mg/L	96	90	110			
WG491012ICB	ICB	01/31/20 15:10				U	mg/L		-0.000176	0.000176			
WG491012LFB	LFB	01/31/20 15:14	MS200120-3	.05005		.05116	mg/L	102	85	115			
L57111-05AS	AS	01/31/20 15:55	MS200120-3	.05005	U	.05328	mg/L	106	70	130			
L57111-05ASD	ASD	01/31/20 15:58	MS200120-3	.05005	U	.05317	mg/L	106	70	130	0	20	
L57126-02AS	AS	01/31/20 16:36	MS200120-3	.05005	U	.04979	mg/L	99	70	130			
L57126-02ASD	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	RPD	Limit	Qual
WG491012													
WG491012ICV	ICV	01/31/20 15:07	MS200114-2	.05		.04841	mg/L	97	90	110			
WG491012ICB	ICB	01/31/20 15:10				U	mg/L		-0.00011	0.00011			
WG491012LFB	LFB	01/31/20 15:14	MS200120-3	.05005		.05135	mg/L	103	85	115			
L57111-05AS	AS	01/31/20 15:55	MS200120-3	.05005	.00052	.05158	mg/L	102	70	130			
L57111-05ASD	ASD	01/31/20 15:58	MS200120-3	.05005	.00052	.05135	mg/L	102	70	130	0	20	
L57126-02AS	AS	01/31/20 16:36	MS200120-3	.05005	U	.05015	mg/L	100	70	130			
L57126-02ASD	ASD	01/31/20 16:39	MS200120-3	.05005	U	.05102	mg/L	102	70	130	2	20	

CRG Mining, LLC

ACZ Project ID: ***L57111***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Calcium, dissolved M200.7 ICP

ACZ ID	Type	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 SM4500Cl-E

ACZ ID	Type	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, dissolved M200.8 ICP-MS

ACZ ID	Type	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				U	mg/L		-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, dissolved M200.7 ICP

ACZ ID	Type	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	
L57121-04AS	AS	01/31/20 21:53	II200123-3	.5	.01	.484	mg/L	95	85	115			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	.5	.01	.489	mg/L	96	85	115	1	20	

CRG Mining, LLC

ACZ Project ID: ***L57111***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Conductivity @25C SM2510B

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490942													
WG490942ICV	ICV	01/30/20 16:05	WI200129-10	.3		.2936	mg/L	98	90	110			
WG490942ICB	ICB	01/30/20 16:06				U	mg/L		-0.003	0.003			
WG490966													
WG490911LRB	LRB	01/30/20 16:34				U	mg/L		-0.003	0.003			
WG490911LFB	LFB	01/30/20 16:35	WI200129-7	.2		.1848	mg/L	92	90	110			
L57042-01DUP	DUP	01/30/20 16:36			U	U	mg/L				0	20	RA
L57042-02LFM	LFM	01/30/20 16:38	WI200129-7	.2	U	.1802	mg/L	90	90	110			
L57111-05DUP	DUP	01/30/20 16:48			U	U	mg/L				0	20	RA
L57111-06LFM	LFM	01/30/20 16:50	WI200129-7	.2	U	.1894	mg/L	95	90	110			

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	2		1.946	mg/L	97	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.09	0.09			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	1.0018		.998	mg/L	100	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	1.0018	U	.992	mg/L	99	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	1.0018	U	.991	mg/L	99	85	115	0	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	1.0018	.4	1.348	mg/L	95	85	115			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	1.0018	.4	1.333	mg/L	93	85	115	1	20	

CRG Mining, LLC

ACZ Project ID: ***L57111***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	.5015	.35	.829	mg/L	96	85	115	1	20	

Mercury, total M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490862													
WG490862ICV	ICV	01/30/20 13:40	HG191211-3	.004995		.00499	mg/L	100	95	105			
WG490862ICB	ICB	01/30/20 13:41				U	mg/L		-0.0002	0.0002			
WG490862LRB	LRB	01/30/20 13:43				U	mg/L		-0.00044	0.00044			
WG490862LFB	LFB	01/30/20 13:44	HG200127-4	.002002		.00194	mg/L	97	85	115			
L50237-47LFM	LFM	01/30/20 13:46	HG200127-4	.002002	U	.00193	mg/L	96	85	115			
L50237-47LFMD	LFMD	01/30/20 13:47	HG200127-4	.002002	U	.00193	mg/L	96	85	115	0	20	
L57111-02LFM	LFM	01/30/20 13:59	HG200127-4	.002002	U	.00189	mg/L	94	85	115			
L57111-02LFMD	LFMD	01/30/20 14:00	HG200127-4	.002002	U	.0019	mg/L	95	85	115	1	20	

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ACZ Project ID: ***L57111***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Nickel, dissolved M200.7 ICP

ACZ ID	Type	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, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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			
WG490787ICB	ICB	01/28/20 22:05				U	mg/L		-0.02	0.02			
WG490787LFB	LFB	01/28/20 22:10	WI191004-3	2		1.967	mg/L	98	90	110			
L57100-01AS	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, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	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) SM4500H+ B

ACZ ID	Type	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, dissolved M200.7 ICP

ACZ ID	Type	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			
L57111-04AS	AS	01/31/20 21:04	II200123-3	99.95798	.6	97.56	mg/L	97	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	99.95798	.6	100.5	mg/L	100	85	115	3	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	99.95798	13.2	114.9	mg/L	102	85	115			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	99.95798	13.2	116.3	mg/L	103	85	115	1	20	

CRG Mining, LLC

ACZ Project ID: ***L57111***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490854													
WG490854PBW	PBW	01/29/20 15:00				U	mg/L		-40	40			
WG490854LCSW	LCSW	01/29/20 15:02	PCN60404	963		1000	mg/L	104	80	120			
L57128-03DUP	DUP	01/29/20 15:31			1650	1660	mg/L				1	10	
WG490939													
WG490939PBW	PBW	01/30/20 13:30				U	mg/L		-40	40			
WG490939LCSW	LCSW	01/30/20 13:32	PCN60404	963		998	mg/L	104	80	120			
L57127-04DUP	DUP	01/30/20 14:04			326	322	mg/L				1	10	

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	100		99.22	mg/L	99	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	100.0046		99.1	mg/L	99	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	100.0046	2.2	98.38	mg/L	96	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	100.0046	2.2	101.5	mg/L	99	85	115	3	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	100.0046	2630	2611	mg/L	-19	85	115			M3
L57121-04ASD	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 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG490958													
WG490958ICB	ICB	01/30/20 9:24				U	mg/L		-3	3			
WG490958ICV	ICV	01/30/20 9:24	WI200117-2	20		19.8	mg/L	99	90	110			
WG490958LFB	LFB	01/30/20 16:40	WI190801-3	10.01		9.5	mg/L	95	90	110			
L57111-01AS	AS	01/30/20 17:15	WI190801-3	10.01	3.2	14.4	mg/L	112	90	110			M1
L57111-02DUP	DUP	01/30/20 17:15			28.4	29.6	mg/L				4	20	

Vanadium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG491014													
WG491014ICV	ICV	01/31/20 20:16	II200122-1	2		1.997	mg/L	100	95	105			
WG491014ICB	ICB	01/31/20 20:22				U	mg/L		-0.015	0.015			
WG491014LFB	LFB	01/31/20 20:35	II200123-3	.4995		.5049	mg/L	101	85	115			
L57111-04AS	AS	01/31/20 21:04	II200123-3	.4995	U	.4876	mg/L	98	85	115			
L57111-04ASD	ASD	01/31/20 21:14	II200123-3	.4995	U	.5039	mg/L	101	85	115	3	20	
L57121-04AS	AS	01/31/20 21:53	II200123-3	.4995	U	.4974	mg/L	100	85	115			
L57121-04ASD	ASD	01/31/20 21:57	II200123-3	.4995	U	.5028	mg/L	101	85	115	1	20	

CRG Mining, LLC

ACZ Project ID: ***L57111***

NOTE: If the Rec% column is null, the high/low limits are in the same units as the result. If the Rec% column is not null, then the high/low limits are in % Rec.

Zinc, dissolved M200.7 ICP

ACZ ID	Type	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	

CRG Mining, LLC ACZ Project ID: ***L57111***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57111-01	WG491088	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	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.
L57111-03	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.

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ACZ Project ID: ***L57111***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57111-04	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.
L57111-05	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.
L57111-06	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.

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57111-07	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	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.
	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	WG491265	Chloride	SM4500Cl-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	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.
	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).

CRG Mining, LLC

ACZ Project ID: ***L57111***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L57111-09	WG491265	Chloride	SM4500Cl-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	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.
	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).

CRG Mining, LLC ACZ Project ID: ***L57111***

No certification qualifiers associated with this analysis

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

Sample Receipt

CRG Mining, LLC

ACZ Project ID: L57111
Date Received: 01/28/2020 10:07
Received By:
Date Printed: 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?	X		
3) Does this project require special handling procedures such as CLP protocol?		X	
4) Are any samples NRC licensable material?			X
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	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody form match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits? [1]	X		
12) Is there sufficient sample volume to perform all requested work?	X		
13) Is the custody seal intact on all containers?			X
14) Are samples that require zero headspace acceptable?			X
15) Are all sample containers appropriate for analytical requirements?	X		
16) Is there an Hg-1631 trip blank present?			X
17) Is there a VOA trip blank present?			X
18) Were all samples received within hold time?	X		

NA indicates Not Applicable

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.

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

Sample Receipt

CRG Mining, LLC

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

[1] 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 Laboratories, Inc. L57111

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

CHAIN of CUSTODY

Report to:

Name: JAKE WILKINSON
Company: CRG
E-mail: JWILKINSON@CRGMINING.COM
Address: 502 S. WISCONSON GUNNISON CO 81230
Telephone: 970-417-3311

Copy of Report to:

Name: PAUL WOLFE
Company: CRG
E-mail: WOLFECUSTOM1@OUTLOOK.COM
Telephone: 970-964-6113

Invoice to:

Name: JAKE WILKINSON
Company: CRG MINING
E-mail: JWILKINSON@CRGMINING.COM
Address: 502. S. WISCONSON GUNNISON CO 81230
Telephone: 970-417-3311

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ✓ NO

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO" is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: PAUL WOLFE **Sampler's Site Information** **State** COLORADO **Zip code** 81230 **Time Zone** MOUNTAIN

***Sampler's Signature:** PAUL WOLFE

*I attest to the authenticity and validity of this sample. I understand that intentionally mislabeling the time/date/location or tampering with the sample in anyway, is considered fraud and punishable by State Law.

PROJECT INFORMATION

Quote #:
PO#:
Reporting state for compliance testing:
Check box if samples include NRC licensed material?

ANALYSES REQUESTED *(attach list or use quote number)*

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers								
GL-01	1-27-20/9:44AM	SW	5								
GL-02	1-27-20/9:23 AM	SW	5								
GL-03	1-27-20/10:11 AM	SW	5								
RM-01	1-27-20/10:21 AM	SW	5								
RM-02	1-27-20/11:02 AM	SW	5								
RM-03	1-27-20/10:36AM	SW	5								
CM-01	1-27-20/11:12 AM	SW	5								
CM-02	1-27-20/11:42 AM	SW	5								
CM-03	1-27-20/11:55AM	SW	5								

Matrix: SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)

REMARKS

Please refer to ACZ's terms & conditions located on the reverse side of this COC.

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
PAUL WOLFE	1-27-20 1:15 PM	Lynne	1-28-2020 10:07

L57111 Chain of Custod

ACZ Laboratories, Inc.

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

Bottle Order Packing List

Account: CRG/CRG Mining, LLC
Bottle Order: BO44136

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	Qty	ACZ ID	Type	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

PACK	Qty	ACZ ID	Size	Weight	UPS Tracking Number
	1	2395	Large	13	1Z8101300326283586

Quote number: BASELINE-SW-QTRLY
Sample Quantity: 9

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	Type	Size	Filter/Raw/Preserve	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.

SW