

Figure 3

Groundwater samples in Windy Gulch were collected on September 27, 2022

Sample Locations:

- 1) HW-2
- 2) DP-3 * Not enough water to sample
- 3) DP-4 * Not enough water to sample
- 4) DP-5

Refer to Map G-3, Appendix 4 for sample locations.

GW-1 in the analytical results is a field duplication sample for HW-2.

October 17, 2022

Report to:

Randy McClure
Rio Grande Silver, Inc.
112 E. 12th St.
Creede, CO 81130

Bill to:

Randy McClure
Rio Grande Silver, Inc.
P.O. Box 610
Creede, CO 81130

Project ID:

ACZ Project ID: L76240

Randy McClure:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on September 28, 2022. This project has been assigned to ACZ's project number, L76240. 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 L76240. 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 16, 2022. 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.



Sue Webber has reviewed and
approved this report.



Rio Grande Silver, Inc.

October 17, 2022

Project ID:

ACZ Project ID: L76240

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 3 groundwater samples from Rio Grande Silver, Inc. on September 28, 2022. 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 L76240. 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 except for parameters flagged with "H" flags, received after the hold time expired (H3) or performed past the hold time due to workload issues (H1).

Sample Analysis

These samples were analyzed for inorganic, organic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports.

Rio Grande Silver, Inc.

Project ID:

Sample ID: HW-2

ACZ Sample ID: **L76240-01**

Date Sampled: 09/27/22 10:30

Date Received: 09/28/22

Sample Matrix: Groundwater

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								10/03/22 13:47	wgm
Total Recoverable Digestion	M200.2 ICP-MS								10/05/22 9:15	mfm
Total Recoverable Digestion	M200.2 ICP								10/04/22 12:19	aeH

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.411			mg/L	0.05	0.25	10/07/22 21:16	wtc
Aluminum, total recoverable	M200.7 ICP	1	1.54		*	mg/L	0.05	0.25	10/10/22 19:29	aeH
Arsenic, dissolved	M200.8 ICP-MS	1	0.00858			mg/L	0.0002	0.001	10/03/22 20:00	mfm
Arsenic, total recoverable	M200.8 ICP-MS	1	0.00862			mg/L	0.0002	0.001	10/06/22 14:25	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00279			mg/L	0.00005	0.00025	10/03/22 20:00	mfm
Cadmium, total recoverable	M200.8 ICP-MS	1	0.00290			mg/L	0.00005	0.00025	10/06/22 14:25	mfm
Calcium, dissolved	M200.7 ICP	1	35.0			mg/L	0.1	0.5	10/07/22 21:16	wtc
Copper, dissolved	M200.8 ICP-MS	1	0.00099	B		mg/L	0.0008	0.002	10/03/22 20:00	mfm
Copper, total recoverable	M200.8 ICP-MS	1	0.00207			mg/L	0.0008	0.002	10/06/22 14:25	mfm
Iron, dissolved	M200.7 ICP	1	0.218			mg/L	0.06	0.15	10/07/22 21:16	wtc
Iron, total recoverable	M200.7 ICP	1	0.938			mg/L	0.06	0.15	10/10/22 19:29	aeH
Lead, dissolved	M200.8 ICP-MS	1	0.00063			mg/L	0.0001	0.0005	10/03/22 20:00	mfm
Lead, total recoverable	M200.8 ICP-MS	1	0.00258			mg/L	0.0001	0.0005	10/06/22 14:25	mfm
Magnesium, dissolved	M200.7 ICP	1	3.37			mg/L	0.2	1	10/11/22 2:10	aeH
Manganese, dissolved	M200.7 ICP	1	0.033	B		mg/L	0.01	0.05	10/07/22 21:16	wtc
Manganese, total recoverable	M200.7 ICP	1	0.046	B		mg/L	0.01	0.05	10/10/22 19:29	aeH
Mercury, total	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	10/05/22 12:32	mlh
Potassium, dissolved	M200.7 ICP	1	3.28			mg/L	0.2	1	10/07/22 21:16	wtc
Silver, dissolved	M200.8 ICP-MS	1	0.00021	B		mg/L	0.0001	0.0005	10/06/22 10:01	mfm
Silver, total recoverable	M200.8 ICP-MS	1	0.00087			mg/L	0.0001	0.0005	10/06/22 14:25	mfm
Sodium, dissolved	M200.7 ICP	1	6.30			mg/L	0.2	1	10/07/22 21:16	wtc
Zinc, dissolved	M200.8 ICP-MS	1	0.734			mg/L	0.006	0.015	10/03/22 20:00	mfm
Zinc, total recoverable	M200.8 ICP-MS	1	0.658			mg/L	0.006	0.015	10/06/22 14:25	mfm

Rio Grande Silver, Inc.

Project ID:

Sample ID: HW-2

ACZ Sample ID: **L76240-01**

Date Sampled: 09/27/22 10:30

Date Received: 09/28/22

Sample Matrix: Groundwater

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	31.2			mg/L	2	20	10/07/22 0:00	emk
Carbonate as CaCO ₃		1	<2	U		mg/L	2	20	10/07/22 0:00	emk
Hydroxide as CaCO ₃		1	<2	U		mg/L	2	20	10/07/22 0:00	emk
Total Alkalinity		1	31.2		*	mg/L	2	20	10/07/22 0:00	emk
Carbon, dissolved organic (DOC)	SM5310B	1	2.4	B	*	mg/L	1	5	10/06/22 3:32	bls
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-2.0			%			10/17/22 0:00	calc
Sum of Anions			2.6			meq/L			10/17/22 0:00	calc
Sum of Cations			2.5			meq/L			10/17/22 0:00	calc
Chloride	M300.0 - Ion Chromatography	1	1.33	B	*	mg/L	0.4	2	10/12/22 1:06	mad
Fluoride	SM4500F-C	1	0.23	B		mg/L	0.15	0.35	10/11/22 17:34	emk
Hardness as CaCO ₃ (dissolved)	SM2340B - Calculation		101			mg/L	0.2	5	10/17/22 0:00	calc
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.097	B		mg/L	0.02	0.1	10/17/22 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.097	B	*	mg/L	0.02	0.1	09/28/22 23:49	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	<0.01	U	*	mg/L	0.01	0.05	09/28/22 23:49	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	<0.05	U	*	mg/L	0.05	0.2	09/29/22 14:45	bls
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		<0.2	U		mg/L	0.2	0.5	10/17/22 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	<0.2	U	*	mg/L	0.2	0.5	10/05/22 1:40	pjb
pH (lab)	SM4500H+ B									
pH		1	6.4	H		units	0.1	0.1	10/01/22 0:00	jck
pH measured at		1	21.5			C	0.1	0.1	10/01/22 0:00	jck
Residue, Filterable (TDS) @180C	SM2540C	1	214		*	mg/L	20	40	09/28/22 15:00	svm
Sulfate	M300.0 - Ion Chromatography	1	91.6		*	mg/L	0.4	2	10/12/22 1:06	mad
Sulfide as S	SM4500S2-D	1	<0.02	U	*	mg/L	0.02	0.1	09/29/22 16:14	jck
TDS (calculated)	Calculation		162			mg/L			10/17/22 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.32						10/17/22 0:00	calc

Rio Grande Silver, Inc.

Project ID:

Sample ID: GW-1

ACZ Sample ID: **L76240-02**

Date Sampled: 09/13/22 10:50

Date Received: 09/28/22

Sample Matrix: Groundwater

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								10/03/22 14:01	wgm
Total Recoverable Digestion	M200.2 ICP-MS								10/05/22 9:15	mfm
Total Recoverable Digestion	M200.2 ICP								10/04/22 13:00	aeH

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	<0.05	U		mg/L	0.05	0.25	10/07/22 21:19	wtc
Aluminum, total recoverable	M200.7 ICP	1	1.18			mg/L	0.05	0.25	10/10/22 19:38	aeH
Arsenic, dissolved	M200.8 ICP-MS	1	0.00818			mg/L	0.0002	0.001	10/03/22 20:09	mfm
Arsenic, total recoverable	M200.8 ICP-MS	1	0.00851			mg/L	0.0002	0.001	10/06/22 14:27	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00289			mg/L	0.00005	0.00025	10/03/22 20:09	mfm
Cadmium, total recoverable	M200.8 ICP-MS	1	0.00292			mg/L	0.00005	0.00025	10/06/22 14:27	mfm
Calcium, dissolved	M200.7 ICP	1	34.4			mg/L	0.1	0.5	10/07/22 21:19	wtc
Copper, dissolved	M200.8 ICP-MS	1	0.00092	B		mg/L	0.0008	0.002	10/03/22 20:09	mfm
Copper, total recoverable	M200.8 ICP-MS	1	0.00220			mg/L	0.0008	0.002	10/06/22 14:27	mfm
Iron, dissolved	M200.7 ICP	1	<0.06	U		mg/L	0.06	0.15	10/07/22 21:19	wtc
Iron, total recoverable	M200.7 ICP	1	0.707			mg/L	0.06	0.15	10/10/22 19:38	aeH
Lead, dissolved	M200.8 ICP-MS	1	0.00010	B		mg/L	0.0001	0.0005	10/03/22 20:09	mfm
Lead, total recoverable	M200.8 ICP-MS	1	0.00212			mg/L	0.0001	0.0005	10/06/22 14:27	mfm
Magnesium, dissolved	M200.7 ICP	1	3.43			mg/L	0.2	1	10/11/22 2:13	aeH
Manganese, dissolved	M200.7 ICP	1	0.015	B		mg/L	0.01	0.05	10/07/22 21:19	wtc
Manganese, total recoverable	M200.7 ICP	1	0.033	B		mg/L	0.01	0.05	10/10/22 19:38	aeH
Mercury, total	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	10/05/22 12:33	mlh
Potassium, dissolved	M200.7 ICP	1	3.24			mg/L	0.2	1	10/07/22 21:19	wtc
Silver, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	10/06/22 10:03	mfm
Silver, total recoverable	M200.8 ICP-MS	1	0.00062			mg/L	0.0001	0.0005	10/06/22 14:27	mfm
Sodium, dissolved	M200.7 ICP	1	6.22			mg/L	0.2	1	10/07/22 21:19	wtc
Zinc, dissolved	M200.8 ICP-MS	1	0.700			mg/L	0.006	0.015	10/03/22 20:09	mfm
Zinc, total recoverable	M200.8 ICP-MS	1	0.664			mg/L	0.006	0.015	10/06/22 14:27	mfm

Rio Grande Silver, Inc.

Project ID:

Sample ID: GW-1

ACZ Sample ID: **L76240-02**

Date Sampled: 09/13/22 10:50

Date Received: 09/28/22

Sample Matrix: Groundwater

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	29.7	H	*	mg/L	2	20	10/07/22 0:00	emk
Carbonate as CaCO ₃		1	<2	UH	*	mg/L	2	20	10/07/22 0:00	emk
Hydroxide as CaCO ₃		1	<2	UH	*	mg/L	2	20	10/07/22 0:00	emk
Total Alkalinity		1	29.7	H	*	mg/L	2	20	10/07/22 0:00	emk
Carbon, dissolved organic (DOC)	SM5310B	1	2.5	B	*	mg/L	1	5	10/06/22 3:43	bls
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-4.0			%			10/17/22 0:00	calc
Sum of Anions			2.6			meq/L			10/17/22 0:00	calc
Sum of Cations			2.4			meq/L			10/17/22 0:00	calc
Chloride	M300.0 - Ion Chromatography	1	1.37	BH	*	mg/L	0.4	2	10/12/22 1:42	mad
Fluoride	SM4500F-C	1	0.22	B		mg/L	0.15	0.35	10/11/22 17:42	emk
Hardness as CaCO ₃ (dissolved)	SM2340B - Calculation		100			mg/L	0.2	5	10/17/22 0:00	calc
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.148	H		mg/L	0.02	0.1	10/17/22 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.148	H	*	mg/L	0.02	0.1	09/28/22 23:51	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	<0.01	UH	*	mg/L	0.01	0.05	09/28/22 23:51	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	<0.05	U	*	mg/L	0.05	0.2	09/29/22 14:47	bls
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		<0.2	U		mg/L	0.2	0.5	10/17/22 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	<0.2	U	*	mg/L	0.2	0.5	10/05/22 1:41	pjb
pH (lab)	SM4500H+ B									
pH		1	6.4	H		units	0.1	0.1	10/01/22 0:00	jck
pH measured at		1	21.3			C	0.1	0.1	10/01/22 0:00	jck
Residue, Filterable (TDS) @180C	SM2540C	1	206	H	*	mg/L	20	40	09/28/22 15:03	svm
Sulfate	M300.0 - Ion Chromatography	1	91.9	H	*	mg/L	0.4	2	10/12/22 1:42	mad
Sulfide as S	SM4500S2-D	1	<0.02	UH	*	mg/L	0.02	0.1	09/29/22 16:17	jck
TDS (calculated)	Calculation		160			mg/L			10/17/22 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.29						10/17/22 0:00	calc

Rio Grande Silver, Inc.

Project ID:

Sample ID: DP-5

ACZ Sample ID: **L76240-03**

Date Sampled: 09/27/22 10:00

Date Received: 09/28/22

Sample Matrix: Groundwater

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								10/03/22 14:15	wgm
Total Recoverable Digestion	M200.2 ICP-MS								10/05/22 9:15	mfm
Total Recoverable Digestion	M200.2 ICP								10/04/22 13:14	aeH

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	<0.05	U	*	mg/L	0.05	0.25	10/12/22 11:56	aeH
Aluminum, total recoverable	M200.7 ICP	1	0.958			mg/L	0.05	0.25	10/10/22 19:41	aeH
Arsenic, dissolved	M200.8 ICP-MS	1	0.00894			mg/L	0.0002	0.001	10/03/22 20:11	mfm
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0235			mg/L	0.0002	0.001	10/06/22 14:32	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.00156			mg/L	0.00005	0.00025	10/03/22 20:11	mfm
Cadmium, total recoverable	M200.8 ICP-MS	1	0.00326			mg/L	0.00005	0.00025	10/06/22 14:32	mfm
Calcium, dissolved	M200.7 ICP	1	51.8			mg/L	0.1	0.5	10/12/22 11:56	aeH
Copper, dissolved	M200.8 ICP-MS	1	0.00089	B		mg/L	0.0008	0.002	10/03/22 20:11	mfm
Copper, total recoverable	M200.8 ICP-MS	1	0.00408			mg/L	0.0008	0.002	10/06/22 14:32	mfm
Iron, dissolved	M200.7 ICP	1	0.764			mg/L	0.06	0.15	10/12/22 11:56	aeH
Iron, total recoverable	M200.7 ICP	1	4.32			mg/L	0.06	0.15	10/10/22 19:41	aeH
Lead, dissolved	M200.8 ICP-MS	1	0.00021	B		mg/L	0.0001	0.0005	10/03/22 20:11	mfm
Lead, total recoverable	M200.8 ICP-MS	1	0.0566			mg/L	0.0001	0.0005	10/06/22 14:32	mfm
Magnesium, dissolved	M200.7 ICP	1	5.32			mg/L	0.2	1	10/12/22 11:56	aeH
Manganese, dissolved	M200.7 ICP	1	0.094			mg/L	0.01	0.05	10/12/22 11:56	aeH
Manganese, total recoverable	M200.7 ICP	1	0.148			mg/L	0.01	0.05	10/10/22 19:41	aeH
Mercury, total	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	10/05/22 12:54	mlh
Potassium, dissolved	M200.7 ICP	1	3.12			mg/L	0.2	1	10/12/22 11:56	aeH
Silver, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	10/06/22 10:05	mfm
Silver, total recoverable	M200.8 ICP-MS	1	0.00072			mg/L	0.0001	0.0005	10/06/22 14:32	mfm
Sodium, dissolved	M200.7 ICP	1	12.8			mg/L	0.2	1	10/12/22 11:56	aeH
Zinc, dissolved	M200.8 ICP-MS	1	3.53			mg/L	0.006	0.015	10/03/22 20:11	mfm
Zinc, total recoverable	M200.8 ICP-MS	1	4.64			mg/L	0.006	0.015	10/06/22 14:32	mfm

Rio Grande Silver, Inc.

Project ID:

Sample ID: DP-5

ACZ Sample ID: **L76240-03**

Date Sampled: 09/27/22 10:00

Date Received: 09/28/22

Sample Matrix: Groundwater

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	63.0			mg/L	2	20	10/07/22 0:00	emk
Carbonate as CaCO ₃		1	<2	U		mg/L	2	20	10/07/22 0:00	emk
Hydroxide as CaCO ₃		1	<2	U		mg/L	2	20	10/07/22 0:00	emk
Total Alkalinity		1	63.0		*	mg/L	2	20	10/07/22 0:00	emk
Carbon, dissolved organic (DOC)	SM5310B	1	1.6	B	*	mg/L	1	5	10/06/22 3:54	bls
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.8			%			10/17/22 0:00	calc
Sum of Anions			4.1			meq/L			10/17/22 0:00	calc
Sum of Cations			3.8			meq/L			10/17/22 0:00	calc
Chloride	M300.0 - Ion Chromatography	2	3.19	B	*	mg/L	0.8	4	10/12/22 2:54	mad
Fluoride	SM4500F-C	1	0.36			mg/L	0.15	0.35	10/11/22 17:50	emk
Hardness as CaCO ₃ (dissolved)	SM2340B - Calculation		151			mg/L	0.2	5	10/17/22 0:00	calc
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.184			mg/L	0.02	0.1	10/17/22 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.184		*	mg/L	0.02	0.1	09/28/22 23:52	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	<0.01	U	*	mg/L	0.01	0.05	09/28/22 23:52	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	<0.05	U	*	mg/L	0.05	0.2	09/29/22 14:48	bls
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		<0.2	U		mg/L	0.2	0.5	10/17/22 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	<0.2	U	*	mg/L	0.2	0.5	10/05/22 1:42	pjb
pH (lab)	SM4500H+ B									
pH		1	6.6	H		units	0.1	0.1	10/01/22 0:00	jck
pH measured at		1	21.3			C	0.1	0.1	10/01/22 0:00	jck
Residue, Filterable (TDS) @180C	SM2540C	1	284			mg/L	20	40	10/03/22 11:05	svm
Sulfate	M300.0 - Ion Chromatography	2	128			mg/L	0.8	4	10/12/22 2:54	mad
Sulfide as S	SM4500S2-D	1	<0.02	U	*	mg/L	0.02	0.1	09/29/22 16:21	jck
TDS (calculated)	Calculation		248			mg/L			10/17/22 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.15						10/17/22 0:00	calc

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #5). Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Recovered amount of the true value or spike added, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>AS</i>	Analytical Spike (Post Digestion)	<i>LCSWD</i>	Laboratory Control Sample - Water Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LFB</i>	Laboratory Fortified Blank
<i>CCB</i>	Continuing Calibration Blank	<i>LFM</i>	Laboratory Fortified Matrix
<i>CCV</i>	Continuing Calibration Verification standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>ICB</i>	Initial Calibration Blank	<i>MS</i>	Matrix Spike
<i>ICV</i>	Initial Calibration Verification standard	<i>MSD</i>	Matrix Spike Duplicate
<i>ICSAB</i>	Inter-element Correction Standard - A plus B solutions	<i>PBS</i>	Prep Blank - Soil
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBW</i>	Prep Blank - Water
<i>LCSSD</i>	Laboratory Control Sample - Soil Duplicate	<i>PQV</i>	Practical Quantitation Verification standard
<i>LCSW</i>	Laboratory Control Sample - Water	<i>SDL</i>	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>

HECLARIO

ACZ Project ID: **L76240**

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
WG552247													
WG552247PBW	PBW	10/07/22 12:40				5.2	mg/L		-20	20			
WG552247LCSW2	LCSW	10/07/22 12:54	WC221006-1	820		750.8	mg/L	92	90	110			
L71615-31DUP	DUP	10/07/22 14:07			U	U	mg/L				0	20	RA
WG552247LCSW4	LCSW	10/07/22 15:34	WC221006-1	820		756.9	mg/L	92	90	110			

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552273													
WG552273ICV	ICV	10/07/22 19:35	II220927-1	2		1.964	mg/L	98	95	105			
WG552273ICB	ICB	10/07/22 19:41				U	mg/L		-0.15	0.15			
WG552273PQV	PQV	10/07/22 19:44	II220907-2	.2502		.291	mg/L	116	70	130			
WG552273SIC	SIC	10/07/22 19:47	II220906-2	200.4102		192.1	mg/L	96	1	200			
WG552273LFB	LFB	10/07/22 19:53	II220915-2	1.0008		1.031	mg/L	103	85	115			
WG552273CCV1	CCV	10/07/22 20:24	II220921-1	1		.98	mg/L	98	90	110			
WG552273CCB1	CCB	10/07/22 20:27				U	mg/L		-0.15	0.15			
WG552273CCV2	CCV	10/07/22 21:01	II220921-1	1		.973	mg/L	97	90	110			
WG552273CCB2	CCB	10/07/22 21:04				U	mg/L		-0.15	0.15			
L76239-01AS	AS	10/07/22 21:07	II220915-2	1.0008	.064	1.028	mg/L	96	85	115			
L76239-01ASD	ASD	10/07/22 21:10	II220915-2	1.0008	.064	1.053	mg/L	99	85	115	2	20	
WG552273CCV3	CCV	10/07/22 21:22	II220921-1	1		.98	mg/L	98	90	110			
WG552273CCB3	CCB	10/07/22 21:25				U	mg/L		-0.15	0.15			
WG552403													
WG552403ICV	ICV	10/12/22 11:12	II221010-3	2		1.976	mg/L	99	95	105			
WG552403ICB	ICB	10/12/22 11:18				U	mg/L		-0.15	0.15			
WG552403PQV	PQV	10/12/22 11:21	II221008-4	.2502		.252	mg/L	101	70	130			
WG552403SIC	SIC	10/12/22 11:24	II221007-2	200.4102		206.3	mg/L	103	1	200			
WG552403LFB	LFB	10/12/22 11:31	II221008-2	1.0008		1.04	mg/L	104	85	115			
L75994-06AS	AS	10/12/22 11:47	II221008-2	1.0008	14.9	16.16	mg/L	126	85	115			M3
L75994-06ASD	ASD	10/12/22 11:50	II221008-2	1.0008	14.9	16.18	mg/L	128	85	115	0	20	M3
WG552403CCV1	CCV	10/12/22 12:03	II221010-4	1		.99	mg/L	99	90	110			
WG552403CCB1	CCB	10/12/22 12:06				U	mg/L		-0.15	0.15			
WG552403CCV2	CCV	10/12/22 12:41	II221010-4	1		.99	mg/L	99	90	110			
WG552403CCB2	CCB	10/12/22 12:44				U	mg/L		-0.15	0.15			
WG552403CCV3	CCV	10/12/22 13:03	II221010-4	1		.991	mg/L	99	90	110			
WG552403CCB3	CCB	10/12/22 13:07				U	mg/L		-0.15	0.15			

HECLARIO

ACZ Project ID: **L76240**

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.

Aluminum, total recoverable

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552401													
WG552401ICV	ICV	10/10/22 18:30	II221010-3	2		2.002	mg/L	100	95	105			
WG552401ICB	ICB	10/10/22 18:36				U	mg/L		-0.15	0.15			
WG552401PQV	PQV	10/10/22 18:39	II221008-4	.2502		.239	mg/L	96	70	130			
WG552401SIC	SIC	10/10/22 18:42	II221007-2	200.4102		210.7	mg/L	105	1	200			
WG551889LRB	LRB	10/10/22 18:49				U	mg/L		-0.11	0.11			
WG551889LFB	LFB	10/10/22 18:52	II220915-2	1.0008		.974	mg/L	97	85	115			
WG552401CCV1	CCV	10/10/22 19:19	II221010-4	1		1	mg/L	100	90	110			
WG552401CCB1	CCB	10/10/22 19:22				U	mg/L		-0.15	0.15			
L76240-01LFM	LFM	10/10/22 19:32	II220915-2	1.0008	1.54	3.409	mg/L	187	70	130			M1
L76240-01LFMD	LFMD	10/10/22 19:35	II220915-2	1.0008	1.54	3.51	mg/L	197	70	130	3	20	M1
WG552401CCV2	CCV	10/10/22 19:56	II221010-4	1		.987	mg/L	99	90	110			
WG552401CCB2	CCB	10/10/22 19:59				U	mg/L		-0.15	0.15			
L76278-03LFM	LFM	10/10/22 20:02	II220915-2	1.0008	U	1.058	mg/L	106	70	130			
L76278-03LFMD	LFMD	10/10/22 20:05	II220915-2	1.0008	U	1.069	mg/L	107	70	130	1	20	
WG552401CCV3	CCV	10/10/22 20:21	II221010-4	1		1.024	mg/L	102	90	110			
WG552401CCB3	CCB	10/10/22 20:24				U	mg/L		-0.15	0.15			

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG551877													
WG551877ICV	ICV	10/03/22 19:20	MS220930-3	.05		.04867	mg/L	97	90	110			
WG551877ICB	ICB	10/03/22 19:22				U	mg/L		-0.00044	0.00044			
WG551877LFB	LFB	10/03/22 19:24	MS220822-2	.05005		.05146	mg/L	103	85	115			
WG551877CCV1	CCV	10/03/22 19:43	MS220920-2	.1001		.09751	mg/L	97	90	110			
WG551877CCB1	CCB	10/03/22 19:45				U	mg/L		-0.0006	0.0006			
L76240-01AS	AS	10/03/22 20:01	MS220822-2	.05005	.00858	.05985	mg/L	102	70	130			
L76240-01ASD	ASD	10/03/22 20:03	MS220822-2	.05005	.00858	.05875	mg/L	100	70	130	2	20	
WG551877CCV2	CCV	10/03/22 20:05	MS220920-2	.1001		.09881	mg/L	99	90	110			
WG551877CCB2	CCB	10/03/22 20:07				U	mg/L		-0.0006	0.0006			
WG551877CCV3	CCV	10/03/22 20:18	MS220920-2	.1001		.09725	mg/L	97	90	110			
WG551877CCB3	CCB	10/03/22 20:20				U	mg/L		-0.0006	0.0006			

Arsenic, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552163													
WG552163ICV	ICV	10/06/22 14:12	MS220930-3	.05		.05012	mg/L	100	90	110			
WG552163ICB	ICB	10/06/22 14:14				U	mg/L		-0.0006	0.0006			
WG551995LRB	LRB	10/06/22 14:15				U	mg/L		-0.00044	0.00044			
WG551995LFB	LFB	10/06/22 14:17	MS220822-2	.05005		.04648	mg/L	93	85	115			
L76240-02LFM	LFM	10/06/22 14:29	MS220822-2	.05005	.00851	.05432	mg/L	92	70	130			
L76240-02LFMD	LFMD	10/06/22 14:30	MS220822-2	.05005	.00851	.05488	mg/L	93	70	130	1	20	
WG552163CCV1	CCV	10/06/22 14:34	MS221004-5	.1001		.09708	mg/L	97	90	110			
WG552163CCB1	CCB	10/06/22 14:36				U	mg/L		-0.0006	0.0006			
WG552163CCV2	CCV	10/06/22 14:57	MS221004-5	.1001		.09741	mg/L	97	90	110			
WG552163CCB2	CCB	10/06/22 14:59				U	mg/L		-0.0006	0.0006			
WG552163CCV3	CCV	10/06/22 15:12	MS221004-5	.1001		.09418	mg/L	94	90	110			
WG552163CCB3	CCB	10/06/22 15:14				U	mg/L		-0.0006	0.0006			

HECLARIO

ACZ Project ID: **L76240**

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.

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG551877													
WG551877ICV	ICV	10/03/22 19:20	MS220930-3	.05		.050829	mg/L	102	90	110			
WG551877ICB	ICB	10/03/22 19:22				U	mg/L		-0.00011	0.00011			
WG551877LFB	LFB	10/03/22 19:24	MS220822-2	.05005		.050442	mg/L	101	85	115			
WG551877CCV1	CCV	10/03/22 19:43	MS220920-2	.1001		.099582	mg/L	99	90	110			
WG551877CCB1	CCB	10/03/22 19:45				U	mg/L		-0.00015	0.00015			
L76240-01AS	AS	10/03/22 20:01	MS220822-2	.05005	.00279	.053787	mg/L	102	70	130			
L76240-01ASD	ASD	10/03/22 20:03	MS220822-2	.05005	.00279	.051129	mg/L	97	70	130	5	20	
WG551877CCV2	CCV	10/03/22 20:05	MS220920-2	.1001		.100615	mg/L	101	90	110			
WG551877CCB2	CCB	10/03/22 20:07				U	mg/L		-0.00015	0.00015			
WG551877CCV3	CCV	10/03/22 20:18	MS220920-2	.1001		.10123	mg/L	101	90	110			
WG551877CCB3	CCB	10/03/22 20:20				U	mg/L		-0.00015	0.00015			

Cadmium, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552163													
WG552163ICV	ICV	10/06/22 14:12	MS220930-3	.05		.05131	mg/L	103	90	110			
WG552163ICB	ICB	10/06/22 14:14				U	mg/L		-0.00015	0.00015			
WG551995LRB	LRB	10/06/22 14:15				U	mg/L		-0.00011	0.00011			
WG551995LFB	LFB	10/06/22 14:17	MS220822-2	.05005		.045206	mg/L	90	85	115			
L76240-02LFM	LFM	10/06/22 14:29	MS220822-2	.05005	.00292	.047893	mg/L	90	70	130			
L76240-02LFMD	LFMD	10/06/22 14:30	MS220822-2	.05005	.00292	.048745	mg/L	92	70	130	2	20	
WG552163CCV1	CCV	10/06/22 14:34	MS221004-5	.1001		.096266	mg/L	96	90	110			
WG552163CCB1	CCB	10/06/22 14:36				U	mg/L		-0.00015	0.00015			
WG552163CCV2	CCV	10/06/22 14:57	MS221004-5	.1001		.096917	mg/L	97	90	110			
WG552163CCB2	CCB	10/06/22 14:59				U	mg/L		-0.00015	0.00015			
WG552163CCV3	CCV	10/06/22 15:12	MS221004-5	.1001		.094602	mg/L	95	90	110			
WG552163CCB3	CCB	10/06/22 15:14				U	mg/L		-0.00015	0.00015			

HECLARIO

ACZ Project ID: **L76240**

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
WG552273													
WG552273ICV	ICV	10/07/22 19:35	II220927-1	100		98.13	mg/L	98	95	105			
WG552273ICB	ICB	10/07/22 19:41				U	mg/L		-0.3	0.3			
WG552273PQV	PQV	10/07/22 19:44	II220907-2	.5003		.56	mg/L	112	70	130			
WG552273SIC	SIC	10/07/22 19:47	II220906-2	200.7203		197.6	mg/L	98	1	200			
WG552273LFB	LFB	10/07/22 19:53	II220915-2	67.98862		67.48	mg/L	99	85	115			
WG552273CCV1	CCV	10/07/22 20:24	II220921-1	50		49.39	mg/L	99	90	110			
WG552273CCB1	CCB	10/07/22 20:27				U	mg/L		-0.3	0.3			
WG552273CCV2	CCV	10/07/22 21:01	II220921-1	50		48.33	mg/L	97	90	110			
WG552273CCB2	CCB	10/07/22 21:04				U	mg/L		-0.3	0.3			
L76239-01AS	AS	10/07/22 21:07	II220915-2	67.98862	37.6	103.9	mg/L	98	85	115			
L76239-01ASD	ASD	10/07/22 21:10	II220915-2	67.98862	37.6	103.8	mg/L	97	85	115	0	20	
WG552273CCV3	CCV	10/07/22 21:22	II220921-1	50		48.17	mg/L	96	90	110			
WG552273CCB3	CCB	10/07/22 21:25				U	mg/L		-0.3	0.3			
WG552403													
WG552403ICV	ICV	10/12/22 11:12	II221010-3	100		99.38	mg/L	99	95	105			
WG552403ICB	ICB	10/12/22 11:18				U	mg/L		-0.3	0.3			
WG552403PQV	PQV	10/12/22 11:21	II221008-4	.5003		.53	mg/L	106	70	130			
WG552403SIC	SIC	10/12/22 11:24	II221007-2	200.7203		201.9	mg/L	101	1	200			
WG552403LFB	LFB	10/12/22 11:31	II221008-2	67.98862		70.04	mg/L	103	85	115			
L75994-06AS	AS	10/12/22 11:47	II221008-2	67.98862	.67	69.8	mg/L	102	85	115			
L75994-06ASD	ASD	10/12/22 11:50	II221008-2	67.98862	.67	70.49	mg/L	103	85	115	1	20	
WG552403CCV1	CCV	10/12/22 12:03	II221010-4	50		49.67	mg/L	99	90	110			
WG552403CCB1	CCB	10/12/22 12:06				U	mg/L		-0.3	0.3			
WG552403CCV2	CCV	10/12/22 12:41	II221010-4	50		49.72	mg/L	99	90	110			
WG552403CCB2	CCB	10/12/22 12:44				U	mg/L		-0.3	0.3			
WG552403CCV3	CCV	10/12/22 13:03	II221010-4	50		49.7	mg/L	99	90	110			
WG552403CCB3	CCB	10/12/22 13:07				U	mg/L		-0.3	0.3			

Carbon, dissolved organic (DOC)

SM5310B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552031													
WG552031CCV1	CCV	10/06/22 2:01	WI220929-2	50		50.6	mg/L	101	90	110			
WG552031CCB1	CCB	10/06/22 2:11				U	mg/L		-3	3			
WG552031PQV	PQV	10/06/22 2:21	WI220929-1	5		5.2	mg/L	104	70	130			
WG552031LFB1	LFB	10/06/22 2:34	WI220929-3	50		51.5	mg/L	103	90	110			
L76189-01AS	AS	10/06/22 2:58	WI220929-3	50	2.8	53.5	mg/L	101	90	110			
L76189-02DUP	DUP	10/06/22 3:21			3.5	3.4	mg/L				3	20	RA
WG552031CCV2	CCV	10/06/22 4:20	WI220929-2	50		51	mg/L	102	90	110			
WG552031CCB2	CCB	10/06/22 4:30				U	mg/L		-3	3			
WG552031CCV3	CCV	10/06/22 6:39	WI220929-2	50		50.6	mg/L	101	90	110			
WG552031CCB3	CCB	10/06/22 6:49				U	mg/L		-3	3			
WG552031LFB2	LFB	10/06/22 8:09	WI220929-3	50		51.2	mg/L	102	90	110			
WG552031CCV4	CCV	10/06/22 8:56	WI220929-2	50		50.9	mg/L	102	90	110			
WG552031CCB4	CCB	10/06/22 9:06				U	mg/L		-3	3			
WG552031CCV5	CCV	10/06/22 11:03	WI220929-2	50		51.1	mg/L	102	90	110			
WG552031CCB5	CCB	10/06/22 11:13				U	mg/L		-3	3			

HECLARIO

ACZ Project ID: **L76240**

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

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547857													
WG547857ICV	ICV	08/03/22 17:44	WI220803-5	19.98		20.18	mg/L	101	90	110			
WG547857ICB	ICB	08/03/22 18:02				U	mg/L		-0.4	0.4			
WG552485													
WG552485CCV1	CCV	10/11/22 15:33	WI221004-11	50		48.13	mg/L	96	90	110			
WG552485CCB1	CCB	10/11/22 15:50				U	mg/L		-0.4	0.4			
WG552485PQV	PQV	10/11/22 16:08	WI221004-9	1.998		2.19	mg/L	110	70	130			
WG552485LFB1	LFB	10/11/22 16:26	WI211112-6	30		30.97	mg/L	103	90	110			
WG552485CCV2	CCV	10/11/22 19:08	WI221004-11	50		47.82	mg/L	96	90	110			
WG552485CCB2	CCB	10/11/22 19:25				U	mg/L		-0.4	0.4			
L75979-02DUP	DUP	10/11/22 21:31			4.17	U	mg/L				200	20	RA
L75979-03AS	AS	10/11/22 22:07	WI211112-6	300	U	301.71	mg/L	101	90	110			
WG552485CCV3	CCV	10/11/22 22:43	WI221004-11	50		47.65	mg/L	95	90	110			
WG552485CCB3	CCB	10/11/22 23:01				U	mg/L		-0.4	0.4			
WG552485LFB2	LFB	10/12/22 1:24	WI211112-6	30		30.24	mg/L	101	90	110			
L76240-02DUP	DUP	10/12/22 2:00			1.37	1.32	mg/L				4	20	RA
WG552485CCV4	CCV	10/12/22 2:18	WI221004-11	50		48.13	mg/L	96	90	110			
WG552485CCB4	CCB	10/12/22 2:36				U	mg/L		-0.4	0.4			
L76240-03AS	AS	10/12/22 3:12	WI211112-6	60	3.19	63.61	mg/L	101	90	110			
WG552485CCV5	CCV	10/12/22 5:35	WI221004-11	50		48.17	mg/L	96	90	110			
WG552485CCB5	CCB	10/12/22 5:53				U	mg/L		-0.4	0.4			

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG551877													
WG551877ICV	ICV	10/03/22 19:20	MS220930-3	.05		.05021	mg/L	100	90	110			
WG551877ICB	ICB	10/03/22 19:22				U	mg/L		-0.00176	0.00176			
WG551877LFB	LFB	10/03/22 19:24	MS220822-2	.05		.04941	mg/L	99	85	115			
WG551877CCV1	CCV	10/03/22 19:43	MS220920-2	.25		.24078	mg/L	96	90	110			
WG551877CCB1	CCB	10/03/22 19:45				U	mg/L		-0.0024	0.0024			
L76240-01AS	AS	10/03/22 20:01	MS220822-2	.05	.00099	.04651	mg/L	91	70	130			
L76240-01ASD	ASD	10/03/22 20:03	MS220822-2	.05	.00099	.04531	mg/L	89	70	130	3	20	
WG551877CCV2	CCV	10/03/22 20:05	MS220920-2	.25		.24992	mg/L	100	90	110			
WG551877CCB2	CCB	10/03/22 20:07				U	mg/L		-0.0024	0.0024			
WG551877CCV3	CCV	10/03/22 20:18	MS220920-2	.25		.24638	mg/L	99	90	110			
WG551877CCB3	CCB	10/03/22 20:20				U	mg/L		-0.0024	0.0024			

HECLARIO

ACZ Project ID: **L76240**

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, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552163													
WG552163ICV	ICV	10/06/22 14:12	MS220930-3	.05		.05129	mg/L	103	90	110			
WG552163ICB	ICB	10/06/22 14:14				U	mg/L		-0.0024	0.0024			
WG551995LRB	LRB	10/06/22 14:15				U	mg/L		-0.00176	0.00176			
WG551995LFB	LFB	10/06/22 14:17	MS220822-2	.05		.04498	mg/L	90	85	115			
L76240-02LFM	LFM	10/06/22 14:29	MS220822-2	.05	.0022	.04455	mg/L	85	70	130			
L76240-02LFMD	LFMD	10/06/22 14:30	MS220822-2	.05	.0022	.04521	mg/L	86	70	130	1	20	
WG552163CCV1	CCV	10/06/22 14:34	MS221004-5	.25		.2459	mg/L	98	90	110			
WG552163CCB1	CCB	10/06/22 14:36				U	mg/L		-0.0024	0.0024			
WG552163CCV2	CCV	10/06/22 14:57	MS221004-5	.25		.24914	mg/L	100	90	110			
WG552163CCB2	CCB	10/06/22 14:59				U	mg/L		-0.0024	0.0024			
WG552163CCV3	CCV	10/06/22 15:12	MS221004-5	.25		.24047	mg/L	96	90	110			
WG552163CCB3	CCB	10/06/22 15:14				U	mg/L		-0.0024	0.0024			

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552439													
WG552439ICV	ICV	10/11/22 10:37	WC221006-4	2.008		2	mg/L	100	90	110			
WG552439ICB	ICB	10/11/22 10:45				U	mg/L		-0.3	0.3			
WG552439PQV	PQV	10/11/22 10:53	WC220925-1	.3514		.33	mg/L	94	70	130			
WG552439LFB1	LFB	10/11/22 10:59	WC221011-2	5.02		4.9	mg/L	98	90	110			
WG552439CCV1	CCV	10/11/22 12:16	WC221006-4	2.008		2.042	mg/L	102	90	110			
WG552439CCB1	CCB	10/11/22 12:24				U	mg/L		-0.3	0.3			
WG552439CCV2	CCV	10/11/22 13:48	WC221006-4	2.008		2.042	mg/L	102	90	110			
WG552439CCB2	CCB	10/11/22 13:56				U	mg/L		-0.3	0.3			
WG552439LFB2	LFB	10/11/22 14:43	WC221011-2	5.02		5.12	mg/L	102	90	110			
WG552439CCV3	CCV	10/11/22 15:20	WC221006-4	2.008		2.013	mg/L	100	90	110			
WG552439CCB3	CCB	10/11/22 15:28				U	mg/L		-0.3	0.3			
WG552439CCV4	CCV	10/11/22 16:47	WC221006-4	2.008		2.101	mg/L	105	90	110			
WG552439CCB4	CCB	10/11/22 16:54				U	mg/L		-0.3	0.3			
L75947-01AS	AS	10/11/22 17:02	WC221011-2	5.02	.18	5.12	mg/L	98	90	110			
L75947-01ASD	ASD	10/11/22 17:10	WC221011-2	5.02	.18	5.17	mg/L	99	90	110	1	20	
WG552439CCV5	CCV	10/11/22 18:27	WC221006-4	2.008		2.042	mg/L	102	90	110			
WG552439CCB5	CCB	10/11/22 18:34				U	mg/L		-0.3	0.3			

HECLARIO

ACZ Project ID: **L76240**

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.

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552273													
WG552273ICV	ICV	10/07/22 19:35	II220927-1	2		1.957	mg/L	98	95	105			
WG552273ICB	ICB	10/07/22 19:41				U	mg/L		-0.18	0.18			
WG552273PQV	PQV	10/07/22 19:44	II220907-2	.150195		.186	mg/L	124	70	130			
WG552273SIC	SIC	10/07/22 19:47	II220906-2	200.410195		191.9	mg/L	96	1	200			
WG552273LFB	LFB	10/07/22 19:53	II220915-2	1.0013		1.014	mg/L	101	85	115			
WG552273CCV1	CCV	10/07/22 20:24	II220921-1	1		1.007	mg/L	101	90	110			
WG552273CCB1	CCB	10/07/22 20:27				U	mg/L		-0.18	0.18			
WG552273CCV2	CCV	10/07/22 21:01	II220921-1	1		1.001	mg/L	100	90	110			
WG552273CCB2	CCB	10/07/22 21:04				U	mg/L		-0.18	0.18			
L76239-01AS	AS	10/07/22 21:07	II220915-2	1.0013	U	1.016	mg/L	95	85	115			
L76239-01ASD	ASD	10/07/22 21:10	II220915-2	1.0013	U	1.014	mg/L	95	85	115	0	20	
WG552273CCV3	CCV	10/07/22 21:22	II220921-1	1		.99	mg/L	99	90	110			
WG552273CCB3	CCB	10/07/22 21:25				U	mg/L		-0.18	0.18			
WG552403													
WG552403ICV	ICV	10/12/22 11:12	II221010-3	2		1.996	mg/L	100	95	105			
WG552403ICB	ICB	10/12/22 11:18				U	mg/L		-0.18	0.18			
WG552403PQV	PQV	10/12/22 11:21	II221008-4	.150195		.19	mg/L	127	70	130			
WG552403SIC	SIC	10/12/22 11:24	II221007-2	200.410195		198.8	mg/L	99	1	200			
WG552403LFB	LFB	10/12/22 11:31	II221008-2	1.0013		1.046	mg/L	104	85	115			
L75994-06AS	AS	10/12/22 11:47	II221008-2	1.0013	.431	1.51	mg/L	108	85	115			
L75994-06ASD	ASD	10/12/22 11:50	II221008-2	1.0013	.431	1.513	mg/L	108	85	115	0	20	
WG552403CCV1	CCV	10/12/22 12:03	II221010-4	1		1.008	mg/L	101	90	110			
WG552403CCB1	CCB	10/12/22 12:06				U	mg/L		-0.18	0.18			
WG552403CCV2	CCV	10/12/22 12:41	II221010-4	1		1.007	mg/L	101	90	110			
WG552403CCB2	CCB	10/12/22 12:44				U	mg/L		-0.18	0.18			
WG552403CCV3	CCV	10/12/22 13:03	II221010-4	1		1	mg/L	100	90	110			
WG552403CCB3	CCB	10/12/22 13:07				U	mg/L		-0.18	0.18			

Iron, total recoverable

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552401													
WG552401ICV	ICV	10/10/22 18:30	II221010-3	2		2	mg/L	100	95	105			
WG552401ICB	ICB	10/10/22 18:36				U	mg/L		-0.18	0.18			
WG552401PQV	PQV	10/10/22 18:39	II221008-4	.150195		.155	mg/L	103	70	130			
WG552401SIC	SIC	10/10/22 18:42	II221007-2	200.410195		197.6	mg/L	99	1	200			
WG551889LRB	LRB	10/10/22 18:49				U	mg/L		-0.132	0.132			
WG551889LFB	LFB	10/10/22 18:52	II220915-2	1.0013		.988	mg/L	99	85	115			
WG552401CCV1	CCV	10/10/22 19:19	II221010-4	1		1.017	mg/L	102	90	110			
WG552401CCB1	CCB	10/10/22 19:22				U	mg/L		-0.18	0.18			
L76240-01LFM	LFM	10/10/22 19:32	II220915-2	1.0013	.938	2.098	mg/L	116	70	130			
L76240-01LFMD	LFMD	10/10/22 19:35	II220915-2	1.0013	.938	2.15	mg/L	121	70	130	2	20	
WG552401CCV2	CCV	10/10/22 19:56	II221010-4	1		1.001	mg/L	100	90	110			
WG552401CCB2	CCB	10/10/22 19:59				U	mg/L		-0.18	0.18			
L76278-03LFM	LFM	10/10/22 20:02	II220915-2	1.0013	U	1.002	mg/L	100	70	130			
L76278-03LFMD	LFMD	10/10/22 20:05	II220915-2	1.0013	U	1.013	mg/L	101	70	130	1	20	
WG552401CCV3	CCV	10/10/22 20:21	II221010-4	1		1.04	mg/L	104	90	110			
WG552401CCB3	CCB	10/10/22 20:24				U	mg/L		-0.18	0.18			

HECLARIO

ACZ Project ID: **L76240**

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
WG551877													
WG551877ICV	ICV	10/03/22 19:20	MS220930-3	.05		.05081	mg/L	102	90	110			
WG551877ICB	ICB	10/03/22 19:22				U	mg/L		-0.00022	0.00022			
WG551877LFB	LFB	10/03/22 19:24	MS220822-2	.0501		.04984	mg/L	99	85	115			
WG551877CCV1	CCV	10/03/22 19:43	MS220920-2	.2505		.24558	mg/L	98	90	110			
WG551877CCB1	CCB	10/03/22 19:45				U	mg/L		-0.0003	0.0003			
L76240-01AS	AS	10/03/22 20:01	MS220822-2	.0501	.00063	.04879	mg/L	96	70	130			
L76240-01ASD	ASD	10/03/22 20:03	MS220822-2	.0501	.00063	.0466	mg/L	92	70	130	5	20	
WG551877CCV2	CCV	10/03/22 20:05	MS220920-2	.2505		.24841	mg/L	99	90	110			
WG551877CCB2	CCB	10/03/22 20:07				U	mg/L		-0.0003	0.0003			
WG551877CCV3	CCV	10/03/22 20:18	MS220920-2	.2505		.25156	mg/L	100	90	110			
WG551877CCB3	CCB	10/03/22 20:20				U	mg/L		-0.0003	0.0003			

Lead, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552163													
WG552163ICV	ICV	10/06/22 14:12	MS220930-3	.05		.05216	mg/L	104	90	110			
WG552163ICB	ICB	10/06/22 14:14				U	mg/L		-0.0003	0.0003			
WG551995LRB	LRB	10/06/22 14:15				U	mg/L		-0.00022	0.00022			
WG551995LFB	LFB	10/06/22 14:17	MS220822-2	.0501		.04539	mg/L	91	85	115			
L76240-02LFM	LFM	10/06/22 14:29	MS220822-2	.0501	.00212	.04817	mg/L	92	70	130			
L76240-02LFMD	LFMD	10/06/22 14:30	MS220822-2	.0501	.00212	.04959	mg/L	95	70	130	3	20	
WG552163CCV1	CCV	10/06/22 14:34	MS221004-5	.2505		.24203	mg/L	97	90	110			
WG552163CCB1	CCB	10/06/22 14:36				.00011	mg/L		-0.0003	0.0003			
WG552163CCV2	CCV	10/06/22 14:57	MS221004-5	.2505		.24472	mg/L	98	90	110			
WG552163CCB2	CCB	10/06/22 14:59				U	mg/L		-0.0003	0.0003			
WG552163CCV3	CCV	10/06/22 15:12	MS221004-5	.2505		.23673	mg/L	95	90	110			
WG552163CCB3	CCB	10/06/22 15:14				U	mg/L		-0.0003	0.0003			

HECLARIO

ACZ Project ID: **L76240**

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
WG552354													
WG552354ICV	ICV	10/11/22 0:31	II220927-1	100		96.58	mg/L	97	95	105			
WG552354ICB	ICB	10/11/22 0:37				U	mg/L		-0.6	0.6			
WG552354PQV	PQV	10/11/22 0:40	II221008-4	1.0001		1.12	mg/L	112	70	130			
WG552354SIC	SIC	10/11/22 0:44	II221007-2	201.2001		199	mg/L	99	1	200			
WG552354LFB	LFB	10/11/22 0:50	II221008-2	49.99809		49.38	mg/L	99	85	115			
WG552354CCV1	CCV	10/11/22 1:22	II220921-1	50		48.01	mg/L	96	90	110			
WG552354CCB1	CCB	10/11/22 1:25				U	mg/L		-0.6	0.6			
L76209-03AS	AS	10/11/22 1:54	II221008-2	49.99809	3.53	51.73	mg/L	96	85	115			
L76209-03ASD	ASD	10/11/22 1:57	II221008-2	49.99809	3.53	51.34	mg/L	96	85	115	1	20	
WG552354CCV2	CCV	10/11/22 2:01	II220921-1	50		48.12	mg/L	96	90	110			
WG552354CCB2	CCB	10/11/22 2:04				U	mg/L		-0.6	0.6			
WG552354CCV3	CCV	10/11/22 2:17	II220921-1	50		48.78	mg/L	98	90	110			
WG552354CCB3	CCB	10/11/22 2:20				U	mg/L		-0.6	0.6			
WG552403													
WG552403ICV	ICV	10/12/22 11:12	II221010-3	100		95.35	mg/L	95	95	105			
WG552403ICB	ICB	10/12/22 11:18				U	mg/L		-0.6	0.6			
WG552403PQV	PQV	10/12/22 11:21	II221008-4	1.0001		1.13	mg/L	113	70	130			
WG552403SIC	SIC	10/12/22 11:24	II221007-2	201.2001		200.5	mg/L	100	1	200			
WG552403LFB	LFB	10/12/22 11:31	II221008-2	49.99809		49.19	mg/L	98	85	115			
L75994-06AS	AS	10/12/22 11:47	II221008-2	49.99809	U	48.68	mg/L	97	85	115			
L75994-06ASD	ASD	10/12/22 11:50	II221008-2	49.99809	U	49.1	mg/L	98	85	115	1	20	
WG552403CCV1	CCV	10/12/22 12:03	II221010-4	50		47.49	mg/L	95	90	110			
WG552403CCB1	CCB	10/12/22 12:06				U	mg/L		-0.6	0.6			
WG552403CCV2	CCV	10/12/22 12:41	II221010-4	50		47.55	mg/L	95	90	110			
WG552403CCB2	CCB	10/12/22 12:44				U	mg/L		-0.6	0.6			
WG552403CCV3	CCV	10/12/22 13:03	II221010-4	50		47.51	mg/L	95	90	110			
WG552403CCB3	CCB	10/12/22 13:07				U	mg/L		-0.6	0.6			

HECLARIO

ACZ Project ID: **L76240**

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
WG552273													
WG552273ICV	ICV	10/07/22 19:35	II220927-1	2		1.901	mg/L	95	95	105			
WG552273ICB	ICB	10/07/22 19:41				U	mg/L		-0.03	0.03			
WG552273PQV	PQV	10/07/22 19:44	II220907-2	.0498		.057	mg/L	114	70	130			
WG552273SIC	SIC	10/07/22 19:47	II220906-2	49.9498		47.18	mg/L	94	1	200			
WG552273LFB	LFB	10/07/22 19:53	II220915-2	.499		.501	mg/L	100	85	115			
WG552273CCV1	CCV	10/07/22 20:24	II220921-1	1		.96	mg/L	96	90	110			
WG552273CCB1	CCB	10/07/22 20:27				U	mg/L		-0.03	0.03			
WG552273CCV2	CCV	10/07/22 21:01	II220921-1	1		.949	mg/L	95	90	110			
WG552273CCB2	CCB	10/07/22 21:04				U	mg/L		-0.03	0.03			
L76239-01AS	AS	10/07/22 21:07	II220915-2	.499	U	.495	mg/L	99	85	115			
L76239-01ASD	ASD	10/07/22 21:10	II220915-2	.499	U	.498	mg/L	100	85	115	1	20	
WG552273CCV3	CCV	10/07/22 21:22	II220921-1	1		.943	mg/L	94	90	110			
WG552273CCB3	CCB	10/07/22 21:25				U	mg/L		-0.03	0.03			
WG552403													
WG552403ICV	ICV	10/12/22 11:12	II221010-3	2		1.931	mg/L	97	95	105			
WG552403ICB	ICB	10/12/22 11:18				U	mg/L		-0.03	0.03			
WG552403PQV	PQV	10/12/22 11:21	II221008-4	.0498		.052	mg/L	104	70	130			
WG552403SIC	SIC	10/12/22 11:24	II221007-2	49.9498		47.99	mg/L	96	1	200			
WG552403LFB	LFB	10/12/22 11:31	II221008-2	.499		.517	mg/L	104	85	115			
L75994-06AS	AS	10/12/22 11:47	II221008-2	.499	.156	.66	mg/L	101	85	115			
L75994-06ASD	ASD	10/12/22 11:50	II221008-2	.499	.156	.665	mg/L	102	85	115	1	20	
WG552403CCV1	CCV	10/12/22 12:03	II221010-4	1		.974	mg/L	97	90	110			
WG552403CCB1	CCB	10/12/22 12:06				U	mg/L		-0.03	0.03			
WG552403CCV2	CCV	10/12/22 12:41	II221010-4	1		.974	mg/L	97	90	110			
WG552403CCB2	CCB	10/12/22 12:44				U	mg/L		-0.03	0.03			
WG552403CCV3	CCV	10/12/22 13:03	II221010-4	1		.985	mg/L	99	90	110			
WG552403CCB3	CCB	10/12/22 13:07				U	mg/L		-0.03	0.03			

Manganese, total recoverable

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552401													
WG552401ICV	ICV	10/10/22 18:30	II221010-3	2		1.939	mg/L	97	95	105			
WG552401ICB	ICB	10/10/22 18:36				U	mg/L		-0.03	0.03			
WG552401PQV	PQV	10/10/22 18:39	II221008-4	.0498		.05	mg/L	100	70	130			
WG552401SIC	SIC	10/10/22 18:42	II221007-2	49.9498		47.68	mg/L	95	1	200			
WG551889LRB	LRB	10/10/22 18:49				U	mg/L		-0.022	0.022			
WG551889LFB	LFB	10/10/22 18:52	II220915-2	.499		.484	mg/L	97	85	115			
WG552401CCV1	CCV	10/10/22 19:19	II221010-4	1		.991	mg/L	99	90	110			
WG552401CCB1	CCB	10/10/22 19:22				U	mg/L		-0.03	0.03			
L76240-01LFM	LFM	10/10/22 19:32	II220915-2	.499	.046	.537	mg/L	98	70	130			
L76240-01LFMD	LFMD	10/10/22 19:35	II220915-2	.499	.046	.535	mg/L	98	70	130	0	20	
WG552401CCV2	CCV	10/10/22 19:56	II221010-4	1		.981	mg/L	98	90	110			
WG552401CCB2	CCB	10/10/22 19:59				U	mg/L		-0.03	0.03			
L76278-03LFM	LFM	10/10/22 20:02	II220915-2	.499	U	.503	mg/L	101	70	130			
L76278-03LFMD	LFMD	10/10/22 20:05	II220915-2	.499	U	.509	mg/L	102	70	130	1	20	
WG552401CCV3	CCV	10/10/22 20:21	II221010-4	1		1.014	mg/L	101	90	110			
WG552401CCB3	CCB	10/10/22 20:24				U	mg/L		-0.03	0.03			

HECLARIO

ACZ Project ID: **L76240**

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
WG551881													
WG551881ICV	ICV	10/05/22 10:56	HG221003-3	.005005		.00506	mg/L	101	95	105			
WG551881ICB	ICB	10/05/22 10:57				U	mg/L		-0.0002	0.0002			
WG551920													
WG551920CCV1	CCV	10/05/22 12:03	HG221003-3	.005005		.00517	mg/L	103	90	110			
WG551920CCB1	CCB	10/05/22 12:04				U	mg/L		-0.0002	0.0002			
WG551920PQV	PQV	10/05/22 12:05	HG221003-5	.001001		.00081	mg/L	81	70	130			
WG551920LRB	LRB	10/05/22 12:06				U	mg/L		-0.00044	0.00044			
WG551920LFB	LFB	10/05/22 12:07	HG221003-6	.002002		.00179	mg/L	89	85	115			
WG551920CCV2	CCV	10/05/22 12:15	HG221003-3	.005005		.00494	mg/L	99	90	110			
WG551920CCB2	CCB	10/05/22 12:16				U	mg/L		-0.0002	0.0002			
L76214-01LFM	LFM	10/05/22 12:25	HG221003-6	.002002	U	.00181	mg/L	90	85	115			
WG551920CCV3	CCV	10/05/22 12:26	HG221003-3	.005005		.00495	mg/L	99	90	110			
WG551920CCB3	CCB	10/05/22 12:27				U	mg/L		-0.0002	0.0002			
L76214-01LFMD	LFMD	10/05/22 12:28	HG221003-6	.002002	U	.00183	mg/L	91	85	115	1	20	
WG551920CCV4	CCV	10/05/22 12:35	HG221003-3	.005005		.00497	mg/L	99	90	110			
WG551920CCB4	CCB	10/05/22 12:36				U	mg/L		-0.0002	0.0002			
WG551924													
WG551924CCV1	CCV	10/05/22 12:44	HG221003-3	.005005		.00495	mg/L	99	90	110			
WG551924CCB1	CCB	10/05/22 12:45				U	mg/L		-0.0002	0.0002			
WG551924PQV	PQV	10/05/22 12:46	HG221003-5	.001001		.00086	mg/L	86	70	130			
WG551924LRB	LRB	10/05/22 12:47				U	mg/L		-0.00044	0.00044			
WG551924LFB	LFB	10/05/22 12:48	HG221003-6	.002002		.00193	mg/L	96	85	115			
L76130-01LFM	LFM	10/05/22 12:49	HG221003-6	.002002	U	.00181	mg/L	90	85	115			
L76130-01LFMD	LFMD	10/05/22 12:50	HG221003-6	.002002	U	.00176	mg/L	88	85	115	3	20	
WG551924CCV2	CCV	10/05/22 12:55	HG221003-3	.005005		.00491	mg/L	98	90	110			
WG551924CCB2	CCB	10/05/22 12:56				U	mg/L		-0.0002	0.0002			
WG551924CCV3	CCV	10/05/22 13:06	HG221003-3	.005005		.005	mg/L	100	90	110			
WG551924CCB3	CCB	10/05/22 13:07				U	mg/L		-0.0002	0.0002			
WG551924CCV4	CCV	10/05/22 13:15	HG221003-3	.005005		.00494	mg/L	99	90	110			
WG551924CCB4	CCB	10/05/22 13:16				U	mg/L		-0.0002	0.0002			

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
WG551584													
WG551584ICV	ICV	09/28/22 23:29	WI220903-1	2.416		2.342	mg/L	97	90	110			
WG551584ICB	ICB	09/28/22 23:30				U	mg/L		-0.02	0.02			
WG551584LFB	LFB	09/28/22 23:34	WI220826-7	2		2.017	mg/L	101	90	110			
L58827-125AS	AS	09/28/22 23:36	WI220826-7	2	U	2.026	mg/L	101	90	110			
L73559-18DUP	DUP	09/28/22 23:39			U	U	mg/L				0	20	RA
WG551584CCV1	CCV	09/28/22 23:44	WI220923-5	2		1.966	mg/L	98	90	110			
WG551584CCB1	CCB	09/28/22 23:47				U	mg/L		-0.02	0.02			
WG551584CCV2	CCV	09/29/22 0:01	WI220923-5	2		1.961	mg/L		90	110			
WG551584CCB2	CCB	09/29/22 0:04				U	mg/L		-0.02	0.02			
WG551584CCV3	CCV	09/29/22 0:15	WI220923-5	2		1.951	mg/L	98	90	110			
WG551584CCB3	CCB	09/29/22 0:18				U	mg/L		-0.02	0.02			

HECLARIO

ACZ Project ID: **L76240**

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
WG551584													
WG551584ICV	ICV	09/28/22 23:29	WI220903-1	.608		.603	mg/L	99	90	110			
WG551584ICB	ICB	09/28/22 23:30				U	mg/L		-0.01	0.01			
WG551584LFB	LFB	09/28/22 23:34	WI220826-7	1		1.02	mg/L	102	90	110			
L58827-125AS	AS	09/28/22 23:36	WI220826-7	1	U	1.02	mg/L	102	90	110			
L73559-18DUP	DUP	09/28/22 23:39			U	U	mg/L				0	20	RA
WG551584CCV1	CCV	09/28/22 23:44	WI220923-5	1		.989	mg/L	99	90	110			
WG551584CCB1	CCB	09/28/22 23:47				U	mg/L		-0.01	0.01			
WG551584CCV2	CCV	09/29/22 0:01	WI220923-5	1		.991	mg/L	99	90	110			
WG551584CCB2	CCB	09/29/22 0:04				U	mg/L		-0.01	0.01			
WG551584CCV3	CCV	09/29/22 0:15	WI220923-5	1		.99	mg/L	99	90	110			
WG551584CCB3	CCB	09/29/22 0:18				U	mg/L		-0.01	0.01			

Nitrogen, ammonia

M350.1 Auto Salicylate w/gas diffusion

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG551629													
WG551629ICV	ICV	09/29/22 11:30	WI220702-3	12.024		12.861	mg/L	107	90	110			
WG551629ICB	ICB	09/29/22 11:31				U	mg/L		-0.05	0.05			
WG551630													
WG551630CCV1	CCV	09/29/22 12:55	WI220913-1	10		9.86	mg/L	99	90	110			
WG551630CCB1	CCB	09/29/22 12:56				U	mg/L		-0.05	0.05			
WG551630LFB1	LFB	09/29/22 12:58	WI220420-3	10		10.544	mg/L	105	90	110			
WG551630CCV2	CCV	09/29/22 13:12	WI220913-1	10		9.803	mg/L	98	90	110			
WG551630CCB2	CCB	09/29/22 13:14				U	mg/L		-0.05	0.05			
WG551630CCV3	CCV	09/29/22 13:30	WI220913-1	10		9.786	mg/L	98	90	110			
WG551630CCB3	CCB	09/29/22 13:32				U	mg/L		-0.05	0.05			
WG551630LFB2	LFB	09/29/22 13:40	WI220420-3	10		10.221	mg/L	102	90	110			
WG551630CCV4	CCV	09/29/22 13:48	WI220913-1	10		9.831	mg/L	98	90	110			
WG551630CCB4	CCB	09/29/22 13:49				U	mg/L		-0.05	0.05			
WG551630CCV6	CCV	09/29/22 14:35	WI220913-1	10		9.739	mg/L	97	90	110			
WG551630CCB6	CCB	09/29/22 14:36				U	mg/L		-0.05	0.05			
L76198-03DUP	DUP	09/29/22 14:41			U	U	mg/L				0	20	RA
WG551630CCV7	CCV	09/29/22 14:53	WI220913-1	10		9.755	mg/L	98	90	110			
WG551630CCB7	CCB	09/29/22 14:54				U	mg/L		-0.05	0.05			
L76198-02AS	AS	09/29/22 14:56	WI220420-3	10	U	10.195	mg/L	102	90	110			
WG551630CCV8	CCV	09/29/22 15:01	WI220913-1	10		9.646	mg/L	96	90	110			
WG551630CCB8	CCB	09/29/22 15:02				U	mg/L		-0.05	0.05			

HECLARIO

ACZ Project ID: **L76240**

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.

Nitrogen, total Kjeldahl

M351.2 - TKN by Block Digester

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG551988													
WG551988ICV	ICV	10/05/22 0:22	WI220928-1	4		4.09	mg/L	102	90	110			
WG551988ICB	ICB	10/05/22 0:23				U	mg/L		-0.2	0.2			
WG551991													
WG551991CCV1	CCV	10/05/22 1:07	WI220928-2	2.5		2.4	mg/L	96	90	110			
WG551991CCB1	CCB	10/05/22 1:08				U	mg/L		-0.2	0.2			
WG551799LRB	LRB	10/05/22 1:09				U	mg/L		-0.2	0.2			
WG551799LFB	LFB	10/05/22 1:10	WI220906-2	2.5		2.49	mg/L	100	90	110			
WG551991CCV2	CCV	10/05/22 1:21	WI220928-2	2.5		2.39	mg/L	96	90	110			
WG551991CCB2	CCB	10/05/22 1:22				U	mg/L		-0.2	0.2			
WG551991CCV3	CCV	10/05/22 1:34	WI220928-2	2.5		2.38	mg/L	95	90	110			
WG551991CCB3	CCB	10/05/22 1:36				U	mg/L		-0.2	0.2			
L76122-12LFM	LFM	10/05/22 1:37	2XTKN	5	U	5.29	mg/L	106	90	110			
L76122-13DUP	DUP	10/05/22 1:39			U	U	mg/L				0	20	RA
WG551991CCV4	CCV	10/05/22 1:45	WI220928-2	2.5		2.39	mg/L	96	90	110			
WG551991CCB4	CCB	10/05/22 1:47				U	mg/L		-0.2	0.2			

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG551768													
WG551768LCSW1	LCSW	09/30/22 15:50	PCN65296	6		6	units	100	5.9	6.1			
WG551768LCSW3	LCSW	09/30/22 18:16	PCN65296	6		6	units	100	5.9	6.1			
WG551768LCSW5	LCSW	09/30/22 20:34	PCN65296	6		6	units	100	5.9	6.1			
WG551768LCSW7	LCSW	09/30/22 23:11	PCN65296	6		6	units	100	5.9	6.1			
L76240-03DUP	DUP	10/01/22 2:03			6.6	6.6	units				0	20	
WG551768LCSW9	LCSW	10/01/22 2:07	PCN65296	6		6	units	100	5.9	6.1			

HECLARIO

ACZ Project ID: **L76240**

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
WG552273													
WG552273ICV	ICV	10/07/22 19:35	II220927-1	20		19.19	mg/L	96	95	105			
WG552273ICB	ICB	10/07/22 19:41				U	mg/L		-0.6	0.6			
WG552273PQV	PQV	10/07/22 19:44	II220907-2	1.005		1.08	mg/L	107	70	130			
WG552273SIC	SIC	10/07/22 19:47	II220906-2	1.005		.84	mg/L	84	80	120			
WG552273LFB	LFB	10/07/22 19:53	II220915-2	99.95798		97.39	mg/L	97	85	115			
WG552273CCV1	CCV	10/07/22 20:24	II220921-1	10		9.61	mg/L	96	90	110			
WG552273CCB1	CCB	10/07/22 20:27				U	mg/L		-0.6	0.6			
WG552273CCV2	CCV	10/07/22 21:01	II220921-1	10		9.49	mg/L	95	90	110			
WG552273CCB2	CCB	10/07/22 21:04				U	mg/L		-0.6	0.6			
L76239-01AS	AS	10/07/22 21:07	II220915-2	99.95798	.54	100.8	mg/L	100	85	115			
L76239-01ASD	ASD	10/07/22 21:10	II220915-2	99.95798	.54	99.97	mg/L	99	85	115	1	20	
WG552273CCV3	CCV	10/07/22 21:22	II220921-1	10		9.48	mg/L	95	90	110			
WG552273CCB3	CCB	10/07/22 21:25				U	mg/L		-0.6	0.6			
WG552403													
WG552403ICV	ICV	10/12/22 11:12	II221010-3	20		19.61	mg/L	98	95	105			
WG552403ICB	ICB	10/12/22 11:18				U	mg/L		-0.6	0.6			
WG552403PQV	PQV	10/12/22 11:21	II221008-4	1.005		1.02	mg/L	101	70	130			
WG552403SIC	SIC	10/12/22 11:24	II221007-2	1.005		1.09	mg/L	108	80	120			
WG552403LFB	LFB	10/12/22 11:31	II221008-2	99.95798		100.3	mg/L	100	85	115			
L75994-06AS	AS	10/12/22 11:47	II221008-2	99.95798	36.6	134.8	mg/L	98	85	115			
L75994-06ASD	ASD	10/12/22 11:50	II221008-2	99.95798	36.6	136	mg/L	99	85	115	1	20	
WG552403CCV1	CCV	10/12/22 12:03	II221010-4	10		9.86	mg/L	99	90	110			
WG552403CCB1	CCB	10/12/22 12:06				U	mg/L		-0.6	0.6			
WG552403CCV2	CCV	10/12/22 12:41	II221010-4	10		9.86	mg/L	99	90	110			
WG552403CCB2	CCB	10/12/22 12:44				U	mg/L		-0.6	0.6			
WG552403CCV3	CCV	10/12/22 13:03	II221010-4	10		9.85	mg/L	99	90	110			
WG552403CCB3	CCB	10/12/22 13:07				U	mg/L		-0.6	0.6			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG551554													
WG551554PBW	PBW	09/28/22 14:11				U	mg/L		-20	20			
WG551554LCSW	LCSW	09/28/22 14:13	PCN623503	1000		976	mg/L	98	80	120			
L76246-06DUP	DUP	09/28/22 15:11			U	U	mg/L				0	10	RA
WG551826													
WG551826PBW	PBW	10/03/22 11:00				U	mg/L		-20	20			
WG551826LCSW	LCSW	10/03/22 11:02	PCN623502	1000		986	mg/L	99	80	120			
L76277-06DUP	DUP	10/03/22 11:31			1960	1920	mg/L				2	10	

HECLARIO

ACZ Project ID: **L76240**

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.

Silver, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552106													
WG552106ICV	ICV	10/06/22 9:04	MS220930-3	.02		.02062	mg/L	103	90	110			
WG552106ICB	ICB	10/06/22 9:06				U	mg/L		-0.00022	0.00022			
WG552106LFB	LFB	10/06/22 9:08	MS220822-2	.01		.00941	mg/L	94	85	115			
WG552106CCV1	CCV	10/06/22 9:27	MS221004-5	.025		.02437	mg/L	97	90	110			
WG552106CCB1	CCB	10/06/22 9:29				U	mg/L		-0.0003	0.0003			
L76198-03AS	AS	10/06/22 9:44	MS220822-2	.01	U	.00912	mg/L	91	70	130			
L76198-03ASD	ASD	10/06/22 9:46	MS220822-2	.01	U	.00923	mg/L	92	70	130	1	20	
WG552106CCV2	CCV	10/06/22 9:49	MS221004-5	.025		.02419	mg/L	97	90	110			
WG552106CCB2	CCB	10/06/22 9:51				U	mg/L		-0.0003	0.0003			
WG552106CCV3	CCV	10/06/22 10:08	MS221004-5	.025		.02401	mg/L	96	90	110			
WG552106CCB3	CCB	10/06/22 10:10				U	mg/L		-0.0003	0.0003			

Silver, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552163													
WG552163ICV	ICV	10/06/22 14:12	MS220930-3	.02		.02131	mg/L	107	90	110			
WG552163ICB	ICB	10/06/22 14:14				U	mg/L		-0.0003	0.0003			
WG551995LRB	LRB	10/06/22 14:15				U	mg/L		-0.00022	0.00022			
WG551995LFB	LFB	10/06/22 14:17	MS220822-2	.01		.00909	mg/L	91	85	115			
L76240-02LFM	LFM	10/06/22 14:29	MS220822-2	.01	.00062	.00932	mg/L	87	70	130			
L76240-02LFMD	LFMD	10/06/22 14:30	MS220822-2	.01	.00062	.0096	mg/L	90	70	130	3	20	
WG552163CCV1	CCV	10/06/22 14:34	MS221004-5	.025		.02372	mg/L	95	90	110			
WG552163CCB1	CCB	10/06/22 14:36				U	mg/L		-0.0003	0.0003			
WG552163CCV2	CCV	10/06/22 14:57	MS221004-5	.025		.02405	mg/L	96	90	110			
WG552163CCB2	CCB	10/06/22 14:59				U	mg/L		-0.0003	0.0003			
WG552163CCV3	CCV	10/06/22 15:12	MS221004-5	.025		.02332	mg/L	93	90	110			
WG552163CCB3	CCB	10/06/22 15:14				U	mg/L		-0.0003	0.0003			

HECLARIO

ACZ Project ID: **L76240**

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
WG552273													
WG552273ICV	ICV	10/07/22 19:35	II220927-1	100		97.15	mg/L	97	95	105			
WG552273ICB	ICB	10/07/22 19:41				U	mg/L		-0.6	0.6			
WG552273PQV	PQV	10/07/22 19:44	II220907-2	1.002		1.07	mg/L	107	70	130			
WG552273SIC	SIC	10/07/22 19:47	II220906-2	1.002		1.04	mg/L	104	80	120			
WG552273LFB	LFB	10/07/22 19:53	II220915-2	100.0023		96.71	mg/L	97	85	115			
WG552273CCV1	CCV	10/07/22 20:24	II220921-1	50		48.44	mg/L	97	90	110			
WG552273CCB1	CCB	10/07/22 20:27				U	mg/L		-0.6	0.6			
WG552273CCV2	CCV	10/07/22 21:01	II220921-1	50		47.97	mg/L	96	90	110			
WG552273CCB2	CCB	10/07/22 21:04				U	mg/L		-0.6	0.6			
L76239-01AS	AS	10/07/22 21:07	II220915-2	100.0023	9.21	108.2	mg/L	99	85	115			
L76239-01ASD	ASD	10/07/22 21:10	II220915-2	100.0023	9.21	107.3	mg/L	98	85	115	1	20	
WG552273CCV3	CCV	10/07/22 21:22	II220921-1	50		47.99	mg/L	96	90	110			
WG552273CCB3	CCB	10/07/22 21:25				U	mg/L		-0.6	0.6			
WG552403													
WG552403ICV	ICV	10/12/22 11:12	II221010-3	100		98.99	mg/L	99	95	105			
WG552403ICB	ICB	10/12/22 11:18				U	mg/L		-0.6	0.6			
WG552403PQV	PQV	10/12/22 11:21	II221008-4	1.002		1.04	mg/L	104	70	130			
WG552403SIC	SIC	10/12/22 11:24	II221007-2	1.002		1.11	mg/L	111	80	120			
WG552403LFB	LFB	10/12/22 11:31	II221008-2	100.0023		100.6	mg/L	101	85	115			
L75994-06AS	AS	10/12/22 11:47	II221008-2	100.0023	103	199.1	mg/L	96	85	115			
L75994-06ASD	ASD	10/12/22 11:50	II221008-2	100.0023	103	199	mg/L	96	85	115	0	20	
WG552403CCV1	CCV	10/12/22 12:03	II221010-4	50		49.49	mg/L	99	90	110			
WG552403CCB1	CCB	10/12/22 12:06				U	mg/L		-0.6	0.6			
WG552403CCV2	CCV	10/12/22 12:41	II221010-4	50		49.46	mg/L	99	90	110			
WG552403CCB2	CCB	10/12/22 12:44				U	mg/L		-0.6	0.6			
WG552403CCV3	CCV	10/12/22 13:03	II221010-4	50		49.33	mg/L	99	90	110			
WG552403CCB3	CCB	10/12/22 13:07				U	mg/L		-0.6	0.6			

HECLARIO

ACZ Project ID: **L76240**

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

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547857													
WG547857ICV	ICV	08/03/22 17:44	WI220803-5	49.75		48.68	mg/L	98	90	110			
WG547857ICB	ICB	08/03/22 18:02				U	mg/L		-0.4	0.4			
WG552485													
WG552485CCV1	CCV	10/11/22 15:33	WI221004-11	50		49.87	mg/L	100	90	110			
WG552485CCB1	CCB	10/11/22 15:50				U	mg/L		-0.4	0.4			
WG552485PQV	PQV	10/11/22 16:08	WI221004-9	1.99		1.58	mg/L	79	70	130			
WG552485LFB1	LFB	10/11/22 16:26	WI211112-6	30		32.45	mg/L	108	90	110			
WG552485CCV2	CCV	10/11/22 19:08	WI221004-11	50		50.94	mg/L	102	90	110			
WG552485CCB2	CCB	10/11/22 19:25				U	mg/L		-0.4	0.4			
L75979-03AS	AS	10/11/22 22:07	WI211112-6	300	141	452.94	mg/L	104	90	110			
WG552485CCV3	CCV	10/11/22 22:43	WI221004-11	50		49.41	mg/L	99	90	110			
WG552485CCB3	CCB	10/11/22 23:01				U	mg/L		-0.4	0.4			
WG552485LFB2	LFB	10/12/22 1:24	WI211112-6	30		31.92	mg/L	106	90	110			
L76240-02DUP	DUP	10/12/22 2:00			91.9	91.69	mg/L				0	20	
WG552485CCV4	CCV	10/12/22 2:18	WI221004-11	50		50.41	mg/L	101	90	110			
WG552485CCB4	CCB	10/12/22 2:36				U	mg/L		-0.4	0.4			
L76240-03AS	AS	10/12/22 3:12	WI211112-6	60	128	187.11	mg/L	99	90	110			
WG552485CCV5	CCV	10/12/22 5:35	WI221004-11	50		49.62	mg/L	99	90	110			
WG552485CCB5	CCB	10/12/22 5:53				U	mg/L		-0.4	0.4			
WG552485CCV6	CCV	10/13/22 18:57	WI221004-11	50		49.7	mg/L	99	90	110			
WG552485CCB6	CCB	10/13/22 19:14				U	mg/L		-0.4	0.4			
WG552485PQV1	PQV	10/13/22 19:32	WI221004-9	1.99		1.42	mg/L	71	70	130			
L75979-02DUP	DUP	10/13/22 21:56			U	U	mg/L				0	20	RA
WG552485CCV7	CCV	10/13/22 22:32	WI221004-11	50		48.62	mg/L	97	90	110			
WG552485CCB7	CCB	10/13/22 22:50				U	mg/L		-0.4	0.4			
WG552485CCV8	CCV	10/14/22 0:37	WI221004-11	50		49.85	mg/L	100	90	110			
WG552485CCB8	CCB	10/14/22 0:55				U	mg/L		-0.4	0.4			

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG551674													
WG551674ICV	ICV	09/29/22 15:58	WC220929-3	.332		.339	mg/L	102	90	110			
WG551674ICB	ICB	09/29/22 16:01				U	mg/L		-0.05	0.05			
WG551674LFB1	LFB	09/29/22 16:04	WC220929-6	.21244		.244	mg/L	115	80	120			
WG551674CCV1	CCV	09/29/22 16:37	WC220929-4	.15933		.155	mg/L	97	90	110			
WG551674CCB1	CCB	09/29/22 16:40				U	mg/L		-0.05	0.05			
L76244-02AS	AS	09/29/22 16:47	WC220929-6	.21244	U	.035	mg/L	16	75	125			M2
L76244-02ASD	ASD	09/29/22 16:50	WC220929-6	.21244	U	.038	mg/L	18	75	125	8	20	M2
WG551674CCV2	CCV	09/29/22 17:17	WC220929-4	.15933		.154	mg/L	97	90	110			
WG551674CCB2	CCB	09/29/22 17:20				U	mg/L		-0.05	0.05			
WG551674LFB2	LFB	09/29/22 17:40	WC220929-6	.21244		.237	mg/L	112	80	120			
WG551674CCV3	CCV	09/29/22 17:56	WC220929-4	.15933		.155	mg/L	97	90	110			
WG551674CCB3	CCB	09/29/22 18:00				U	mg/L		-0.05	0.05			
WG551674CCV4	CCV	09/29/22 18:36	WC220929-4	.15933		.155	mg/L	97	90	110			
WG551674CCB4	CCB	09/29/22 18:39				U	mg/L		-0.05	0.05			
WG551674CCV5	CCV	09/29/22 18:52	WC220929-4	.15933		.155	mg/L	97	90	110			
WG551674CCB5	CCB	09/29/22 18:56				U	mg/L		-0.05	0.05			

HECLARIO

ACZ Project ID: **L76240**

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

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG551877													
WG551877ICV	ICV	10/03/22 19:20	MS220930-3	.05		.0488	mg/L	98	90	110			
WG551877ICB	ICB	10/03/22 19:22				U	mg/L		-0.0132	0.0132			
WG551877LFB	LFB	10/03/22 19:24	MS220822-2	.050075		.0515	mg/L	103	85	115			
WG551877CCV1	CCV	10/03/22 19:43	MS220920-2	.50075		.4949	mg/L	99	90	110			
WG551877CCB1	CCB	10/03/22 19:45				U	mg/L		-0.018	0.018			
L76240-01AS	AS	10/03/22 20:01	MS220822-2	.050075	.734	.7711	mg/L	74	70	130			
L76240-01ASD	ASD	10/03/22 20:03	MS220822-2	.050075	.734	.7701	mg/L	72	70	130	0	20	
WG551877CCV2	CCV	10/03/22 20:05	MS220920-2	.50075		.5049	mg/L	101	90	110			
WG551877CCB2	CCB	10/03/22 20:07				U	mg/L		-0.018	0.018			
WG551877CCV3	CCV	10/03/22 20:18	MS220920-2	.50075		.5067	mg/L	101	90	110			
WG551877CCB3	CCB	10/03/22 20:20				U	mg/L		-0.018	0.018			

Zinc, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG552163													
WG552163ICV	ICV	10/06/22 14:12	MS220930-3	.05		.0493	mg/L	99	90	110			
WG552163ICB	ICB	10/06/22 14:14				U	mg/L		-0.018	0.018			
WG551995LRB	LRB	10/06/22 14:15				U	mg/L		-0.0132	0.0132			
WG551995LFB	LFB	10/06/22 14:17	MS220822-2	.050075		.0455	mg/L	91	85	115			
L76240-02LFM	LFM	10/06/22 14:29	MS220822-2	.050075	.664	.7176	mg/L	107	70	130			
L76240-02LFMD	LFMD	10/06/22 14:30	MS220822-2	.050075	.664	.7245	mg/L	121	70	130	1	20	
WG552163CCV1	CCV	10/06/22 14:34	MS221004-5	.50075		.4919	mg/L	98	90	110			
WG552163CCB1	CCB	10/06/22 14:36				U	mg/L		-0.018	0.018			
WG552163CCV2	CCV	10/06/22 14:57	MS221004-5	.50075		.4918	mg/L	98	90	110			
WG552163CCB2	CCB	10/06/22 14:59				U	mg/L		-0.018	0.018			
WG552163CCV3	CCV	10/06/22 15:12	MS221004-5	.50075		.4828	mg/L	96	90	110			
WG552163CCB3	CCB	10/06/22 15:14				U	mg/L		-0.018	0.018			

Rio Grande Silver, Inc.

ACZ Project ID: **L76240**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L76240-01	WG552401	Aluminum, total recoverable	M200.7 ICP	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG552031	Carbon, dissolved organic (DOC)	SM5310B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG552485	Chloride	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG551584	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).
		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).
	WG551630	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG551991	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG551554	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).
	WG552485	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG551674	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	QD	Reported value is the background-corrected concentration, as described by the method.
	WG552247	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).

Rio Grande Silver, Inc.

ACZ Project ID: **L76240**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L76240-02	WG552247	Bicarbonate as CaCO ₃	SM2320B - Titration	H3	Sample was received and analyzed past holding time.
	WG552031	Carbon, dissolved organic (DOC)	SM5310B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG552247	Carbonate as CaCO ₃	SM2320B - Titration	H3	Sample was received and analyzed past holding time.
	WG552485	Chloride	M300.0 - Ion Chromatography	H1	Sample prep or analysis performed past holding time. See case narrative.
			M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG552247	Hydroxide as CaCO ₃	SM2320B - Titration	H3	Sample was received and analyzed past holding time.
	WG551584	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			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).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			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).
	WG551630	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG551991	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG551554	Residue, Filterable (TDS) @180C	SM2540C	H3	Sample was received and analyzed past holding time.
			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).
	WG552485	Sulfate	M300.0 - Ion Chromatography	H1	Sample prep or analysis performed past holding time. See case narrative.
	WG551674	Sulfide as S	SM4500S2-D	H3	Sample was received and analyzed past holding time.
			SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG552247	Total Alkalinity	SM2320B - Titration	H3	Sample was received and analyzed past holding time.
			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).

Rio Grande Silver, Inc.

ACZ Project ID: **L76240**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L76240-03	WG552403	Aluminum, 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.
	WG552031	Carbon, dissolved organic (DOC)	SM5310B	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG552485	Chloride	M300.0 - Ion Chromatography	DC	Sample required dilution. Non-target analyte exceeded calibration range.
			M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG551584	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).
		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).
	WG551630	Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG551991	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG551674	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	QD	Reported value is the background-corrected concentration, as described by the method.
	WG552247	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).

Rio Grande Silver, Inc.

Project ID:

Sample ID: HW-2

ACZ Sample ID: **L76240-01**

Date Sampled: 09/27/22 10:30

Date Received: 09/28/22

Sample Matrix: Groundwater

Oil & Grease, Total Recoverable

Analysis Method: **1664A/B - Gravimetric**

Extract Method:

Workgroup: **WG552157**

Analyst: MKB

Extract Date:

Analysis Date: 10/06/22 14:38

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease		<2.1	U	1.03		mg/L	2.1	10.3

Rio Grande Silver, Inc.

Project ID:

Sample ID: GW-1

ACZ Sample ID: **L76240-02**

Date Sampled: 09/13/22 10:50

Date Received: 09/28/22

Sample Matrix: Groundwater

Oil & Grease, Total Recoverable

Analysis Method: **1664A/B - Gravimetric**

Extract Method:

Workgroup: **WG552157**

Analyst: MKB

Extract Date:

Analysis Date: 10/06/22 14:44

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease		<2	U	0.99		mg/L	2	9.9

Rio Grande Silver, Inc.

Project ID:

Sample ID: DP-5

ACZ Sample ID: **L76240-03**

Date Sampled: 09/27/22 10:00

Date Received: 09/28/22

Sample Matrix: Groundwater

Oil & Grease, Total Recoverable

Analysis Method: **1664A/B - Gravimetric**

Extract Method:

Workgroup: **WG552157**

Analyst: MKB

Extract Date:

Analysis Date: 10/06/22 14:50

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease		<2	U	1.01		mg/L	2	10.1


Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit unless omitted or equal to the PQL (see comment #4) Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit. Synonymous with the EPA term "minimum level".
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFB</i>	Laboratory Fortified Blank
<i>INTS</i>	Internal Standard	<i>LFM</i>	Laboratory Fortified Matrix
<i>AS</i>	Analytical Spike (Post Digestion)	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>ASD</i>	Analytical Spike (Post Digestion) Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>DUP</i>	Sample Duplicate	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBS</i>	Prep Blank - Soil
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBW</i>	Prep Blank - Water

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.

ACZ Qualifiers (Qual)

O	Analyte concentration is estimated due to result exceeding calibration range.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
J	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
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 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
- (3) EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
- (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) Excluding Oil & Grease, solid & biological matrices for organic analyses are reported on a wet weight basis.
- (3) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (4) 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://aczk.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

Rio Grande Silver, Inc.

ACZ Project ID: **L76240**

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.

Oil & Grease, Total Recoverable

1664A/B - Gravimetric

WG552157

MS	Sample ID: L76216-01MS			PCN/SCN: OP221006-3			Analyzed: 10/06/22 14:31			
Compound	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40	3.9	38.3	mg/L	86.0	78	114			Q5

LCSW	Sample ID: WG552157LCSW			PCN/SCN: OP221006-3			Analyzed: 10/06/22 15:03			
Compound	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		33.4	mg/L	84.0	78	114			

LCSWD	Sample ID: WG552157LCSWD			PCN/SCN: OP221006-3			Analyzed: 10/06/22 15:10			
Compound	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		36.1	mg/L	90.0	78	114	8	18	

PBW	Sample ID: WG552157PBW						Analyzed: 10/06/22 14:00			
Compound	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE			U	mg/L						

ACZ Project ID: **L76240**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
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No extended qualifiers associated with this analysis

Rio Grande Silver, Inc.

ACZ Project ID: **L76240**

No certification qualifiers associated with this analysis

Rio Grande Silver, Inc.

ACZ Project ID: L76240

Date Received: 09/28/2022 11:24

Received By:

Date Printed: 9/29/2022

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	

Some parameters were received past hold time.

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?
7175	3.2	<=6.0	15	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.

Rio Grande Silver, Inc.

ACZ Project ID: L76240

Date Received: 09/28/2022 11:24

Received By:

Date Printed: 9/29/2022

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.** L76240

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

CHAIN of CUSTODY**Report to:**

Name: Randy McClure

Company: Rio Grande Silver, Inc.

E-mail: rmccclure@hecla-mining.com

Address: 625 USFS Road 504. 1A

Creede, CO 81130

Telephone: 719-658-1080

Copy of Report to:

Name:

Company:

E-mail: None

Telephone: None

Invoice to:

Name: Randy McClure

Company: Rio Grande Silver, Inc.

E-mail: rmccclure@hecla-mining.com

Address: 625 USFS Road 504. 1A

Creede, CO 81130

Telephone: 719-658-1080

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: Randy McClure

Sampler's Site Information

State CO

Zip code 81130

Time Zone mst

*Sampler's Signature: Randy McClure

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Rio Grande - GW - 2022

PO#: BO-50266

Reporting state for compliance testing:

Check box if samples include NRC licensed material? ☐

SAMPLE IDENTIFICATION	DATE:TIME	Matrix
HW-2	9/27/22 10:30 am	GW
GW-1	9/13/22 10:50 am	GW
DP-3	Did Not Sample	GW
DP-4	Did Not Sample	GW
DP-5	9/27/22 10:00 am	GW

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

REMARKS

GW samples and any listed trip blanks should be included on one report. There may be more than one cooler for this COC. Please send an additional copy of the report to rmccclure@hecla-mining.com

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

Randy McClure

9/27/22 11:30 am



9/28/22

1124