

Figure 3

Groundwater samples in Windy Gulch were collected on September 19, 2023

2023 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.

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

October 10, 2023

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

cc: Kerry Mierau

Project ID: BO52077
ACZ Project ID: L83261

Randy McClure:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on September 20, 2023. This project has been assigned to ACZ's project number, L83261. 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 L83261. 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 09, 2023. 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.

Project ID: BO52077

Sample ID: DP-5

ACZ Sample ID: **L83261-01**

Date Sampled: 09/19/23 10:00

Date Received: 09/20/23

Sample Matrix: Groundwater

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								09/25/23 12:43	bls/aps
Total Recoverable Digestion	M200.2 ICP								09/27/23 16:11	smw
Total Recoverable Digestion	M200.2 ICP-MS								10/03/23 19:59	jrj

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	09/28/23 15:27	aeH
Aluminum, total recoverable	M200.7 ICP	1	0.685			mg/L	0.05	0.25	09/29/23 18:41	wtc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0103			mg/L	0.0002	0.001	09/25/23 18:19	kja
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0220			mg/L	0.0002	0.001	09/27/23 12:18	jrj
Cadmium, dissolved	M200.8 ICP-MS	1	0.00129			mg/L	0.00005	0.00025	09/25/23 18:19	kja
Cadmium, total recoverable	M200.8 ICP-MS	1	0.00274			mg/L	0.00005	0.00025	09/29/23 17:23	kja
Calcium, dissolved	M200.7 ICP	1	41.4			mg/L	0.1	0.5	09/28/23 15:27	aeH
Copper, dissolved	M200.8 ICP-MS	1	<0.0008	U		mg/L	0.0008	0.002	09/25/23 18:19	kja
Copper, total recoverable	M200.8 ICP-MS	1	0.00378			mg/L	0.0008	0.002	09/27/23 12:18	jrj
Iron, dissolved	M200.7 ICP	1	0.664			mg/L	0.06	0.15	09/30/23 13:04	wtc
Iron, total recoverable	M200.7 ICP	1	4.24			mg/L	0.06	0.15	09/29/23 18:41	wtc
Lead, dissolved	M200.8 ICP-MS	1	0.00083			mg/L	0.0001	0.0005	09/25/23 18:19	kja
Lead, total recoverable	M200.8 ICP-MS	1	0.0519			mg/L	0.0001	0.0005	09/27/23 12:18	jrj
Magnesium, dissolved	M200.7 ICP	1	4.44			mg/L	0.2	1	09/28/23 15:27	aeH
Manganese, dissolved	M200.7 ICP	1	0.084			mg/L	0.01	0.05	09/30/23 13:04	wtc
Manganese, total recoverable	M200.7 ICP	1	0.121			mg/L	0.01	0.05	09/29/23 18:41	wtc
Mercury, total	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	09/25/23 14:03	mlh
Potassium, dissolved	M200.7 ICP	1	2.97			mg/L	0.5	1	09/28/23 15:27	aeH
Silver, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	09/25/23 18:19	kja
Silver, total recoverable	M200.8 ICP-MS	1	0.00059			mg/L	0.0001	0.0005	09/27/23 12:18	jrj
Sodium, dissolved	M200.7 ICP	1	10.4			mg/L	0.2	1	09/28/23 15:27	aeH
Zinc, dissolved	M200.8 ICP-MS	2	3.33			mg/L	0.012	0.03	10/02/23 15:51	gjl/scp
Zinc, total recoverable	M200.8 ICP-MS	1	4.54			mg/L	0.006	0.015	10/04/23 19:17	kja

Rio Grande Silver, Inc.

Project ID: BO52077

Sample ID: DP-5

ACZ Sample ID: **L83261-01**

Date Sampled: 09/19/23 10:00

Date Received: 09/20/23

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	67.2	H		mg/L	2	20	10/06/23 0:00	emk
Carbonate as CaCO ₃		1	<2	UH		mg/L	2	20	10/06/23 0:00	emk
Hydroxide as CaCO ₃		1	<2	UH		mg/L	2	20	10/06/23 0:00	emk
Total Alkalinity		1	67.2	H	*	mg/L	2	20	10/06/23 0:00	emk
Carbon, dissolved organic (DOC)	SM5310B	1	2.6	B	*	mg/L	1	5	09/26/23 19:54	ems
Cation-Anion Balance	Calculation									
Cation-Anion Balance			0.0			%			10/10/23 0:00	calc
Sum of Anions			3.1			meq/L			10/10/23 0:00	calc
Sum of Cations			3.1			meq/L			10/10/23 0:00	calc
Chloride	M300.0 - Ion Chromatography	1	2.88		*	mg/L	0.4	2	10/06/23 18:53	bls
Fluoride	SM4500F-C	1	0.44			mg/L	0.15	0.35	10/05/23 16:24	jck
Hardness as CaCO ₃ (dissolved)	SM2340B - Calculation		122			mg/L	0.2	5	10/10/23 0:00	calc
Nitrate as N	Calculation: NO ₃ NO ₂ minus NO ₂		0.246			mg/L	0.02	0.1	10/10/23 0:00	calc
Nitrate/Nitrite as N	M353.2 - Automated Cadmium Reduction	1	0.246			mg/L	0.02	0.1	09/20/23 23:55	pjb
Nitrite as N	M353.2 - Automated Cadmium Reduction	1	<0.01	U		mg/L	0.01	0.05	09/20/23 23:55	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	<0.1	U	*	mg/L	0.1	0.2	09/25/23 15:26	scs
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		<0.2	U		mg/L	0.2	0.5	10/10/23 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	<0.2	U	*	mg/L	0.2	0.5	09/30/23 23:58	pjb
pH (lab)	SM4500H+ B									
pH		1	7.3	H		units	0.1	0.1	09/26/23 0:00	emk
pH measured at		1	23.2			C	0.1	0.1	09/26/23 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	220			mg/L	20	40	09/26/23 12:39	smr
Sulfate	M300.0 - Ion Chromatography	1	78.0			mg/L	0.9	2	10/06/23 18:53	bls
Sulfide as S	SM4500S2-D	1	<0.02	U		mg/L	0.02	0.1	09/21/23 14:09	svm
TDS (calculated)	Calculation		186			mg/L			10/10/23 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.18						10/10/23 0:00	calc

Rio Grande Silver, Inc.

Project ID: BO52077

Sample ID: HW-2

ACZ Sample ID: **L83261-02**

Date Sampled: 09/19/23 10:30

Date Received: 09/20/23

Sample Matrix: Groundwater

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								09/25/23 13:14	bls/aps
Total Recoverable Digestion	M200.2 ICP								09/27/23 16:25	smw
Total Recoverable Digestion	M200.2 ICP-MS								10/03/23 20:10	jrj

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	09/28/23 15:30	aeH
Aluminum, total recoverable	M200.7 ICP	1	0.321			mg/L	0.05	0.25	09/29/23 18:44	wtc
Arsenic, dissolved	M200.8 ICP-MS	1	0.00787			mg/L	0.0002	0.001	09/25/23 18:21	kja
Arsenic, total recoverable	M200.8 ICP-MS	1	0.00730			mg/L	0.0002	0.001	09/27/23 12:20	jrj
Cadmium, dissolved	M200.8 ICP-MS	1	0.00319			mg/L	0.00005	0.00025	09/25/23 18:21	kja
Cadmium, total recoverable	M200.8 ICP-MS	1	0.00345			mg/L	0.00005	0.00025	09/29/23 17:25	kja
Calcium, dissolved	M200.7 ICP	1	38.7			mg/L	0.1	0.5	09/28/23 15:30	aeH
Copper, dissolved	M200.8 ICP-MS	1	<0.0008	U		mg/L	0.0008	0.002	09/25/23 18:21	kja
Copper, total recoverable	M200.8 ICP-MS	1	0.00109	B		mg/L	0.0008	0.002	09/27/23 12:20	jrj
Iron, dissolved	M200.7 ICP	1	<0.06	U		mg/L	0.06	0.15	09/30/23 13:07	wtc
Iron, total recoverable	M200.7 ICP	1	0.209			mg/L	0.06	0.15	09/29/23 18:44	wtc
Lead, dissolved	M200.8 ICP-MS	1	0.00032	B		mg/L	0.0001	0.0005	09/25/23 18:21	kja
Lead, total recoverable	M200.8 ICP-MS	1	0.00076			mg/L	0.0001	0.0005	09/27/23 12:20	jrj
Magnesium, dissolved	M200.7 ICP	1	3.81			mg/L	0.2	1	09/28/23 15:30	aeH
Manganese, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	09/30/23 13:07	wtc
Manganese, total recoverable	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	09/29/23 18:44	wtc
Mercury, total	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	09/28/23 11:46	mlh
Potassium, dissolved	M200.7 ICP	1	3.61			mg/L	0.5	1	09/28/23 15:30	aeH
Silver, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	09/25/23 18:21	kja
Silver, total recoverable	M200.8 ICP-MS	1	0.00013	B		mg/L	0.0001	0.0005	09/27/23 12:20	jrj
Sodium, dissolved	M200.7 ICP	1	6.87			mg/L	0.2	1	09/28/23 15:30	aeH
Zinc, dissolved	M200.8 ICP-MS	2	0.836			mg/L	0.012	0.03	10/02/23 15:54	gjl/scp
Zinc, total recoverable	M200.8 ICP-MS	1	0.769			mg/L	0.006	0.015	10/04/23 19:19	kja

Rio Grande Silver, Inc.

Project ID: BO52077

Sample ID: HW-2

ACZ Sample ID: **L83261-02**

Date Sampled: 09/19/23 10:30

Date Received: 09/20/23

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	31.3			mg/L	2	20	09/26/23 0:00	emk
Carbonate as CaCO ₃		1	<2	U		mg/L	2	20	09/26/23 0:00	emk
Hydroxide as CaCO ₃		1	<2	U		mg/L	2	20	09/26/23 0:00	emk
Total Alkalinity		1	31.3		*	mg/L	2	20	09/26/23 0:00	emk
Carbon, dissolved organic (DOC)	SM5310B	1	2.4	B	*	mg/L	1	5	09/26/23 20:13	ems
Cation-Anion Balance	Calculation									
Cation-Anion Balance			-3.6			%			10/10/23 0:00	calc
Sum of Anions			2.9			meq/L			10/10/23 0:00	calc
Sum of Cations			2.7			meq/L			10/10/23 0:00	calc
Chloride	M300.0 - Ion Chromatography	2	2.94	B	*	mg/L	0.8	4	09/29/23 23:45	bls
Fluoride	SM4500F-C	1	0.27	B		mg/L	0.15	0.35	10/05/23 16:39	jck
Hardness as CaCO ₃ (dissolved)	SM2340B - Calculation		112			mg/L	0.2	5	10/10/23 0:00	calc
Nitrate as N	Calculation: NO ₃ NO ₂ minus NO ₂		0.198			mg/L	0.02	0.1	10/10/23 0:00	calc
Nitrate/Nitrite as N	M353.2 - Automated Cadmium Reduction	1	0.198			mg/L	0.02	0.1	09/20/23 23:56	pjb
Nitrite as N	M353.2 - Automated Cadmium Reduction	1	<0.01	U		mg/L	0.01	0.05	09/20/23 23:56	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	<0.1	U	*	mg/L	0.1	0.2	09/25/23 15:28	scs
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		<0.2	U		mg/L	0.2	0.5	10/10/23 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	<0.2	U	*	mg/L	0.2	0.5	10/01/23 0:00	pjb
pH (lab)	SM4500H+ B									
pH		1	5.8	H		units	0.1	0.1	09/26/23 0:00	emk
pH measured at		1	23.5			C	0.1	0.1	09/26/23 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	214			mg/L	20	40	09/26/23 12:41	smr
Sulfate	M300.0 - Ion Chromatography	2	104			mg/L	1.8	4	09/29/23 23:45	bls
Sulfide as S	SM4500S2-D	1	<0.02	U		mg/L	0.02	0.1	09/21/23 14:13	svm
TDS (calculated)	Calculation		180			mg/L			10/10/23 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.19						10/10/23 0:00	calc

Rio Grande Silver, Inc.

Project ID: BO52077

Sample ID: HW-D

ACZ Sample ID: **L83261-03**

Date Sampled: 09/19/23 10:45

Date Received: 09/20/23

Sample Matrix: Groundwater

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrogen, total Kjeldahl	M351.2 - Block Digestor								09/25/23 13:44	bls/aps
Total Recoverable Digestion	M200.2 ICP-MS				*				10/03/23 20:22	jrj
Total Recoverable Digestion	M200.2 ICP								09/27/23 16:40	smw

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	09/28/23 15:44	aeH
Aluminum, total recoverable	M200.7 ICP	1	0.289			mg/L	0.05	0.25	09/29/23 18:47	wtc
Arsenic, dissolved	M200.8 ICP-MS	1	0.00820			mg/L	0.0002	0.001	09/25/23 18:23	kja
Arsenic, total recoverable	M200.8 ICP-MS	1	0.00746			mg/L	0.0002	0.001	09/27/23 12:22	jrj
Cadmium, dissolved	M200.8 ICP-MS	1	0.00367			mg/L	0.00005	0.00025	09/25/23 18:23	kja
Cadmium, total recoverable	M200.8 ICP-MS	1	0.00387			mg/L	0.00005	0.00025	09/29/23 17:27	kja
Calcium, dissolved	M200.7 ICP	1	40.7			mg/L	0.1	0.5	09/28/23 15:44	aeH
Copper, dissolved	M200.8 ICP-MS	1	<0.0008	U		mg/L	0.0008	0.002	09/25/23 18:23	kja
Copper, total recoverable	M200.8 ICP-MS	1	0.00133	B		mg/L	0.0008	0.002	09/27/23 12:22	jrj
Iron, dissolved	M200.7 ICP	1	<0.06	U		mg/L	0.06	0.15	09/30/23 13:16	wtc
Iron, total recoverable	M200.7 ICP	1	0.194			mg/L	0.06	0.15	09/29/23 18:47	wtc
Lead, dissolved	M200.8 ICP-MS	1	0.00034	B		mg/L	0.0001	0.0005	09/25/23 18:23	kja
Lead, total recoverable	M200.8 ICP-MS	1	0.00079			mg/L	0.0001	0.0005	09/27/23 12:22	jrj
Magnesium, dissolved	M200.7 ICP	1	4.12			mg/L	0.2	1	09/28/23 15:44	aeH
Manganese, dissolved	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	09/30/23 13:16	wtc
Manganese, total recoverable	M200.7 ICP	1	<0.01	U		mg/L	0.01	0.05	09/29/23 18:47	wtc
Mercury, total	M245.1 CVAA	1	<0.0002	U		mg/L	0.0002	0.001	09/28/23 11:47	mlh
Potassium, dissolved	M200.7 ICP	1	3.85			mg/L	0.5	1	09/28/23 15:44	aeH
Silver, dissolved	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	09/25/23 18:23	kja
Silver, total recoverable	M200.8 ICP-MS	1	<0.0001	U		mg/L	0.0001	0.0005	09/27/23 12:22	jrj
Sodium, dissolved	M200.7 ICP	1	7.25			mg/L	0.2	1	09/28/23 15:44	aeH
Zinc, dissolved	M200.8 ICP-MS	2	0.877			mg/L	0.012	0.03	10/02/23 15:56	gjl/scp
Zinc, total recoverable	M200.8 ICP-MS	2	0.826			mg/L	0.012	0.03	10/04/23 19:21	kja

Rio Grande Silver, Inc.

Project ID: BO52077

Sample ID: HW-D

ACZ Sample ID: **L83261-03**

Date Sampled: 09/19/23 10:45

Date Received: 09/20/23

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	26.3			mg/L	2	20	09/26/23 0:00	emk
Carbonate as CaCO ₃		1	<2	U		mg/L	2	20	09/26/23 0:00	emk
Hydroxide as CaCO ₃		1	<2	U		mg/L	2	20	09/26/23 0:00	emk
Total Alkalinity		1	26.3		*	mg/L	2	20	09/26/23 0:00	emk
Carbon, dissolved organic (DOC)	SM5310B	1	2.6	B	*	mg/L	1	5	09/26/23 20:38	ems
Cation-Anion Balance	Calculation									
Cation-Anion Balance			5.7			%			10/10/23 0:00	calc
Sum of Anions			2.5			meq/L			10/10/23 0:00	calc
Sum of Cations			2.8			meq/L			10/10/23 0:00	calc
Chloride	M300.0 - Ion Chromatography	1	1.39	B	*	mg/L	0.4	2	10/02/23 23:08	bls
Fluoride	SM4500F-C	1	0.27	B		mg/L	0.15	0.35	10/05/23 16:43	jck
Hardness as CaCO ₃ (dissolved)	SM2340B - Calculation		119			mg/L	0.2	5	10/10/23 0:00	calc
Nitrate as N	Calculation: NO ₃ NO ₂ minus NO ₂		0.231			mg/L	0.02	0.1	10/10/23 0:00	calc
Nitrate/Nitrite as N	M353.2 - Automated Cadmium Reduction	1	0.231			mg/L	0.02	0.1	09/20/23 23:58	pjb
Nitrite as N	M353.2 - Automated Cadmium Reduction	1	<0.01	U		mg/L	0.01	0.05	09/20/23 23:58	pjb
Nitrogen, ammonia	M350.1 Auto Salicylate w/gas diffusion	1	<0.1	U	*	mg/L	0.1	0.2	09/25/23 15:29	scs
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		<0.2	U		mg/L	0.2	0.5	10/10/23 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	1	<0.2	U	*	mg/L	0.2	0.5	10/01/23 0:05	pjb
pH (lab)	SM4500H+ B									
pH		1	5.8	H		units	0.1	0.1	09/26/23 0:00	emk
pH measured at		1	23.4			C	0.1	0.1	09/26/23 0:00	emk
Residue, Filterable (TDS) @180C	SM2540C	1	228			mg/L	20	40	09/26/23 12:44	smr
Sulfate	M300.0 - Ion Chromatography	5	89.3			mg/L	4.5	10	09/30/23 0:21	bls
Sulfide as S	SM4500S2-D	1	<0.02	U		mg/L	0.02	0.1	09/21/23 14:16	svm
TDS (calculated)	Calculation		164			mg/L			10/10/23 0:00	calc
TDS (ratio - measured/calculated)	Calculation		1.39						10/10/23 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: **L83261**

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
WG575175													
WG575175PBW1	PBW	09/26/23 17:45				U	mg/L		-20	20			
WG575175LCSW2	LCSW	09/26/23 17:52	WC230826-1	820.0001		800.1	mg/L	98	90	110			
WG575175PQV	PQV	09/26/23 17:57	WC230703-1	20		21.8	mg/L	109	50	150			
WG575175LCSW4	LCSW	09/26/23 19:41	WC230826-1	820.0001		775.3	mg/L	95	90	110			
WG575175PBW2	PBW	09/26/23 19:45				85.4	mg/L		-20	20			B4
WG575175LCSW6	LCSW	09/26/23 21:04	WC230826-1	820.0001		765.1	mg/L	93	90	110			
WG575175PBW3	PBW	09/26/23 21:09				86.8	mg/L		-20	20			B4 BF
WG575175LCSW8	LCSW	09/26/23 22:41	WC230826-1	820.0001		781.7	mg/L	95	90	110			
WG575175PBW4	PBW	09/26/23 22:46				92.5	mg/L		-20	20			B4 BF
L83261-03DUP	DUP	09/26/23 23:25			26.3	26.9	mg/L				2	20	
WG575175LCSW10	LCSW	09/27/23 0:12	WC230826-1	820.0001		787.1	mg/L	96	90	110			
WG575175PBW5	PBW	09/27/23 0:17				96.5	mg/L		-20	20			B4 BF
WG575175LCSW12	LCSW	09/27/23 1:32	WC230826-1	820.0001		772.6	mg/L	94	90	110			
WG575175PBW6	PBW	09/27/23 1:37				95.5	mg/L		-20	20			B4 BF
WG575996													
WG575996PBW1	PBW	10/06/23 11:23				7.2	mg/L		-20	20			
WG575996LCSW2	LCSW	10/06/23 11:39	WC230929-8	820.0001		815.8	mg/L	99	90	110			
L83275-05DUP	DUP	10/06/23 12:09			U	U	mg/L				0	20	RA
WG575996LCSW4	LCSW	10/06/23 12:57	WC230929-8	820.0001		820	mg/L	100	90	110			
WG575996PBW2	PBW	10/06/23 13:05				3.2	mg/L		-20	20			

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575225													
WG575225ICV	ICV	09/28/23 14:43	II230922-1	2		1.956	mg/L	98	95	105			
WG575225ICB	ICB	09/28/23 14:49				U	mg/L		-0.15	0.15			
WG575225PQV	PQV	09/28/23 14:52	II230919-3	.25025		.209	mg/L	84	70	130			
WG575225SIC	SIC	09/28/23 14:55	II230919-4	200.45025		210.9	mg/L	105	1	200			
WG575225LFB	LFB	09/28/23 15:01	II230927-1	1.001		1.028	mg/L	103	85	115			
WG575225CCV1	CCV	09/28/23 15:33	II230922-2	1		.989	mg/L	99	90	110			
WG575225CCB1	CCB	09/28/23 15:36				U	mg/L		-0.15	0.15			
L83261-02AS	AS	09/28/23 15:39	II230927-1	1.001	U	1.035	mg/L	103	85	115			
L83261-02ASD	ASD	09/28/23 15:42	II230927-1	1.001	U	1.019	mg/L	102	85	115	2	20	
WG575225CCV2	CCV	09/28/23 16:08	II230922-2	1		.995	mg/L	100	90	110			
WG575225CCB2	CCB	09/28/23 16:11				U	mg/L		-0.15	0.15			
WG575225CCV3	CCV	09/28/23 16:30	II230922-2	1		.976	mg/L	98	90	110			
WG575225CCB3	CCB	09/28/23 16:33				U	mg/L		-0.15	0.15			

HECLARIO

ACZ Project ID: **L83261**

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
WG575478													
WG575478ICV	ICV	09/29/23 18:05	II230922-1	2		1.946	mg/L	97	95	105			
WG575478ICB	ICB	09/29/23 18:10				U	mg/L		-0.15	0.15			
WG575478PQV	PQV	09/29/23 18:14	II230919-3	.25025		.183	mg/L	73	70	130			
WG575478SIC	SIC	09/29/23 18:17	II230919-4	200.45025		208.3	mg/L	104	1	200			
WG575188LRB	LRB	09/29/23 18:23				U	mg/L		-0.11	0.11			
WG575188LFB	LFB	09/29/23 18:26	II230907-5	1.001		.966	mg/L	97	85	115			
L83261-03LFM	LFM	09/29/23 18:50	II230907-5	1.001	.289	1.549	mg/L	126	70	130			
WG575478CCV1	CCV	09/29/23 18:53	II230922-2	1		.94	mg/L	94	90	110			
WG575478CCB1	CCB	09/29/23 18:56				U	mg/L		-0.15	0.15			
L83261-03LFMD	LFMD	09/29/23 18:59	II230907-5	1.001	.289	1.594	mg/L	130	70	130	3	20	
WG575478CCV2	CCV	09/29/23 19:29	II230922-2	1		.939	mg/L	94	90	110			
WG575478CCB2	CCB	09/29/23 19:32				U	mg/L		-0.15	0.15			
WG575478CCV3	CCV	09/29/23 19:53	II230922-2	1		.945	mg/L	95	90	110			
WG575478CCB3	CCB	09/29/23 19:56				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
WG575036													
WG575036ICV	ICV	09/25/23 17:48	MS230908-1	.05		.05191	mg/L	104	90	110			
WG575036ICB	ICB	09/25/23 17:49				U	mg/L		-0.00044	0.00044			
WG575036LFB	LFB	09/25/23 17:51	MS230912-3	.0501		.05415	mg/L	108	85	115			
WG575036CCV1	CCV	09/25/23 18:06	MS230921-3	.1002		.10291	mg/L	103	90	110			
WG575036CCB1	CCB	09/25/23 18:08				U	mg/L		-0.0006	0.0006			
WG575036CCV2	CCV	09/25/23 18:28	MS230921-3	.1002		.10335	mg/L	103	90	110			
WG575036CCB2	CCB	09/25/23 18:30				U	mg/L		-0.0006	0.0006			
L83266-02AS	AS	09/25/23 18:37	MS230912-3	.0501	.0125	.07108	mg/L	117	70	130			
L83266-02ASD	ASD	09/25/23 18:39	MS230912-3	.0501	.0125	.07024	mg/L	115	70	130	1	20	
WG575036CCV3	CCV	09/25/23 18:45	MS230921-3	.1002		.10424	mg/L	104	90	110			
WG575036CCB3	CCB	09/25/23 18:46				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
WG575226													
WG575226ICV	ICV	09/27/23 11:40	MS230908-1	.05		.05028	mg/L	101	90	110			
WG575226ICB	ICB	09/27/23 11:41				U	mg/L		-0.0006	0.0006			
WG575166LRB	LRB	09/27/23 11:43				U	mg/L		-0.00044	0.00044			
WG575166LFB	LFB	09/27/23 11:45	MS230912-3	.0501		.05514	mg/L	110	85	115			
WG575226CCV1	CCV	09/27/23 12:02	MS230921-3	.1002		.10038	mg/L	100	90	110			
WG575226CCB1	CCB	09/27/23 12:04				U	mg/L		-0.0006	0.0006			
WG575226CCV2	CCV	09/27/23 12:24	MS230921-3	.1002		.09719	mg/L	97	90	110			
WG575226CCB2	CCB	09/27/23 12:26				U	mg/L		-0.0006	0.0006			
L83302-02LFM	LFM	09/27/23 12:33	MS230912-3	.0501	U	.04782	mg/L	95	70	130			
L83302-02LFMD	LFMD	09/27/23 12:35	MS230912-3	.0501	U	.04721	mg/L	94	70	130	1	20	
WG575226CCV3	CCV	09/27/23 12:39	MS230921-3	.1002		.09546	mg/L	95	90	110			
WG575226CCB3	CCB	09/27/23 12:41				U	mg/L		-0.0006	0.0006			

HECLARIO

ACZ Project ID: **L83261**

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
WG575036													
WG575036ICV	ICV	09/25/23 17:48	MS230908-1	.05		.051538	mg/L	103	90	110			
WG575036ICB	ICB	09/25/23 17:49				U	mg/L		-0.00011	0.00011			
WG575036LFB	LFB	09/25/23 17:51	MS230912-3	.05005		.0552	mg/L	110	85	115			
WG575036CCV1	CCV	09/25/23 18:06	MS230921-3	.1001		.101198	mg/L	101	90	110			
WG575036CCB1	CCB	09/25/23 18:08				U	mg/L		-0.00015	0.00015			
WG575036CCV2	CCV	09/25/23 18:28	MS230921-3	.1001		.100161	mg/L	100	90	110			
WG575036CCB2	CCB	09/25/23 18:30				U	mg/L		-0.00015	0.00015			
L83266-02AS	AS	09/25/23 18:37	MS230912-3	.05005	.000138	.054238	mg/L	108	70	130			
L83266-02ASD	ASD	09/25/23 18:39	MS230912-3	.05005	.000138	.053867	mg/L	107	70	130	1	20	
WG575036CCV3	CCV	09/25/23 18:45	MS230921-3	.1001		.099465	mg/L	99	90	110			
WG575036CCB3	CCB	09/25/23 18:46				.000076	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
WG575477													
WG575477ICV	ICV	09/29/23 16:51	MS230908-1	.05		.051209	mg/L	102	90	110			
WG575477ICB	ICB	09/29/23 16:52				.00005	mg/L		-0.00015	0.00015			
WG575166LRB	LRB	09/29/23 16:54				U	mg/L		-0.00011	0.00011			
WG575166LFB	LFB	09/29/23 16:56	MS230912-3	.05005		.057199	mg/L	114	85	115			
WG575477CCV1	CCV	09/29/23 17:09	MS230921-3	.1001		.098464	mg/L	98	90	110			
WG575477CCB1	CCB	09/29/23 17:10				.000064	mg/L		-0.00015	0.00015			
WG575477CCV2	CCV	09/29/23 17:30	MS230921-3	.1001		.099427	mg/L	99	90	110			
WG575477CCB2	CCB	09/29/23 17:32				.000059	mg/L		-0.00015	0.00015			
L83302-02LFM	LFM	09/29/23 17:38	MS230912-3	.05005	U	.055132	mg/L	110	70	130			
L83302-02LFMD	LFMD	09/29/23 17:39	MS230912-3	.05005	U	.055552	mg/L	111	70	130	1	20	
WG575477CCV3	CCV	09/29/23 17:43	MS230921-3	.1001		.100808	mg/L	101	90	110			
WG575477CCB3	CCB	09/29/23 17:45				.000057	mg/L		-0.00015	0.00015			

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575225													
WG575225ICV	ICV	09/28/23 14:43	II230922-1	100		96.9	mg/L	97	95	105			
WG575225ICB	ICB	09/28/23 14:49				U	mg/L		-0.3	0.3			
WG575225PQV	PQV	09/28/23 14:52	II230919-3	.4999		.48	mg/L	96	70	130			
WG575225SIC	SIC	09/28/23 14:55	II230919-4	200.4599		200.1	mg/L	100	1	200			
WG575225LFB	LFB	09/28/23 15:01	II230927-1	67.98753		69.98	mg/L	103	85	115			
WG575225CCV1	CCV	09/28/23 15:33	II230922-2	50		49.83	mg/L	100	90	110			
WG575225CCB1	CCB	09/28/23 15:36				U	mg/L		-0.3	0.3			
L83261-02AS	AS	09/28/23 15:39	II230927-1	67.98753	38.7	106.9	mg/L	100	85	115			
L83261-02ASD	ASD	09/28/23 15:42	II230927-1	67.98753	38.7	106.2	mg/L	99	85	115	1	20	
WG575225CCV2	CCV	09/28/23 16:08	II230922-2	50		49.68	mg/L	99	90	110			
WG575225CCB2	CCB	09/28/23 16:11				U	mg/L		-0.3	0.3			
WG575225CCV3	CCV	09/28/23 16:30	II230922-2	50		49.27	mg/L	99	90	110			
WG575225CCB3	CCB	09/28/23 16:33				U	mg/L		-0.3	0.3			

HECLARIO

ACZ Project ID: **L83261**

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.

Carbon, dissolved organic (DOC)

SM5310B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574527													
WG574527ICV	ICV	09/18/23 18:07	WI230918-4	100		107.4	mg/L	107	90	110			
WG575160													
WG575160CCV1	CCV	09/26/23 17:08	WI230918-3	50		46.9	mg/L	94	90	110			
WG575160CCB1	CCB	09/26/23 17:18				U	mg/L		-3	3			
WG575160PQV	PQV	09/26/23 17:30	WI230918-2	5		5.3	mg/L	106	70	130			
WG575160LFB1	LFB	09/26/23 17:41	WI230413-11	50		49.9	mg/L	100	90	110			
WG575160CCV2	CCV	09/26/23 19:32	WI230918-3	50		47.1	mg/L	94	90	110			
WG575160CCB2	CCB	09/26/23 19:43				U	mg/L		-3	3			
L83261-01DUP	DUP	09/26/23 20:03			2.6	2.6	mg/L				0	20	RA
L83261-02AS	AS	09/26/23 20:27	WI230413-11	50	2.4	53.2	mg/L	102	90	110			
WG575160CCV3	CCV	09/26/23 21:50	WI230918-3	50		49.9	mg/L	100	90	110			
WG575160CCB3	CCB	09/26/23 22:01				U	mg/L		-3	3			
L83266-01DUP	DUP	09/26/23 22:46			2.5	2.5	mg/L				0	20	RA
L83266-02AS	AS	09/26/23 23:13	WI230413-11	50	1.4	53.2	mg/L	104	90	110			
WG575160LFB2	LFB	09/26/23 23:26	WI230413-11	50		51.9	mg/L	104	90	110			
WG575160CCV4	CCV	09/27/23 0:12	WI230918-3	50		50.9	mg/L	102	90	110			
WG575160CCB4	CCB	09/27/23 0:23				U	mg/L		-3	3			
WG575160CCV5	CCV	09/27/23 2:16	WI230918-3	50		49.9	mg/L	100	90	110			
WG575160CCB5	CCB	09/27/23 2:27				U	mg/L		-3	3			

HECLARIO

ACZ Project ID: **L83261**

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
WG575109													
WG575109ICV	ICV	09/25/23 13:41	WI230925-3	20		19.68	mg/L	98	90	110			
WG575109ICB	ICB	09/25/23 13:59				U	mg/L		-0.4	0.4			
WG575438													
WG575438CCV1	CCV	09/29/23 12:24	WI230925-2	50		50.54	mg/L	101	90	110			
WG575438CCB1	CCB	09/29/23 12:42				U	mg/L		-0.4	0.4			
WG575438PQV	PQV	09/29/23 13:00	WI230925-1	2		2.07	mg/L	104	70	130			
WG575438LFB1	LFB	09/29/23 13:18	WI230714-6	30		30.71	mg/L	102	90	110			
WG575438CCV2	CCV	09/29/23 15:59	WI230925-2	50		50.16	mg/L	100	90	110			
WG575438CCB2	CCB	09/29/23 16:17				U	mg/L		-0.4	0.4			
WG575438CCV3	CCV	09/29/23 19:34	WI230925-2	50		50.47	mg/L	101	90	110			
WG575438CCB3	CCB	09/29/23 19:52				U	mg/L		-0.4	0.4			
WG575438LFB2	LFB	09/29/23 21:57	WI230714-6	30		31.17	mg/L	104	90	110			
WG575438CCV4	CCV	09/29/23 23:09	WI230925-2	50		50.67	mg/L	101	90	110			
WG575438CCB4	CCB	09/29/23 23:27				U	mg/L		-0.4	0.4			
L83261-02DUP	DUP	09/30/23 0:03			2.94	1.77	mg/L				50	20	RA
L83261-03AS	AS	09/30/23 0:39	WI230714-6	150	U	146.21	mg/L	97	90	110			
WG575438CCV5	CCV	09/30/23 2:26	WI230925-2	50		50.51	mg/L	101	90	110			
WG575438CCB5	CCB	09/30/23 2:44				U	mg/L		-0.4	0.4			
WG575553													
WG575553CCV1	CCV	10/02/23 18:57	WI230925-2	50		51.48	mg/L	103	90	110			
WG575553CCB1	CCB	10/02/23 19:14				U	mg/L		-0.4	0.4			
WG575553LFB1	LFB	10/02/23 19:50	WI230714-6	30		32.19	mg/L	107	90	110			
L83212-01DUP	DUP	10/02/23 21:20			11900	13170.5	mg/L				10	20	
L83212-02AS	AS	10/02/23 21:56	WI230714-6	15000	16200	29113.92	mg/L	86	90	110			M2
WG575553CCV2	CCV	10/02/23 22:32	WI230925-2	50		51.35	mg/L	103	90	110			
WG575553CCB2	CCB	10/02/23 22:50				U	mg/L		-0.4	0.4			
WG575553CCV3	CCV	10/03/23 2:07	WI230925-2	50		52.53	mg/L	105	90	110			
WG575553CCB3	CCB	10/03/23 2:25				U	mg/L		-0.4	0.4			
WG575553LFB2	LFB	10/03/23 4:30	WI230714-6	30		31.72	mg/L	106	90	110			
WG575553CCV4	CCV	10/03/23 5:42	WI230925-2	50		51.53	mg/L	103	90	110			
WG575553CCB4	CCB	10/03/23 6:00				U	mg/L		-0.4	0.4			
WG575553CCV6	CCV	10/03/23 10:37	WI230925-2	50		52.32	mg/L	105	90	110			
WG575553CCB6	CCB	10/03/23 10:54				U	mg/L		-0.4	0.4			
WG575553PQV1	PQV	10/03/23 11:12	WI231002-6	2		2.17	mg/L	109	70	130			
WG575553CCV7	CCV	10/03/23 14:12	WI230925-2	50		51.44	mg/L	103	90	110			
WG575553CCB7	CCB	10/03/23 14:29				U	mg/L		-0.4	0.4			
WG576000													
WG576000CCV1	CCV	10/06/23 17:41	WI231002-7	50		51.67	mg/L	103	90	110			
WG576000CCB1	CCB	10/06/23 17:59				U	mg/L		-0.4	0.4			
WG576000PQV	PQV	10/06/23 18:17	WI231002-6	2		2.11	mg/L	106	70	130			
WG576000LFB	LFB	10/06/23 18:35	WI230714-6	30		31.02	mg/L	103	90	110			
L83298-01AS	AS	10/06/23 19:29	WI230714-6	30	2.49	31.96	mg/L	98	90	110			
L83408-03DUP	DUP	10/06/23 20:05			.51	.51	mg/L				0	20	RA
WG576000CCV2	CCV	10/06/23 21:16	WI231002-7	50		51.77	mg/L	104	90	110			
WG576000CCB2	CCB	10/06/23 21:34				U	mg/L		-0.4	0.4			

HECLARIO

ACZ Project ID: **L83261**

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

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575036													
WG575036ICV	ICV	09/25/23 17:48	MS230908-1	.05		.05418	mg/L	108	90	110			
WG575036ICB	ICB	09/25/23 17:49				U	mg/L		-0.00176	0.00176			
WG575036LFB	LFB	09/25/23 17:51	MS230912-3	.05005		.05546	mg/L	111	85	115			
WG575036CCV1	CCV	09/25/23 18:06	MS230921-3	.25025		.25968	mg/L	104	90	110			
WG575036CCB1	CCB	09/25/23 18:08				U	mg/L		-0.0024	0.0024			
WG575036CCV2	CCV	09/25/23 18:28	MS230921-3	.25025		.25976	mg/L	104	90	110			
WG575036CCB2	CCB	09/25/23 18:30				U	mg/L		-0.0024	0.0024			
L83266-02AS	AS	09/25/23 18:37	MS230912-3	.05005	U	.05404	mg/L	108	70	130			
L83266-02ASD	ASD	09/25/23 18:39	MS230912-3	.05005	U	.05291	mg/L	106	70	130	2	20	
WG575036CCV3	CCV	09/25/23 18:45	MS230921-3	.25025		.26054	mg/L	104	90	110			
WG575036CCB3	CCB	09/25/23 18:46				.00092	mg/L		-0.0024	0.0024			

Copper, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575226													
WG575226ICV	ICV	09/27/23 11:40	MS230908-1	.05		.05327	mg/L	107	90	110			
WG575226ICB	ICB	09/27/23 11:41				U	mg/L		-0.0024	0.0024			
WG575166LRB	LRB	09/27/23 11:43				U	mg/L		-0.00176	0.00176			
WG575166LFB	LFB	09/27/23 11:45	MS230912-3	.05005		.0539	mg/L	108	85	115			
WG575226CCV1	CCV	09/27/23 12:02	MS230921-3	.25025		.25405	mg/L	102	90	110			
WG575226CCB1	CCB	09/27/23 12:04				U	mg/L		-0.0024	0.0024			
WG575226CCV2	CCV	09/27/23 12:24	MS230921-3	.25025		.2374	mg/L	95	90	110			
WG575226CCB2	CCB	09/27/23 12:26				U	mg/L		-0.0024	0.0024			
L83302-02LFM	LFM	09/27/23 12:33	MS230912-3	.05005	.00228	.04606	mg/L	87	70	130			
L83302-02LFMD	LFMD	09/27/23 12:35	MS230912-3	.05005	.00228	.04542	mg/L	86	70	130	1	20	
WG575226CCV3	CCV	09/27/23 12:39	MS230921-3	.25025		.23171	mg/L	93	90	110			
WG575226CCB3	CCB	09/27/23 12:41				U	mg/L		-0.0024	0.0024			

HECLARIO

ACZ Project ID: **L83261**

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.

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575922													
WG575922ICV	ICV	10/05/23 14:55	WC231002-1	2.002		2.07	mg/L	103	90	110			
WG575922ICB	ICB	10/05/23 15:00				U	mg/L		-0.3	0.3			
WG575922PQV	PQV	10/05/23 15:04	WC231002-2	.35035		.38	mg/L	108	70	130			
WG575922LFB1	LFB	10/05/23 15:07	WC230825-1	5.005		5	mg/L	100	90	110			
WG575922CCV1	CCV	10/05/23 15:39	WC231002-1	2.002		2.148	mg/L	107	90	110			
WG575922CCB1	CCB	10/05/23 15:47				U	mg/L		-0.3	0.3			
L83230-01AS	AS	10/05/23 16:09	WC230825-1	5.005	.32	5.44	mg/L	102	90	110			
L83230-01ASD	ASD	10/05/23 16:13	WC230825-1	5.005	.32	5.48	mg/L	103	90	110	1	20	
WG575922CCV2	CCV	10/05/23 16:28	WC231002-1	2.002		2.179	mg/L	109	90	110			
WG575922CCB2	CCB	10/05/23 16:35				U	mg/L		-0.3	0.3			
WG575922LFB2	LFB	10/05/23 17:00	WC230825-1	5.005		5.3	mg/L	106	90	110			
WG575922CCV3	CCV	10/05/23 17:13	WC231002-1	2.002		2.189	mg/L	109	90	110			
WG575922CCB3	CCB	10/05/23 17:21				U	mg/L		-0.3	0.3			
WG575922CCV4	CCV	10/05/23 18:16	WC231002-1	2.002		2.128	mg/L	106	90	110			
WG575922CCB4	CCB	10/05/23 18:24				U	mg/L		-0.3	0.3			
WG575922CCV5	CCV	10/05/23 19:06	WC231002-1	2.002		2.158	mg/L	108	90	110			
WG575922CCB5	CCB	10/05/23 19:13				U	mg/L		-0.3	0.3			
WG575922CCV6	CCV	10/05/23 19:21	WC231002-1	2.002		2.189	mg/L	109	90	110			
WG575922CCB6	CCB	10/05/23 19:29				U	mg/L		-0.3	0.3			

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575490													
WG575490ICV	ICV	09/30/23 12:40	II230922-1	2		1.916	mg/L	96	95	105			
WG575490ICB	ICB	09/30/23 12:46				U	mg/L		-0.18	0.18			
WG575490PQV	PQV	09/30/23 12:49	II230919-3	.149715		.114	mg/L	76	70	130			
WG575490SIC	SIC	09/30/23 12:52	II230919-4	199.769715		195.8	mg/L	98	1	200			
WG575490LFB	LFB	09/30/23 12:58	II230927-1	1.004		1.01	mg/L	101	85	115			
L83261-02AS	AS	09/30/23 13:10	II230927-1	1.004	U	1.01	mg/L	101	85	115			
L83261-02ASD	ASD	09/30/23 13:13	II230927-1	1.004	U	1.005	mg/L	100	85	115	0	20	
WG575490CCV1	CCV	09/30/23 13:28	II230922-2	1		.942	mg/L	94	90	110			
WG575490CCB1	CCB	09/30/23 13:31				U	mg/L		-0.18	0.18			
WG575490CCV2	CCV	09/30/23 14:04	II230922-2	1		.95	mg/L	95	90	110			
WG575490CCB2	CCB	09/30/23 14:07				U	mg/L		-0.18	0.18			
WG575490CCV3	CCV	09/30/23 14:26	II230922-2	1		.941	mg/L	94	90	110			
WG575490CCB3	CCB	09/30/23 14:29				U	mg/L		-0.18	0.18			

HECLARIO

ACZ Project ID: **L83261**

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, total recoverable

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575478													
WG575478ICV	ICV	09/29/23 18:05	II230922-1	2		1.89	mg/L	95	95	105			
WG575478ICB	ICB	09/29/23 18:10				U	mg/L		-0.18	0.18			
WG575478PQV	PQV	09/29/23 18:14	II230919-3	.149715		.108	mg/L	72	70	130			
WG575478SIC	SIC	09/29/23 18:17	II230919-4	199.769715		194.8	mg/L	98	1	200			
WG575188LRB	LRB	09/29/23 18:23				U	mg/L		-0.132	0.132			
WG575188LFB	LFB	09/29/23 18:26	II230907-5	1.004		.974	mg/L	97	85	115			
L83261-03LFM	LFM	09/29/23 18:50	II230907-5	1.004	.194	1.235	mg/L	104	70	130			
WG575478CCV1	CCV	09/29/23 18:53	II230922-2	1		.929	mg/L	93	90	110			
WG575478CCB1	CCB	09/29/23 18:56				U	mg/L		-0.18	0.18			
L83261-03LFMD	LFMD	09/29/23 18:59	II230907-5	1.004	.194	1.267	mg/L	107	70	130	3	20	
WG575478CCV2	CCV	09/29/23 19:29	II230922-2	1		.938	mg/L	94	90	110			
WG575478CCB2	CCB	09/29/23 19:32				U	mg/L		-0.18	0.18			
WG575478CCV3	CCV	09/29/23 19:53	II230922-2	1		.938	mg/L	94	90	110			
WG575478CCB3	CCB	09/29/23 19:56				U	mg/L		-0.18	0.18			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575036													
WG575036ICV	ICV	09/25/23 17:48	MS230908-1	.05		.05173	mg/L	103	90	110			
WG575036ICB	ICB	09/25/23 17:49				U	mg/L		-0.00022	0.00022			
WG575036LFB	LFB	09/25/23 17:51	MS230912-3	.05005		.05574	mg/L	111	85	115			
WG575036CCV1	CCV	09/25/23 18:06	MS230921-3	.25025		.25147	mg/L	100	90	110			
WG575036CCB1	CCB	09/25/23 18:08				U	mg/L		-0.0003	0.0003			
WG575036CCV2	CCV	09/25/23 18:28	MS230921-3	.25025		.24965	mg/L	100	90	110			
WG575036CCB2	CCB	09/25/23 18:30				.00013	mg/L		-0.0003	0.0003			
L83266-02AS	AS	09/25/23 18:37	MS230912-3	.05005	U	.05813	mg/L	116	70	130			
L83266-02ASD	ASD	09/25/23 18:39	MS230912-3	.05005	U	.05782	mg/L	116	70	130	1	20	
WG575036CCV3	CCV	09/25/23 18:45	MS230921-3	.25025		.25006	mg/L	100	90	110			
WG575036CCB3	CCB	09/25/23 18:46				.0002	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
WG575226													
WG575226ICV	ICV	09/27/23 11:40	MS230908-1	.05		.0529	mg/L	106	90	110			
WG575226ICB	ICB	09/27/23 11:41				U	mg/L		-0.0003	0.0003			
WG575166LRB	LRB	09/27/23 11:43				U	mg/L		-0.00022	0.00022			
WG575166LFB	LFB	09/27/23 11:45	MS230912-3	.05005		.05232	mg/L	105	85	115			
WG575226CCV1	CCV	09/27/23 12:02	MS230921-3	.25025		.24812	mg/L	99	90	110			
WG575226CCB1	CCB	09/27/23 12:04				U	mg/L		-0.0003	0.0003			
WG575226CCV2	CCV	09/27/23 12:24	MS230921-3	.25025		.24832	mg/L	99	90	110			
WG575226CCB2	CCB	09/27/23 12:26				U	mg/L		-0.0003	0.0003			
L83302-02LFM	LFM	09/27/23 12:33	MS230912-3	.05005	.00033	.05915	mg/L	118	70	130			
L83302-02LFMD	LFMD	09/27/23 12:35	MS230912-3	.05005	.00033	.05782	mg/L	115	70	130	2	20	
WG575226CCV3	CCV	09/27/23 12:39	MS230921-3	.25025		.24495	mg/L	98	90	110			
WG575226CCB3	CCB	09/27/23 12:41				.00026	mg/L		-0.0003	0.0003			

HECLARIO

ACZ Project ID: **L83261**

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
WG575225													
WG575225ICV	ICV	09/28/23 14:43	II230922-1	100		97.11	mg/L	97	95	105			
WG575225ICB	ICB	09/28/23 14:49				U	mg/L		-0.6	0.6			
WG575225PQV	PQV	09/28/23 14:52	II230919-3	1.006		1.01	mg/L	100	70	130			
WG575225SIC	SIC	09/28/23 14:55	II230919-4	202.206		203.3	mg/L	101	1	200			
WG575225LFB	LFB	09/28/23 15:01	II230927-1	49.80792		51.14	mg/L	103	85	115			
WG575225CCV1	CCV	09/28/23 15:33	II230922-2	50		50.02	mg/L	100	90	110			
WG575225CCB1	CCB	09/28/23 15:36				U	mg/L		-0.6	0.6			
L83261-02AS	AS	09/28/23 15:39	II230927-1	49.80792	3.81	54.12	mg/L	101	85	115			
L83261-02ASD	ASD	09/28/23 15:42	II230927-1	49.80792	3.81	53.71	mg/L	100	85	115	1	20	
WG575225CCV2	CCV	09/28/23 16:08	II230922-2	50		49.56	mg/L	99	90	110			
WG575225CCB2	CCB	09/28/23 16:11				U	mg/L		-0.6	0.6			
WG575225CCV3	CCV	09/28/23 16:30	II230922-2	50		49.15	mg/L	98	90	110			
WG575225CCB3	CCB	09/28/23 16:33				U	mg/L		-0.6	0.6			

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575490													
WG575490ICV	ICV	09/30/23 12:40	II230922-1	2		1.917	mg/L	96	95	105			
WG575490ICB	ICB	09/30/23 12:46				U	mg/L		-0.03	0.03			
WG575490PQV	PQV	09/30/23 12:49	II230919-3	.0502		.039	mg/L	78	70	130			
WG575490SIC	SIC	09/30/23 12:52	II230919-4	50.1502		47.34	mg/L	94	1	200			
WG575490LFB	LFB	09/30/23 12:58	II230927-1	.4995		.509	mg/L	102	85	115			
L83261-02AS	AS	09/30/23 13:10	II230927-1	.4995	U	.509	mg/L	102	85	115			
L83261-02ASD	ASD	09/30/23 13:13	II230927-1	.4995	U	.509	mg/L	102	85	115	0	20	
WG575490CCV1	CCV	09/30/23 13:28	II230922-2	1		.981	mg/L	98	90	110			
WG575490CCB1	CCB	09/30/23 13:31				U	mg/L		-0.03	0.03			
WG575490CCV2	CCV	09/30/23 14:04	II230922-2	1		.971	mg/L	97	90	110			
WG575490CCB2	CCB	09/30/23 14:07				U	mg/L		-0.03	0.03			
WG575490CCV3	CCV	09/30/23 14:26	II230922-2	1		.96	mg/L	96	90	110			
WG575490CCB3	CCB	09/30/23 14:29				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
WG575478													
WG575478ICV	ICV	09/29/23 18:05	II230922-1	2		1.899	mg/L	95	95	105			
WG575478ICB	ICB	09/29/23 18:10				U	mg/L		-0.03	0.03			
WG575478PQV	PQV	09/29/23 18:14	II230919-3	.0502		.035	mg/L	70	70	130			
WG575478SIC	SIC	09/29/23 18:17	II230919-4	50.1502		47.21	mg/L	94	1	200			
WG575188LRB	LRB	09/29/23 18:23				U	mg/L		-0.022	0.022			
WG575188LFB	LFB	09/29/23 18:26	II230907-5	.4995		.492	mg/L	98	85	115			
L83261-03LFM	LFM	09/29/23 18:50	II230907-5	.4995	U	.49	mg/L	98	70	130			
WG575478CCV1	CCV	09/29/23 18:53	II230922-2	1		.953	mg/L	95	90	110			
WG575478CCB1	CCB	09/29/23 18:56				U	mg/L		-0.03	0.03			
L83261-03LFMD	LFMD	09/29/23 18:59	II230907-5	.4995	U	.504	mg/L	101	70	130	3	20	
WG575478CCV2	CCV	09/29/23 19:29	II230922-2	1		.957	mg/L	96	90	110			
WG575478CCB2	CCB	09/29/23 19:32				U	mg/L		-0.03	0.03			
WG575478CCV3	CCV	09/29/23 19:53	II230922-2	1		.959	mg/L	96	90	110			
WG575478CCB3	CCB	09/29/23 19:56				U	mg/L		-0.03	0.03			

HECLARIO

ACZ Project ID: **L83261**

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
WG574968													
WG574968ICV1	ICV	09/25/23 13:08	HG230925-3	.005		.00517	mg/L	103	95	105			
WG574968ICB	ICB	09/25/23 13:09				U	mg/L		-0.0002	0.0002			
WG574970													
WG574970CCV1	CCV	09/25/23 13:42	HG230925-3	.005		.0052	mg/L	104	90	110			
WG574970CCB1	CCB	09/25/23 13:43				U	mg/L		-0.0002	0.0002			
WG574970PQV	PQV	09/25/23 13:44	HG230925-5	.001001		.00102	mg/L	102	70	130			
WG574970LRB	LRB	09/25/23 13:45				U	mg/L		-0.00044	0.00044			
WG574970LFB	LFB	09/25/23 13:46	HG230925-6	.002002		.00206	mg/L	103	85	115			
WG574970CCV2	CCV	09/25/23 13:53	HG230925-3	.005		.00518	mg/L	104	90	110			
WG574970CCB2	CCB	09/25/23 13:54				U	mg/L		-0.0002	0.0002			
L83257-01LFM	LFM	09/25/23 14:01	HG230925-6	.002002	U	.00206	mg/L	103	85	115			
L83257-01LFMD	LFMD	09/25/23 14:02	HG230925-6	.002002	U	.00207	mg/L	103	85	115	0	20	
WG574970CCV3	CCV	09/25/23 14:05	HG230925-3	.005		.00524	mg/L	105	90	110			
WG574970CCB3	CCB	09/25/23 14:05				U	mg/L		-0.0002	0.0002			
WG574970CCV4	CCV	09/25/23 14:13	HG230925-3	.005		.00513	mg/L	103	90	110			
WG574970CCB4	CCB	09/25/23 14:14				U	mg/L		-0.0002	0.0002			
WG575190													
WG575190ICV	ICV	09/28/23 10:32	HG230925-3	.005		.0051	mg/L	102	95	105			
WG575190ICB	ICB	09/28/23 10:33				U	mg/L		-0.0002	0.0002			
WG575216													
WG575216CCV1	CCV	09/28/23 11:42	HG230925-3	.005		.00527	mg/L	105	90	110			
WG575216CCB1	CCB	09/28/23 11:43				U	mg/L		-0.0002	0.0002			
WG575216PQV	PQV	09/28/23 11:43	HG230925-5	.001001		.00097	mg/L	97	70	130			
WG575216LRB	LRB	09/28/23 11:44				U	mg/L		-0.00044	0.00044			
WG575216LFB	LFB	09/28/23 11:45	HG230925-6	.002002		.00191	mg/L	95	85	115			
L83262-01LFM	LFM	09/28/23 11:49	HG230925-6	.002002	U	.0019	mg/L	95	85	115			
L83262-01LFMD	LFMD	09/28/23 11:50	HG230925-6	.002002	U	.00194	mg/L	97	85	115	2	20	
WG575216CCV2	CCV	09/28/23 11:53	HG230925-3	.005		.00512	mg/L	102	90	110			
WG575216CCB2	CCB	09/28/23 11:54				U	mg/L		-0.0002	0.0002			
WG575216CCV3	CCV	09/28/23 12:04	HG230925-3	.005		.00506	mg/L	101	90	110			
WG575216CCB3	CCB	09/28/23 12:05				U	mg/L		-0.0002	0.0002			
WG575216CCV4	CCV	09/28/23 12:13	HG230925-3	.005		.0051	mg/L	102	90	110			
WG575216CCB4	CCB	09/28/23 12:14				U	mg/L		-0.0002	0.0002			

HECLARIO

ACZ Project ID: **L83261**

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

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574764													
WG574764ICV	ICV	09/20/23 23:19	WI230701-1	2.416		2.357	mg/L	98	90	110			
WG574764ICB	ICB	09/20/23 23:20				U	mg/L		-0.02	0.02			
WG574764PQV	PQV	09/20/23 23:24	WI230829-4	.1		.111	mg/L	111	70	130			
WG574764LFB	LFB	09/20/23 23:25	WI230829-3	2		1.963	mg/L	98	90	110			
WG574764CCV1	CCV	09/20/23 23:34	WI230920-5	2		1.965	mg/L	98	90	110			
WG574764CCB1	CCB	09/20/23 23:37				U	mg/L		-0.02	0.02			
L83260-02AS	AS	09/20/23 23:47	WI230829-3	2	.039	1.947	mg/L	95	90	110			
L83260-03DUP	DUP	09/20/23 23:49			.789	.788	mg/L				0	20	
WG574764CCV2	CCV	09/20/23 23:51	WI230920-5	2		1.942	mg/L	97	90	110			
WG574764CCB2	CCB	09/20/23 23:54				U	mg/L		-0.02	0.02			
WG574764CCV3	CCV	09/21/23 0:09	WI230920-5	2		1.953	mg/L	98	90	110			
WG574764CCB3	CCB	09/21/23 0:12				U	mg/L		-0.02	0.02			
WG574764CCV4	CCV	09/21/23 0:17	WI230920-5	2		1.953	mg/L	98	90	110			
WG574764CCB4	CCB	09/21/23 0:20				U	mg/L		-0.02	0.02			

Nitrite as N

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574764													
WG574764ICV	ICV	09/20/23 23:19	WI230701-1	.608		.632	mg/L	104	90	110			
WG574764ICB	ICB	09/20/23 23:20				U	mg/L		-0.01	0.01			
WG574764PQV	PQV	09/20/23 23:24	WI230829-4	.05		.054	mg/L	108	70	130			
WG574764LFB	LFB	09/20/23 23:25	WI230829-3	1		1.012	mg/L	101	90	110			
WG574764CCV1	CCV	09/20/23 23:34	WI230920-5	1		.991	mg/L	99	90	110			
WG574764CCB1	CCB	09/20/23 23:37				U	mg/L		-0.01	0.01			
L83260-02AS	AS	09/20/23 23:47	WI230829-3	1	U	.998	mg/L	100	90	110			
L83260-03DUP	DUP	09/20/23 23:49			.194	.195	mg/L				1	20	
WG574764CCV2	CCV	09/20/23 23:51	WI230920-5	1		.984	mg/L	98	90	110			
WG574764CCB2	CCB	09/20/23 23:54				U	mg/L		-0.01	0.01			
WG574764CCV3	CCV	09/21/23 0:09	WI230920-5	1		1.001	mg/L	100	90	110			
WG574764CCB3	CCB	09/21/23 0:12				U	mg/L		-0.01	0.01			
WG574764CCV4	CCV	09/21/23 0:17	WI230920-5	1		.994	mg/L	99	90	110			
WG574764CCB4	CCB	09/21/23 0:20				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
WG575047													
WG575047ICV	ICV	09/25/23 15:13	WI230911-8	12.036		11.487	mg/L	95	90	110			
WG575047ICB	ICB	09/25/23 15:14				U	mg/L		-0.1	0.1			
L83256-03AS	AS	09/25/23 15:19	WI230817-12	10.03	U	9.884	mg/L	99	90	110			
L83260-01DUP	DUP	09/25/23 15:22			U	U	mg/L				0	20	RA
WG575047CCV1	CCV	09/25/23 15:30	WI230817-11	10.03		9.555	mg/L	95	90	110			
WG575047CCB1	CCB	09/25/23 15:32				U	mg/L		-0.1	0.1			
WG575047CCV2	CCV	09/25/23 15:48	WI230817-11	10.03		9.554	mg/L	95	90	110			
WG575047CCB2	CCB	09/25/23 15:50				U	mg/L		-0.1	0.1			
WG575047LFB	LFB	09/25/23 15:59	WI230817-12	10.03		10.119	mg/L	101	90	110			
WG575047CCV3	CCV	09/25/23 16:06	WI230817-11	10.03		9.836	mg/L	98	90	110			
WG575047CCB3	CCB	09/25/23 16:07				U	mg/L		-0.1	0.1			

HECLARIO

ACZ Project ID: **L83261**

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
WG575499													
WG575499ICV	ICV	09/30/23 23:36	WI230928-6	4		4.12	mg/L	103	90	110			
WG575499ICB	ICB	09/30/23 23:37				U	mg/L		-0.2	0.2			
WG574963LRB	LRB	09/30/23 23:38				U	mg/L		-0.2	0.2			
WG574963LFB	LFB	09/30/23 23:39	WI230721-5	2.5		2.46	mg/L	98	90	110			
WG575499CCV1	CCV	09/30/23 23:49	WI230928-4	2.5		2.46	mg/L	98	90	110			
WG575499CCB1	CCB	09/30/23 23:50				U	mg/L		-0.2	0.2			
L83261-01LFM	LFM	09/30/23 23:59	WI230721-5	2.5	U	2.66	mg/L	106	90	110			
L83261-02DUP	DUP	10/01/23 0:01			U	U	mg/L				0	20	RA
WG575499CCV2	CCV	10/01/23 0:03	WI230928-4	2.5		2.47	mg/L	99	90	110			
WG575499CCB2	CCB	10/01/23 0:04				U	mg/L		-0.2	0.2			
WG575499CCV3	CCV	10/01/23 0:16	WI230928-4	2.5		2.52	mg/L	101	90	110			
WG575499CCB3	CCB	10/01/23 0:17				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
WG575175													
WG575175LCSW1	LCSW	09/26/23 17:50	PCN624449	6		5.96	units	99	5.9	6.1			
WG575175LCSW3	LCSW	09/26/23 19:39	PCN624449	6		6.02	units	100	5.9	6.1			
WG575175LCSW5	LCSW	09/26/23 21:02	PCN624449	6		6.02	units	100	5.9	6.1			
WG575175LCSW7	LCSW	09/26/23 22:39	PCN624449	6		5.99	units	100	5.9	6.1			
L83261-03DUP	DUP	09/26/23 23:25			5.8	5.8	units				0	20	
WG575175LCSW9	LCSW	09/27/23 0:10	PCN624449	6		6	units	100	5.9	6.1			
WG575175LCSW11	LCSW	09/27/23 1:30	PCN624449	6		6.09	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
WG575225													
WG575225ICV	ICV	09/28/23 14:43	II230922-1	20		19.23	mg/L	96	95	105			
WG575225ICB	ICB	09/28/23 14:49				U	mg/L		-1.5	1.5			
WG575225PQV	PQV	09/28/23 14:52	II230919-3	1.004		1.11	mg/L	111	70	130			
WG575225SIC	SIC	09/28/23 14:55	II230919-4	1.004		1.07	mg/L	107	80	120			
WG575225LFB	LFB	09/28/23 15:01	II230927-1	99.95693		101.2	mg/L	101	85	115			
WG575225CCV1	CCV	09/28/23 15:33	II230922-2	10		9.99	mg/L	100	90	110			
WG575225CCB1	CCB	09/28/23 15:36				U	mg/L		-1.5	1.5			
L83261-02AS	AS	09/28/23 15:39	II230927-1	99.95693	3.61	103.9	mg/L	100	85	115			
L83261-02ASD	ASD	09/28/23 15:42	II230927-1	99.95693	3.61	103.9	mg/L	100	85	115	0	20	
WG575225CCV2	CCV	09/28/23 16:08	II230922-2	10		9.98	mg/L	100	90	110			
WG575225CCB2	CCB	09/28/23 16:11				U	mg/L		-1.5	1.5			
WG575225CCV3	CCV	09/28/23 16:30	II230922-2	10		9.87	mg/L	99	90	110			
WG575225CCB3	CCB	09/28/23 16:33				U	mg/L		-1.5	1.5			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575127													
WG575127PBW	PBW	09/26/23 11:52				U	mg/L		-20	20			
WG575127LCSW	LCSW	09/26/23 11:54	PCN625114	1000		980	mg/L	98	80	120			
L83263-01DUP	DUP	09/26/23 12:52			1900	1818	mg/L				4	10	

HECLARIO

ACZ Project ID: **L83261**

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
WG575036													
WG575036ICV	ICV	09/25/23 17:48	MS230908-1	.02		.02078	mg/L	104	90	110			
WG575036ICB	ICB	09/25/23 17:49				U	mg/L		-0.00022	0.00022			
WG575036LFB	LFB	09/25/23 17:51	MS230912-3	.01001		.01044	mg/L	104	85	115			
WG575036CCV1	CCV	09/25/23 18:06	MS230921-3	.025		.02497	mg/L	100	90	110			
WG575036CCB1	CCB	09/25/23 18:08				U	mg/L		-0.0003	0.0003			
WG575036CCV2	CCV	09/25/23 18:28	MS230921-3	.025		.02474	mg/L	99	90	110			
WG575036CCB2	CCB	09/25/23 18:30				U	mg/L		-0.0003	0.0003			
L83266-02AS	AS	09/25/23 18:37	MS230912-3	.01001	U	.00942	mg/L	94	70	130			
L83266-02ASD	ASD	09/25/23 18:39	MS230912-3	.01001	U	.0096	mg/L	96	70	130	2	20	
WG575036CCV3	CCV	09/25/23 18:45	MS230921-3	.025		.02458	mg/L	98	90	110			
WG575036CCB3	CCB	09/25/23 18:46				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
WG575226													
WG575226ICV	ICV	09/27/23 11:40	MS230908-1	.02		.02149	mg/L	107	90	110			
WG575226ICB	ICB	09/27/23 11:41				U	mg/L		-0.0003	0.0003			
WG575166LRB	LRB	09/27/23 11:43				U	mg/L		-0.00022	0.00022			
WG575166LFB	LFB	09/27/23 11:45	MS230912-3	.01001		.01028	mg/L	103	85	115			
WG575226CCV1	CCV	09/27/23 12:02	MS230921-3	.025		.02545	mg/L	102	90	110			
WG575226CCB1	CCB	09/27/23 12:04				U	mg/L		-0.0003	0.0003			
WG575226CCV2	CCV	09/27/23 12:24	MS230921-3	.025		.02494	mg/L	100	90	110			
WG575226CCB2	CCB	09/27/23 12:26				U	mg/L		-0.0003	0.0003			
L83302-02LFM	LFM	09/27/23 12:33	MS230912-3	.01001	U	.00889	mg/L	89	70	130			
L83302-02LFMD	LFMD	09/27/23 12:35	MS230912-3	.01001	U	.00884	mg/L	88	70	130	1	20	
WG575226CCV3	CCV	09/27/23 12:39	MS230921-3	.025		.02547	mg/L	102	90	110			
WG575226CCB3	CCB	09/27/23 12:41				U	mg/L		-0.0003	0.0003			

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575225													
WG575225ICV	ICV	09/28/23 14:43	II230922-1	100		95.09	mg/L	95	95	105			
WG575225ICB	ICB	09/28/23 14:49				U	mg/L		-0.6	0.6			
WG575225PQV	PQV	09/28/23 14:52	II230919-3	1.0055		1.04	mg/L	103	70	130			
WG575225SIC	SIC	09/28/23 14:55	II230919-4	1.0055		1.05	mg/L	104	80	120			
WG575225LFB	LFB	09/28/23 15:01	II230927-1	100.0094		99.75	mg/L	100	85	115			
WG575225CCV1	CCV	09/28/23 15:33	II230922-2	50		49.35	mg/L	99	90	110			
WG575225CCB1	CCB	09/28/23 15:36				U	mg/L		-0.6	0.6			
L83261-02AS	AS	09/28/23 15:39	II230927-1	100.0094	6.87	106.7	mg/L	100	85	115			
L83261-02ASD	ASD	09/28/23 15:42	II230927-1	100.0094	6.87	106.7	mg/L	100	85	115	0	20	
WG575225CCV2	CCV	09/28/23 16:08	II230922-2	50		48.88	mg/L	98	90	110			
WG575225CCB2	CCB	09/28/23 16:11				.2	mg/L		-0.6	0.6			
WG575225CCV3	CCV	09/28/23 16:30	II230922-2	50		48.65	mg/L	97	90	110			
WG575225CCB3	CCB	09/28/23 16:33				U	mg/L		-0.6	0.6			

HECLARIO

ACZ Project ID: **L83261**

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
WG575109													
WG575109ICV	ICV	09/25/23 13:41	WI230925-3	50		48.59	mg/L	97	90	110			
WG575109ICB	ICB	09/25/23 13:59				U	mg/L		-0.9	0.9			
WG575438													
WG575438CCV1	CCV	09/29/23 12:24	WI230925-2	50		49.8	mg/L	100	90	110			
WG575438CCB1	CCB	09/29/23 12:42				U	mg/L		-0.9	0.9			
WG575438PQV	PQV	09/29/23 13:00	WI230925-1	2		2.12	mg/L	106	70	130			
WG575438LFB1	LFB	09/29/23 13:18	WI230714-6	30		30.27	mg/L	101	90	110			
WG575438CCV2	CCV	09/29/23 15:59	WI230925-2	50		49.62	mg/L	99	90	110			
WG575438CCB2	CCB	09/29/23 16:17				U	mg/L		-0.9	0.9			
WG575438CCV3	CCV	09/29/23 19:34	WI230925-2	50		49.53	mg/L	99	90	110			
WG575438CCB3	CCB	09/29/23 19:52				U	mg/L		-0.9	0.9			
WG575438LFB2	LFB	09/29/23 21:57	WI230714-6	30		31	mg/L	103	90	110			
WG575438CCV4	CCV	09/29/23 23:09	WI230925-2	50		49.87	mg/L	100	90	110			
WG575438CCB4	CCB	09/29/23 23:27				U	mg/L		-0.9	0.9			
L83261-02DUP	DUP	09/30/23 0:03			104	110.61	mg/L				6	20	
L83261-03AS	AS	09/30/23 0:39	WI230714-6	150	89.3	231.65	mg/L	95	90	110			
WG575438CCV5	CCV	09/30/23 2:26	WI230925-2	50		49.77	mg/L	100	90	110			
WG575438CCB5	CCB	09/30/23 2:44				U	mg/L		-0.9	0.9			
WG576000													
WG576000CCV1	CCV	10/06/23 17:41	WI231002-7	50		51.03	mg/L	102	90	110			
WG576000CCB1	CCB	10/06/23 17:59				U	mg/L		-0.9	0.9			
WG576000PQV	PQV	10/06/23 18:17	WI231002-6	2		2.28	mg/L	114	70	130			
WG576000LFB	LFB	10/06/23 18:35	WI230714-6	30		30.71	mg/L	102	90	110			
L83298-01AS	AS	10/06/23 19:29	WI230714-6	30	U	29.36	mg/L	98	90	110			
L83408-03DUP	DUP	10/06/23 20:05			18.3	18.29	mg/L				0	20	
WG576000CCV2	CCV	10/06/23 21:16	WI231002-7	50		51.06	mg/L	102	90	110			
WG576000CCB2	CCB	10/06/23 21:34				U	mg/L		-0.9	0.9			
WG576000CCV3	CCV	10/07/23 0:52	WI231002-7	50		50.67	mg/L	101	90	110			
WG576000CCB3	CCB	10/07/23 1:09				U	mg/L		-0.9	0.9			
WG576000CCV4	CCV	10/07/23 3:15	WI231002-7	50		51.17	mg/L	102	90	110			
WG576000CCB4	CCB	10/07/23 3:33				U	mg/L		-0.9	0.9			
WG576000CCV5	CCV	10/09/23 13:34	WI231002-7	50		51.14	mg/L	102	90	110			
WG576000CCB5	CCB	10/09/23 13:51				U	mg/L		-0.9	0.9			
WG576000CCV6	CCV	10/09/23 15:21	WI231002-7	50		51.07	mg/L	102	90	110			

HECLARIO

ACZ Project ID: **L83261**

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.

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG574811													
WG574811ICV	ICV	09/21/23 11:39	WC230921-3	.30934		.327	mg/L	106	90	110			
WG574811ICB	ICB	09/21/23 11:42				U	mg/L		-0.05	0.05			
WG574811LFB1	LFB	09/21/23 11:46	WC230921-6	.22044		.242	mg/L	110	80	120			
WG574811CCV1	CCV	09/21/23 12:21	WC230921-4	.16533		.173	mg/L	105	90	110			
WG574811CCB1	CCB	09/21/23 12:24				U	mg/L		-0.05	0.05			
WG574811CCV2	CCV	09/21/23 13:03	WC230921-4	.16533		.172	mg/L	104	90	110			
WG574811CCB2	CCB	09/21/23 13:06				U	mg/L		-0.05	0.05			
WG574811LFB2	LFB	09/21/23 13:27	WC230921-6	.22044		.235	mg/L	107	80	120			
WG574811CCV3	CCV	09/21/23 13:45	WC230921-4	.16533		.173	mg/L	105	90	110			
WG574811CCB3	CCB	09/21/23 13:48				U	mg/L		-0.05	0.05			
L83252-07AS	AS	09/21/23 13:52	WC230921-6	.22044	U	.228	mg/L	103	75	125			
L83252-07ASD	ASD	09/21/23 13:55	WC230921-6	.22044	U	.227	mg/L	103	75	125	0	20	
WG574811CCV4	CCV	09/21/23 14:27	WC230921-4	.16533		.172	mg/L	104	90	110			
WG574811CCB4	CCB	09/21/23 14:30				U	mg/L		-0.05	0.05			
WG574811CCV5	CCV	09/21/23 15:09	WC230921-4	.16533		.173	mg/L	105	90	110			
WG574811CCB5	CCB	09/21/23 15:12				U	mg/L		-0.05	0.05			
WG574811LFB3	LFB	09/21/23 15:16	WC230921-6	.22044		.235	mg/L	107	80	120			
WG574811CCV6	CCV	09/21/23 15:37	WC230921-4	.16533		.173	mg/L	105	90	110			
WG574811CCB6	CCB	09/21/23 15:40				U	mg/L		-0.05	0.05			

Zinc, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575408													
WG575408ICV	ICV	10/02/23 14:56	MS230908-1	.05		.05	mg/L	100	90	110			
WG575408ICB	ICB	10/02/23 14:58				U	mg/L		-0.0132	0.0132			
WG575408LFB	LFB	10/02/23 15:00	MS230928-12	.050015		.0534	mg/L	107	85	115			
WG575408CCV1	CCV	10/02/23 15:24	MS230921-3	.50015		.5082	mg/L	102	90	110			
WG575408CCB1	CCB	10/02/23 15:26				U	mg/L		-0.018	0.018			
L83252-08AS	AS	10/02/23 15:40	MS230928-12	.10003	U	.1209	mg/L	121	70	130			
L83252-08ASD	ASD	10/02/23 15:42	MS230928-12	.10003	U	.1214	mg/L	121	70	130	0	20	
WG575408CCV2	CCV	10/02/23 15:47	MS230921-3	.50015		.5012	mg/L	100	90	110			
WG575408CCB2	CCB	10/02/23 15:49				U	mg/L		-0.018	0.018			
WG575408CCV3	CCV	10/02/23 15:58	MS230921-3	.50015		.5085	mg/L	102	90	110			
WG575408CCB3	CCB	10/02/23 16:01				U	mg/L		-0.018	0.018			

HECLARIO

ACZ Project ID: **L83261**

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, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG575823													
WG575823ICV	ICV	10/04/23 18:55	MS230908-1	.05		.0517	mg/L	103	90	110			
WG575823ICB	ICB	10/04/23 18:57				U	mg/L		-0.018	0.018			
WG575719LRB	LRB	10/04/23 18:59				U	mg/L		-0.0132	0.0132			
WG575719LFB	LFB	10/04/23 19:00	MS230928-12	.050015		.0517	mg/L	103	85	115			
WG575823CCV1	CCV	10/04/23 19:13	MS231003-2	.50015		.5016	mg/L	100	90	110			
WG575823CCB1	CCB	10/04/23 19:15				U	mg/L		-0.018	0.018			
L83267-01LFM	LFM	10/04/23 19:24	MS230928-12	.050015	.0199	.0658	mg/L	92	70	130			
L83267-01LFMD	LFMD	10/04/23 19:26	MS230928-12	.050015	.0199	.067	mg/L	94	70	130	2	20	
WG575823CCV2	CCV	10/04/23 19:35	MS231003-2	.50015		.5031	mg/L	101	90	110			
WG575823CCB2	CCB	10/04/23 19:37				U	mg/L		-0.018	0.018			
WG575823CCV3	CCV	10/04/23 19:53	MS231003-2	.50015		.4984	mg/L	100	90	110			
WG575823CCB3	CCB	10/04/23 19:55				U	mg/L		-0.018	0.018			

Rio Grande Silver, Inc.

ACZ Project ID: **L83261**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L83261-01	WG575160	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).
	WG576000	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).
	WG575047	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).
	WG575499	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).
	WG575996	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).
L83261-02	WG575160	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).
	WG575438	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).
	WG575047	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).
	WG575499	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).
	WG575175	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.
L83261-03	WG575160	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).
	WG575553	Chloride	M300.0 - Ion Chromatography	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG575047	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).
	WG575499	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).
	WG575175	Total Alkalinity	SM2320B - Titration	B4	Target analyte detected in blank at or above the acceptance criteria.
	WG575719	Total Recoverable Digestion	M200.2 ICP-MS	DJ	Sample dilution required due to insufficient sample.

Rio Grande Silver, Inc.

Project ID: BO52077

Sample ID: DP-5

ACZ Sample ID: **L83261-01**

Date Sampled: 09/19/23 10:00

Date Received: 09/20/23

Sample Matrix: Groundwater

Oil & Grease, Total RecoverableAnalysis Method: **1664A/B - Gravimetric**

Extract Method:

Workgroup: WG574858

Analyst: CAM

Extract Date:

Analysis Date: 09/22/23 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: BO52077

Sample ID: HW-2

ACZ Sample ID: **L83261-02**

Date Sampled: 09/19/23 10:30

Date Received: 09/20/23

Sample Matrix: Groundwater

Oil & Grease, Total Recoverable

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

Extract Method:

Workgroup: WG574858

Analyst: CAM

Extract Date:

Analysis Date: 09/22/23 15:02

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: BO52077

Sample ID: HW-D

ACZ Sample ID: **L83261-03**

Date Sampled: 09/19/23 10:45

Date Received: 09/20/23

Sample Matrix: Groundwater

Oil & Grease, Total Recoverable

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

Extract Method:

Workgroup: WG574858

Analyst: CAM

Extract Date:

Analysis Date: 09/22/23 15:21

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

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://aczel.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf>

Rio Grande Silver, Inc.

ACZ Project ID: **L83261**

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

WG574858

MS	Sample ID: L83252-01MS			PCN/SCN: OP230823-2			Analyzed: 09/22/23 12:16			
Compound	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40	U	30.9	mg/L	77.0	78	114			M2 Q5

LCSW	Sample ID: WG574858LCSW			PCN/SCN: OP230823-2			Analyzed: 09/22/23 9:48			
Compound	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		35.2	mg/L	88.0	78	114			

LCSWD	Sample ID: WG574858LCSWD			PCN/SCN: OP230823-2			Analyzed: 09/22/23 10:06			
Compound	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		37.3	mg/L	93.0	78	114	6	18	

PBW	Sample ID: WG574858PBW			Analyzed: 09/22/23 9:30						
Compound	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE			U	mg/L						

ACZ Project ID: **L83261**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L83261-01	WG574858	Oil and Grease	1664A/B - Gravimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			1664A/B - Gravimetric	Q5	Sample received with inadequate chemical preservation. Additional preservation performed by the laboratory.
L83261-02	WG574858	Oil and Grease	1664A/B - Gravimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L83261-03	WG574858	Oil and Grease	1664A/B - Gravimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			1664A/B - Gravimetric	Q5	Sample received with inadequate chemical preservation. Additional preservation performed by the laboratory.

Rio Grande Silver, Inc.

ACZ Project ID: **L83261**

No certification qualifiers associated with this analysis

Rio Grande Silver, Inc.
BO52077

ACZ Project ID: L83261
Date Received: 09/20/2023 11:52
Received By:
Date Printed: 9/21/2023

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody form or other directive shipping papers present?	☒	☐	☐
3) Does this project require special handling procedures such as CLP protocol?	☐	☒	☐
4) Are any samples NRC licensable material?	☐	☐	☒
5) If samples are received past hold time, proceed with requested short hold time analyses?	☒	☐	☐
6) Is the Chain of Custody form complete and accurate?	☐	☒	☐
quote entered per label on bag			
quote entered per label on bag			
quote entered per label on bag			
quote entered per label on bag			
7) Were any changes made to the Chain of Custody form prior to ACZ receiving the samples?	☐	☒	☐

Samples/Containers

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

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?
4478	3.7	<=6.0	15	Yes

Was ice present in the shipment container(s)?

Rio Grande Silver, Inc.
BO52077

ACZ Project ID: L83261
Date Received: 09/20/2023 11:52
Received By:
Date Printed: 9/21/2023

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.

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

CHAIN of CUSTODY

Report to:

Name: Randy McClure		Address: 625 USFS Road 504. 1A
Company: Rio Grande Silver, Inc.		Creede, CO 81130
E-mail: rmcclure@hecla.com		Telephone: 970-317-5355

Copy of Report to:

Name: Kerry Mierau	email: kmierau@slrconsulting.com
Company: SLR International Corp	Telephone: 303-928-0717

Invoice to:

Name: Randy McClure		Address: 625 USFS Road 504. 1A
Company: Rio Grande Silver, Inc.		Creede, CO 81130
E-mail: rmcclure@hecla.com		Telephone: 970-317-5355

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:**

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

PROJECT INFORMATION

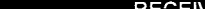
ANALYSES REQUESTED (attach list or use quote number)

[illegible]

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

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	9/19/23 12 pm		9/20/23



83261 Chain of Custody