



BACKWASH SLUDGE Data

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To: "Lennberg - DNR, Patrick" <patrick.lennberg@state.co.us>

Fri, Aug 5, 2022 at 4:06 PM

Patrick

Here is the data from the lab on our Backwash Sludge, please give me a call after review so we can go over your thoughts on disposal.

Kind Regards,

Richard Mittasch, Vice President

Nederland Mining Consultants, Inc.

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[4415 Caribou Rd](#), PO Box 3395, Nederland, CO 80466



L74217.pdf
549K

August 05, 2022

Report to:

Richard Mittasch
Grand Island Resources, LLC
4415 Caribou Rd #3395
Nederland, CO 80466

Bill to:

Richard Mittasch
Grand Island Resources, LLC
4415 Caribou Rd #3395
Nederland, CO 80466

Project ID:

ACZ Project ID: L74217

Richard Mittasch:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 29, 2022. This project has been assigned to ACZ's project number, L74217. Please reference this number in all future inquiries.

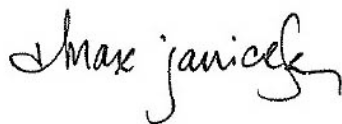
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L74217. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 September 04, 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.



Max Janicek has reviewed and
approved this report.



Grand Island Resources, LLC

August 05, 2022

Project ID:

ACZ Project ID: L74217

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 2 miscellaneous samples from Grand Island Resources, LLC on June 29, 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 L74217. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

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

The below is from WG546292

Qualifier: DE

Applies to:

L74217-01/SULFIDE

Sample required dilution. Samples overdiluted from prep dilution.

Grand Island Resources, LLC
Project ID:
Sample ID: BACKWASH SLUDGE

ACZ Sample ID: **L74217-01**
Date Sampled: 05/27/22 10:00
Date Received: 06/29/22
Sample Matrix: Miscellaneous

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP								07/12/22 12:33	aeH

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic (TCLP)	M6010D ICP	1	<0.04	U	*	mg/L	0.04	0.2	07/19/22 0:44	aeH
Barium (TCLP)	M6010D ICP	1	2.54			mg/L	0.009	0.035	07/19/22 0:44	aeH
Cadmium (TCLP)	M6010D ICP	1	0.115			mg/L	0.008	0.025	07/19/22 0:44	aeH
Chromium (TCLP)	M6010D ICP	1	<0.02	U	*	mg/L	0.02	0.05	07/19/22 0:44	aeH
Lead (TCLP)	M6010D ICP	1	1.28			mg/L	0.03	0.15	07/19/22 0:44	aeH
Mercury (TCLP)	M7470A CVAA	1	<0.0002	UH	*	mg/L	0.0002	0.001	07/15/22 9:55	mlh
Selenium (TCLP)	M6010D ICP	1	<0.05	U	*	mg/L	0.05	0.25	07/19/22 0:44	aeH
Silver (TCLP)	M6010D ICP	1	<0.01	U	*	mg/L	0.01	0.025	07/19/22 0:44	aeH

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
TCLP Metal Extraction	M1311								07/07/22 2:00	scm
Water Extraction	ASA No. 9 10-2.3.2				*				07/08/22 11:40	scm

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfide, soluble (Water)	SM4500S2-D	5	<0.25	U	*	mg/L	0.25	2.5	07/12/22 16:40	jck

Grand Island Resources, LLC

Project ID:

Sample ID: APACHE ORE

ACZ Sample ID: **L74217-02**

Date Sampled: 06/22/22 09:00

Date Received: 06/29/22

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion (1312)	M3010A ICP-MS								07/13/22 22:36	mfm/sc
Total Hot Plate Digestion (1312)	M3010A ICP								07/14/22 15:18	wtc

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	M6010D ICP	1	0.162	B	*	mg/L	0.05	0.25	07/23/22 6:18	keh1
Antimony (1312)	M6020B ICP-MS	1	0.00112	B	*	mg/L	0.0004	0.002	07/15/22 20:27	kja
Arsenic (1312)	M6020B ICP-MS	1	<0.0002	U	*	mg/L	0.0002	0.001	07/15/22 20:27	kja
Barium (1312)	M6010D ICP	1	<0.009	U	*	mg/L	0.009	0.035	07/23/22 6:18	keh1
Beryllium (1312)	M6020B ICP-MS	1	<0.00008	U	*	mg/L	0.00008	0.00025	07/19/22 17:16	kja
Bismuth (1312)	M6010D ICP	1	<0.04	U	*	mg/L	0.04	0.2	07/23/22 6:18	keh1
Cadmium (1312)	M6020B ICP-MS	1	0.000186	B	*	mg/L	0.00005	0.00025	07/15/22 20:27	kja
Calcium (1312)	M6010D ICP	1	1.56			mg/L	0.1	0.5	07/23/22 6:18	keh1
Chromium (1312)	M6020B ICP-MS	1	<0.0005	U	*	mg/L	0.0005	0.002	07/15/22 20:27	kja
Cobalt (1312)	M6010D ICP	1	<0.02	U	*	mg/L	0.02	0.05	07/23/22 6:18	keh1
Copper (1312)	M6010D ICP	1	<0.01	U	*	mg/L	0.01	0.05	07/23/22 6:18	keh1
Gallium (1312)	M6010D ICP	1	<0.1	U	*	mg/L	0.1	0.5	07/23/22 6:18	keh1
Iron (1312)	M6010D ICP	1	<0.06	U	*	mg/L	0.06	0.15	07/23/22 6:18	keh1
Lead (1312)	M6020B ICP-MS	1	0.0160		*	mg/L	0.0001	0.0005	07/15/22 20:27	kja
Lithium (1312)	M6010D ICP	1	<0.008	U	*	mg/L	0.008	0.04	07/23/22 6:18	keh1
Magnesium (1312)	M6010D ICP	1	0.55	B	*	mg/L	0.2	1	07/23/22 6:18	keh1
Manganese (1312)	M6010D ICP	1	0.036	B	*	mg/L	0.01	0.05	07/23/22 6:18	keh1
Mercury (1312)	M7470A CVAA	1	<0.0002	U	*	mg/L	0.0002	0.001	07/18/22 16:17	mlh
Molybdenum (1312)	M6020B ICP-MS	1	0.00552		*	mg/L	0.0002	0.0005	07/15/22 20:27	kja
Nickel (1312)	M6010D ICP	1	<0.008	U	*	mg/L	0.008	0.04	07/23/22 6:18	keh1
Phosphorus (1312)	M6010D ICP	1	<0.1	U	*	mg/L	0.1	0.5	07/23/22 6:18	keh1
Potassium (1312)	M6010D ICP	1	3.07			mg/L	0.2	1	07/23/22 6:18	keh1
Sodium (1312)	M6010D ICP	1	<0.2	U	*	mg/L	0.2	1	07/23/22 6:18	keh1
Strontium (1312)	M6010D ICP	1	0.0153	B	*	mg/L	0.009	0.045	07/23/22 6:18	keh1
Sulfur (1312)	M6010D ICP	1	0.69	B	*	mg/L	0.25	1.25	07/23/22 6:18	keh1
Thallium (1312)	M6020B ICP-MS	1	<0.0001	U	*	mg/L	0.0001	0.0005	07/15/22 20:27	kja
Tin (1312)	M6010D ICP	1	<0.04	U	*	mg/L	0.04	0.2	07/23/22 6:18	keh1
Titanium (1312)	M6010D ICP	1	<0.005	U	*	mg/L	0.005	0.025	07/23/22 6:18	keh1
Uranium (1312)	M6020B ICP-MS	1	<0.0001	U	*	mg/L	0.0001	0.0005	07/15/22 20:27	kja
Vanadium (1312)	M6010D ICP	1	<0.01	U	*	mg/L	0.01	0.025	07/23/22 6:18	keh1
Zinc (1312)	M6010D ICP	1	<0.02	U	*	mg/L	0.02	0.05	07/23/22 6:18	keh1

Grand Island Resources, LLC

Project ID:

Sample ID: APACHE ORE

ACZ Sample ID: **L74217-02**

Date Sampled: 06/22/22 09:00

Date Received: 06/29/22

Sample Matrix: Soil

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4		10.00			t CaCO3/Kt	0.31	3.1	08/05/22 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		16.0			t CaCO3/Kt	1	5	08/05/22 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		6.0			t CaCO3/Kt			08/05/22 0:00	calc
Net Acid Generation Procedure	NAG - EGI 2002	1	6.9		*	units	0.1	0.1	07/14/22 3:20	jpj
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	1.6		*	%	0.1	0.5	07/13/22 10:10	jpj
pH, (1312)	M9045D/M9040C		7			Units	0.1	0.1	08/05/22 0:00	ZLN
Temperature			20.4			Units	0.1	0.1	08/05/22 0:00	ZLN
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2									
Max Particle Size		1	250		*	um			07/15/22 0:00	scm
pH		1	7.7		*	units	0.1	0.1	07/15/22 0:00	scm
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	0.29		*	%	0.01	0.1	07/13/22 0:00	jpj
Sulfur HNO3 Residue		1	<0.01	U	*	%	0.01	0.1	07/13/22 0:00	jpj
Sulfur Organic Residual		1	<0.01	U	*	%	0.01	0.1	07/13/22 0:00	jpj
Sulfur Pyritic Sulfide		1	0.29			%	0.01	0.1	07/13/22 0:00	jpj
Sulfur Sulfate		1	0.03	B	*	%	0.01	0.1	07/13/22 0:00	jpj
Sulfur Total		1	0.32		*	%	0.01	0.1	07/13/22 0:00	jpj
Total Sulfur minus Sulfate		1	0.29			%	0.01	0.1	07/13/22 0:00	jpj

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								07/05/22 19:00	mep
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								07/11/22 13:00	jpj
Saturated Paste Extraction	USDA No. 60 (2)								07/14/22 9:03	scm
Synthetic Precip. Leaching Procedure	M1312								07/13/22 0:27	zln
Synthetic Precip. Leaching Procedure	M1312, DI Water								07/12/22 8:08	zln

Grand Island Resources, LLC

Project ID:

Sample ID: APACHE ORE

ACZ Sample ID: **L74217-02**

Date Sampled: 06/22/22 09:00

Date Received: 06/29/22

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity (1312)	SM2310B - Titration	1	<2	U	*	mg/L	2	20	07/26/22 16:50	eep
Alkalinity (1312)	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	7.9	B	*	mg/L	2	20	07/14/22 0:00	eep
Carbonate as CaCO ₃		1	<2	U	*	mg/L	2	20	07/14/22 0:00	eep
Hydroxide as CaCO ₃		1	<2	U	*	mg/L	2	20	07/14/22 0:00	eep
Total Alkalinity		1	7.9	B	*	mg/L	2	20	07/14/22 0:00	eep
Chloride (1312 DI)	SM4500Cl-E	1	1.99	B	*	mg/L	1	2	08/04/22 11:20	mrd
Conductivity @25C (1312)	SM2510B	1	21		*	umhos/cm	1	10	07/14/22 18:55	eep
Fluoride (1312 DI)	SM4500F-C	1	0.18	B	*	mg/L	0.15	0.35	07/15/22 11:50	emk
Hardness as CaCO ₃ (1312)	SM2340B - Calculation		6.2			mg/L	0.2	5	08/05/22 0:00	calc
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	1	<0.02	U	*	mg/L	0.02	0.1	07/13/22 2:05	pjb
Nitrogen, ammonia (1312-DI)	M350.1 Auto Salicylate w/gas diffusion	1	<0.05	U	*	mg/L	0.05	0.2	07/28/22 10:58	bls
Residue, Filterable (TDS) @180C (1312)	SM2540C	1	<20	U	*	mg/L	20	40	07/14/22 14:02	jck
Sulfate (1312 DI)	D516-07 - Turbidimetric	1	1.2	B	*	mg/L	1	5	07/18/22 15:18	mjj1

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>

GIR

ACZ Project ID: **L74217**

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.

Acidity (1312)

SM2310B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547214													
WG547214PBW	PBW	07/26/22 15:20				6	mg/L		-20	20			
WG547214LCSW	LCSW	07/26/22 15:50	PCN65987	997		1014	mg/L	102	90	110			
WG546248PBS	PBS	07/26/22 16:20				4	mg/L		-20	20			
L74217-02DUP	DUP	07/26/22 17:20			U	U	mg/L				0	20	RA

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546472													
WG546472PBW	PBW	07/14/22 13:20				3.2	mg/L		-20	20			
WG546472LCSW2	LCSW	07/14/22 13:35	WC220714-2	820.0001		765.2	mg/L	93	90	110			
WG545954PBS	PBS	07/14/22 13:47				5	mg/L		-20	20			
WG546244PBS	PBS	07/14/22 16:04				U	mg/L		-20	20			
WG546472LCSW4	LCSW	07/14/22 17:20	WC220701-2	820.0001		770.7	mg/L	94	90	110			
WG546472PBW2	PBW	07/14/22 17:31				3	mg/L		-20	20			
WG546248PBS	PBS	07/14/22 18:47				U	mg/L		-20	20			
L74217-02DUP	DUP	07/14/22 19:03			7.9	8.2	mg/L				4	20	RA
WG546472LCSW6	LCSW	07/14/22 19:18	WC220714-2	820.0001		789.4	mg/L	96	90	110			

Aluminum (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		2.027	mg/L	101	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.15	0.15			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.15	0.15			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	1.0008		1.014	mg/L	101	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	1.0008	.162	1.304	mg/L	114	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	1.0008	.162	1.279	mg/L	112	75	125	2	20	
L74217-02DUP	DUP	07/23/22 6:33			.162	U	mg/L				200	20	RA

Antimony (1312)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546592													
WG546592ICV	ICV	07/15/22 20:13	MS220701-3	.0201		.02009	mg/L	100	90	110			
WG546592ICB	ICB	07/15/22 20:15				U	mg/L		-0.0012	0.0012			
WG546248PBS	PBS	07/15/22 20:24				U	mg/L		-0.0012	0.0012			
WG546248LFB2	LFB	07/15/22 20:26	MS220627-2	.01		.01021	mg/L	102	80	120			
L74217-02MS2	MS	07/15/22 20:31	MS220627-2	.01	.00112	.01144	mg/L	103	75	125			
L74217-02MSD2	MSD	07/15/22 20:33	MS220627-2	.01	.00112	.01152	mg/L	104	75	125	1	20	
L74217-02DUP	DUP	07/15/22 20:35			.00112	.0012	mg/L				7	20	RA

GIR

ACZ Project ID: **L74217**

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

Arsenic (1312)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546592													
WG546592ICV	ICV	07/15/22 20:13	MS220701-3	.05		.05192	mg/L	104	90	110			
WG546592ICB	ICB	07/15/22 20:15				U	mg/L		-0.0006	0.0006			
WG546248PBS	PBS	07/15/22 20:24				U	mg/L		-0.0006	0.0006			
WG546248LFB2	LFB	07/15/22 20:26	MS220627-2	.05005		.0512	mg/L	102	80	120			
L74217-02MS2	MS	07/15/22 20:31	MS220627-2	.05005	U	.05089	mg/L	102	75	125			
L74217-02MSD2	MSD	07/15/22 20:33	MS220627-2	.05005	U	.05127	mg/L	102	75	125	1	20	
L74217-02DUP	DUP	07/15/22 20:35			U	U	mg/L				0	20	RA

Arsenic (TCLP)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546630													
WG546630ICV	ICV	07/19/22 0:08	I1220621-2	4		3.948	mg/L	99	90	110			
WG546630ICB	ICB	07/19/22 0:12				U	mg/L		-0.12	0.12			
WG545816PBS	PBS	07/19/22 0:36				U	mg/L		-0.12	0.12			
WG545816LFB	LFB	07/19/22 0:40	IITCLPSPIKE	1.001		1.073	mg/L	107	80	120			
L74217-01DUP	DUP	07/19/22 0:48			U	U	mg/L				0	20	RA
L74217-01MS	MS	07/19/22 0:52	IITCLPSPIKE	1.001	U	1.06	mg/L	106	75	125			
L74217-01MSD	MSD	07/19/22 0:56	IITCLPSPIKE	1.001	U	1.061	mg/L	106	75	125	0	20	
WG546243PBS	PBS	07/19/22 1:00				U	mg/L		-0.12	0.12			
WG546243LFB	LFB	07/19/22 1:04	IITCLPSPIKE	1.001		1.038	mg/L	104	80	120			

Barium (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	I1220720-4	2		2.014	mg/L	101	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.027	0.027			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.027	0.027			
WG546248LFB1	LFB	07/23/22 6:14	I1220628-3	.502		.4987	mg/L	99	80	120			
L74217-02MS1	MS	07/23/22 6:25	I1220628-3	.502	U	.5144	mg/L	102	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	I1220628-3	.502	U	.5016	mg/L	100	75	125	3	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Barium (TCLP)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546630													
WG546630ICV	ICV	07/19/22 0:08	I1220621-2	2		1.973	mg/L	99	90	110			
WG546630ICB	ICB	07/19/22 0:12				U	mg/L		-0.027	0.027			
WG545816PBS	PBS	07/19/22 0:36				.0153	mg/L		-0.027	0.027			
WG545816LFB	LFB	07/19/22 0:40	IITCLPSPIKE	20.5		20.68	mg/L	101	80	120			
L74217-01DUP	DUP	07/19/22 0:48			2.54	2.556	mg/L				1	20	
L74217-01MS	MS	07/19/22 0:52	IITCLPSPIKE	20.5	2.54	23.04	mg/L	100	75	125			
L74217-01MSD	MSD	07/19/22 0:56	IITCLPSPIKE	20.5	2.54	22.59	mg/L	98	75	125	2	20	
WG546243PBS	PBS	07/19/22 1:00				.0165	mg/L		-0.027	0.027			
WG546243LFB	LFB	07/19/22 1:04	IITCLPSPIKE	20.5		20.28	mg/L	99	80	120			

GIR

ACZ Project ID: **L74217**

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

Beryllium (1312)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546739													
WG546739ICV	ICV	07/19/22 17:01	MS220701-3	.05		.050485	mg/L	101	90	110			
WG546739ICB	ICB	07/19/22 17:03				U	mg/L		-0.00024	0.00024			
WG546248PBS	PBS	07/19/22 17:12				U	mg/L		-0.00024	0.00024			
WG546248LFB2	LFB	07/19/22 17:14	MS220627-2	.05005		.049665	mg/L	99	80	120			
L74217-02MS2	MS	07/19/22 17:20	MS220627-2	.05005	U	.051001	mg/L	102	75	125			
L74217-02MSD2	MSD	07/19/22 17:21	MS220627-2	.05005	U	.050927	mg/L	102	75	125	0	20	
L74217-02DUP	DUP	07/19/22 17:23			U	U	mg/L				0	20	RA

Bismuth (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		2.055	mg/L	103	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.12	0.12			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.12	0.12			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	1		1.06	mg/L	106	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	1	U	1.077	mg/L	108	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	1	U	1.065	mg/L	107	75	125	1	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Cadmium (1312)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546592													
WG546592ICV	ICV	07/15/22 20:13	MS220701-3	.05		.052189	mg/L	104	90	110			
WG546592ICB	ICB	07/15/22 20:15				U	mg/L		-0.00015	0.00015			
WG546248PBS	PBS	07/15/22 20:24				U	mg/L		-0.00015	0.00015			
WG546248LFB2	LFB	07/15/22 20:26	MS220627-2	.05005		.049175	mg/L	98	80	120			
L74217-02MS2	MS	07/15/22 20:31	MS220627-2	.05005	.000186	.050037	mg/L	100	75	125			
L74217-02MSD2	MSD	07/15/22 20:33	MS220627-2	.05005	.000186	.050231	mg/L	100	75	125	0	20	
L74217-02DUP	DUP	07/15/22 20:35			.000186	.000193	mg/L				4	20	RA

Cadmium (TCLP)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546630													
WG546630ICV	ICV	07/19/22 0:08	II220621-2	2		1.944	mg/L	97	90	110			
WG546630ICB	ICB	07/19/22 0:12				U	mg/L		-0.024	0.024			
WG545816PBS	PBS	07/19/22 0:36				U	mg/L		-0.024	0.024			
WG545816LFB	LFB	07/19/22 0:40	IITCLPSPIKE	.501		.5147	mg/L	103	80	120			
L74217-01DUP	DUP	07/19/22 0:48			.115	.1172	mg/L				2	20	
L74217-01MS	MS	07/19/22 0:52	IITCLPSPIKE	.501	.115	.6174	mg/L	100	75	125			
L74217-01MSD	MSD	07/19/22 0:56	IITCLPSPIKE	.501	.115	.609	mg/L	99	75	125	1	20	
WG546243PBS	PBS	07/19/22 1:00				U	mg/L		-0.024	0.024			
WG546243LFB	LFB	07/19/22 1:04	IITCLPSPIKE	.501		.5085	mg/L	101	80	120			

GIR

ACZ Project ID: **L74217**

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 (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	100		101.5	mg/L	102	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.3	0.3			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.3	0.3			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	67.98862		68.46	mg/L	101	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	67.98862	1.56	71.45	mg/L	103	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	67.98862	1.56	70.6	mg/L	102	75	125	1	20	
L74217-02DUP	DUP	07/23/22 6:33			1.56	1.54	mg/L				1	20	

Chloride (1312 DI)

SM4500CI-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547819													
WG547819ICV	ICV	08/04/22 11:18	WI220502-12	54.945		57.63	mg/L	105	90	110			
WG547819ICB	ICB	08/04/22 11:19				1.26	mg/L		-3	3			
WG547819LFB	LFB	08/04/22 11:19	WI220328-1	29.97		31.61	mg/L	105	90	110			
WG546193PBS	PBS	08/04/22 11:20				1.08	mg/L		-3	3			
L74217-02DUP	DUP	08/04/22 11:21			1.99	1.57	mg/L				24	20	RA
L74217-02AS	AS	08/04/22 11:21	WI220328-1	29.97	1.99	32.95	mg/L	103	90	110			

Chromium (1312)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546592													
WG546592ICV	ICV	07/15/22 20:13	MS220701-3	.05		.05211	mg/L	104	90	110			
WG546592ICB	ICB	07/15/22 20:15				U	mg/L		-0.0015	0.0015			
WG546248PBS	PBS	07/15/22 20:24				U	mg/L		-0.0015	0.0015			
WG546248LFB2	LFB	07/15/22 20:26	MS220627-2	.0501		.05002	mg/L	100	80	120			
L74217-02MS2	MS	07/15/22 20:31	MS220627-2	.0501	U	.04955	mg/L	99	75	125			
L74217-02MSD2	MSD	07/15/22 20:33	MS220627-2	.0501	U	.0497	mg/L	99	75	125	0	20	
L74217-02DUP	DUP	07/15/22 20:35			U	U	mg/L				0	20	RA

Chromium (TCLP)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546630													
WG546630ICV	ICV	07/19/22 0:08	II220621-2	2		1.931	mg/L	97	90	110			
WG546630ICB	ICB	07/19/22 0:12				U	mg/L		-0.06	0.06			
WG545816PBS	PBS	07/19/22 0:36				U	mg/L		-0.06	0.06			
WG545816LFB	LFB	07/19/22 0:40	IITCLPSPIKE	.501		.505	mg/L	101	80	120			
L74217-01DUP	DUP	07/19/22 0:48			U	U	mg/L				0	20	RA
L74217-01MS	MS	07/19/22 0:52	IITCLPSPIKE	.501	U	.493	mg/L	98	75	125			
L74217-01MSD	MSD	07/19/22 0:56	IITCLPSPIKE	.501	U	.484	mg/L	97	75	125	2	20	
WG546243PBS	PBS	07/19/22 1:00				U	mg/L		-0.06	0.06			
WG546243LFB	LFB	07/19/22 1:04	IITCLPSPIKE	.501		.495	mg/L	99	80	120			

GIR

ACZ Project ID: **L74217**

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

Cobalt (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2.01		2.023	mg/L	101	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.06	0.06			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.06	0.06			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	.5005		.502	mg/L	100	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	.5005	U	.51	mg/L	102	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	.5005	U	.495	mg/L	99	75	125	3	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Conductivity @25C (1312)

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546472													
WG546472PBW	PBW	07/14/22 13:20				1	umhos/cm		-10	10			
WG546472LCSW1	LCSW	07/14/22 13:22	PCN65647	1409		1399	umhos/cm	99	90	110			
WG545954PBS	PBS	07/14/22 13:47				U	umhos/cm		-4	4			
WG546244PBS	PBS	07/14/22 16:04				U	umhos/cm		-4	4			
WG546472LCSW3	LCSW	07/14/22 17:08	PCN65647	1409		1395	umhos/cm	99	90	110			
WG546472PBW2	PBW	07/14/22 17:31				U	umhos/cm		-10	10			
WG546248PBS	PBS	07/14/22 18:47				U	umhos/cm		-4	4			
L74217-02DUP	DUP	07/14/22 19:03			21	23	umhos/cm				9	20	
WG546472LCSW5	LCSW	07/14/22 19:04	PCN65647	1409		1388	umhos/cm	99	90	110			

Copper (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		2.019	mg/L	101	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.03	0.03			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.03	0.03			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	.5005		.505	mg/L	101	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	.5005	U	.516	mg/L	103	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	.5005	U	.501	mg/L	100	75	125	3	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Fluoride (1312 DI)

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546546													
WG546546ICV	ICV	07/15/22 10:20	WC220714-1	2.008		2.07	mg/L	103	90	110			
WG546546ICB	ICB	07/15/22 10:24				U	mg/L		-0.3	0.3			
WG546548													
WG546548ICV	ICV	07/15/22 11:29	WC220714-1	2.008		1.83	mg/L	91	90	110			
WG546548ICB	ICB	07/15/22 11:33				U	mg/L		-0.3	0.3			
WG546548LFB	LFB	07/15/22 11:42	WC220606-1	5.02		4.88	mg/L	97	90	110			
WG546193PBS	PBS	07/15/22 11:46				U	mg/L		-0.3	0.3			
L74217-02AS	AS	07/15/22 11:54	WC220606-1	5.02	.18	5.09	mg/L	98	90	110			
L74217-02DUP	DUP	07/15/22 11:58			.18	U	mg/L				200	20	RA

GIR

ACZ Project ID: **L74217**

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.

Gallium (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		2.07	mg/L	104	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.3	0.3			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.3	0.3			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	.9822		1.11	mg/L	113	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	.9822	U	1.12	mg/L	114	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	.9822	U	1.1	mg/L	112	75	125	2	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Iron (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		2.048	mg/L	102	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.18	0.18			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.18	0.18			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	1.0013		1.013	mg/L	101	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	1.0013	U	1.147	mg/L	115	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	1.0013	U	1.073	mg/L	107	75	125	7	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Lead (1312)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546592													
WG546592ICV	ICV	07/15/22 20:13	MS220701-3	.05		.05206	mg/L	104	90	110			
WG546592ICB	ICB	07/15/22 20:15				U	mg/L		-0.0003	0.0003			
WG546248PBS	PBS	07/15/22 20:24				U	mg/L		-0.0003	0.0003			
WG546248LFB2	LFB	07/15/22 20:26	MS220627-2	.0501		.04929	mg/L	98	80	120			
L74217-02MS2	MS	07/15/22 20:31	MS220627-2	.0501	.016	.06754	mg/L	103	75	125			
L74217-02MSD2	MSD	07/15/22 20:33	MS220627-2	.0501	.016	.0674	mg/L	103	75	125	0	20	
L74217-02DUP	DUP	07/15/22 20:35			.016	.0024	mg/L				148	20	RD

Lead (TCLP)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546630													
WG546630ICV	ICV	07/19/22 0:08	II220621-2	4		3.826	mg/L	96	90	110			
WG546630ICB	ICB	07/19/22 0:12				U	mg/L		-0.09	0.09			
WG545816PBS	PBS	07/19/22 0:36				U	mg/L		-0.09	0.09			
WG545816LFB	LFB	07/19/22 0:40	IITCLPSPIKE	1.001		1.016	mg/L	101	80	120			
L74217-01DUP	DUP	07/19/22 0:48			1.28	1.264	mg/L				1	20	
L74217-01MS	MS	07/19/22 0:52	IITCLPSPIKE	1.001	1.28	2.269	mg/L	99	75	125			
L74217-01MSD	MSD	07/19/22 0:56	IITCLPSPIKE	1.001	1.28	2.228	mg/L	95	75	125	2	20	
WG546243PBS	PBS	07/19/22 1:00				U	mg/L		-0.09	0.09			
WG546243LFB	LFB	07/19/22 1:04	IITCLPSPIKE	1.001		1.021	mg/L	102	80	120			

GIR

ACZ Project ID: **L74217**

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.

Lithium (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		2.023	mg/L	101	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.024	0.024			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.024	0.024			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	.998		1.007	mg/L	101	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	.998	U	1.028	mg/L	103	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	.998	U	1.019	mg/L	102	75	125	1	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Magnesium (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	100		98.12	mg/L	98	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.6	0.6			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.6	0.6			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	49.99809		47.63	mg/L	95	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	49.99809	.55	49.09	mg/L	97	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	49.99809	.55	48.51	mg/L	96	75	125	1	20	
L74217-02DUP	DUP	07/23/22 6:33			.55	.53	mg/L				4	20	RA

Manganese (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		1.985	mg/L	99	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.03	0.03			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.03	0.03			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	.499		.498	mg/L	100	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	.499	.036	.544	mg/L	102	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	.499	.036	.53	mg/L	99	75	125	3	20	
L74217-02DUP	DUP	07/23/22 6:33			.036	.035	mg/L				3	20	RA

Mercury (1312)

M7470A CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546483													
WG546483ICV	ICV	07/18/22 15:48	HG220718-3	.005005		.00521	mg/L	104	90	110			
WG546483ICB	ICB	07/18/22 15:49				U	mg/L		-0.0006	0.0006			
WG546244PBS	PBS	07/18/22 15:51				U	mg/L		-0.0006	0.0006			
WG546244LFB1	LFB	07/18/22 15:52	HG220718-6	.002002		.0019	mg/L	95	85	115			
WG546248PBS	PBS	07/18/22 16:15				U	mg/L		-0.0006	0.0006			
WG546248LFB1	LFB	07/18/22 16:16	HG220718-6	.002002		.00186	mg/L	93	85	115			
L74217-02MS1	MS	07/18/22 16:18	HG220718-6	.002002	U	.00188	mg/L	94	85	115			
L74217-02MSD1	MSD	07/18/22 16:18	HG220718-6	.002002	U	.00194	mg/L	97	85	115	3	20	
L74217-02DUP	DUP	07/18/22 16:19			U	U	mg/L				0	20	RA

GIR

ACZ Project ID: **L74217**

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 (TCLP)

M7470A CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546476													
WG546476ICV1	ICV	07/15/22 7:57	HG220705-3	.005005		.00484	mg/L	97	95	105			
WG546476ICB	ICB	07/15/22 7:58				U	mg/L		-0.0002	0.0002			
WG546480													
WG546480PBW	PBW	07/15/22 9:52				U	mg/L		-0.00044	0.00044			
WG545816PBS	PBS	07/15/22 9:53				U	mg/L		-0.0006	0.0006			
WG545816LFB	LFB	07/15/22 9:54	HG220705-6	.002002		.00198	mg/L	99	85	115			
L74217-01DUP	DUP	07/15/22 9:56			U	U	mg/L				0	20	RA
L74217-01MS	MS	07/15/22 9:57	HG220705-6	.002002	U	.00199	mg/L	99	85	115			
L74217-01MSD	MSD	07/15/22 9:58	HG220705-6	.002002	U	.00195	mg/L	97	85	115	2	20	

Molybdenum (1312)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546592													
WG546592ICV	ICV	07/15/22 20:13	MS220701-3	.02		.02033	mg/L	102	90	110			
WG546592ICB	ICB	07/15/22 20:15				U	mg/L		-0.0006	0.0006			
WG546248PBS	PBS	07/15/22 20:24				U	mg/L		-0.0006	0.0006			
WG546248LFB2	LFB	07/15/22 20:26	MS220627-2	.05005		.04907	mg/L	98	80	120			
L74217-02MS2	MS	07/15/22 20:31	MS220627-2	.05005	.00552	.05525	mg/L	99	75	125			
L74217-02MSD2	MSD	07/15/22 20:33	MS220627-2	.05005	.00552	.05605	mg/L	101	75	125	1	20	
L74217-02DUP	DUP	07/15/22 20:35			.00552	.00641	mg/L				15	20	

Net Acid Generation Procedure

NAG - EGI 2002

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546305													
WG546305ICV	ICV	07/13/22 23:00	PCN63115	4		4	units	100	3.9	4.1			
L74217-02DUP	DUP	07/14/22 7:40			6.9	6.9	units				0	20	

Neutralization Potential as CaCO3

M600/2-78-054 3.2.3

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546304													
WG546304PBS	PBS	07/13/22 9:27				U	%		-0.2	0.2			
WG546304LCSS	LCSS	07/13/22 9:49	PCN59475	99.9		104	%	104	80	120			
L74217-02MS	MS	07/13/22 10:32	SI190303-1	1	1.6	2.7	%	110	70	130			
L74217-02DUP	DUP	07/13/22 10:54			1.6	1.9	%				17	20	

Nickel (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		1.985	mg/L	99	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.024	0.024			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.024	0.024			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	.502		.5093	mg/L	101	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	.502	U	.526	mg/L	105	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	.502	U	.5046	mg/L	101	75	125	4	20	
L74217-02DUP	DUP	07/23/22 6:33			U	.0082	mg/L				200	20	RA

GIR

ACZ Project ID: **L74217**

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 (1312-DI)

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546312													
WG546312ICV	ICV	07/12/22 23:52	WI220602-3	2.4161		2.343	mg/L	97	90	110			
WG546312ICB	ICB	07/12/22 23:53				U	mg/L		-0.02	0.02			
WG546315													
WG546315LFB	LFB	07/13/22 2:03	WI220630-7	2		1.938	mg/L	97	90	110			
WG546193PBS	PBS	07/13/22 2:04				U	mg/L		-0.02	0.02			
L74217-02AS	AS	07/13/22 2:07	WI220630-7	2	U	2.058	mg/L	103	90	110			
L74217-02DUP	DUP	07/13/22 2:08			U	U	mg/L				0	20	RA

Nitrogen, ammonia (1312-DI)

M350.1 Auto Salicylate w/gas diffusion

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547346													
WG547346ICV	ICV	07/28/22 8:53	WI220611-1	12.024		12.588	mg/L	105	90	110			
WG547346ICB	ICB	07/28/22 8:54				U	mg/L		-0.05	0.05			
WG547376													
WG547376LFB	LFB	07/28/22 10:55	WI220420-3	10		9.593	mg/L	96	90	110			
WG546193PBS	PBS	07/28/22 10:57				U	mg/L		-0.05	0.05			
L74217-02AS	AS	07/28/22 11:00	WI220420-3	10	U	10.355	mg/L	104	90	110			
L74217-02DUP	DUP	07/28/22 11:01			U	U	mg/L				0	20	RA

pH, Saturated Paste

EPA 600/2-78-054 section 3.2.2

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546542													
WG546542ICV	ICV	07/15/22 9:15	PCN63115	4.01		4	units	100	3.9	4.1			
L74322-05DUP	DUP	07/15/22 10:39			7.2	7.17	units				0	20	

Phosphorus (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	5.0075		5.22	mg/L	104	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.3	0.3			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.3	0.3			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	1.002		1.07	mg/L	107	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	1.002	U	1.09	mg/L	109	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	1.002	U	1.04	mg/L	104	75	125	5	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Potassium (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	20		20.2	mg/L	101	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.6	0.6			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.6	0.6			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	99.95798		97.83	mg/L	98	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	99.95798	3.07	103.3	mg/L	100	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	99.95798	3.07	102.2	mg/L	99	75	125	1	20	
L74217-02DUP	DUP	07/23/22 6:33			3.07	3.37	mg/L				9	20	

GIR

ACZ Project ID: **L74217**

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

Residue, Filterable (TDS) @180C (1312) SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546479													
WG546479PBW	PBW	07/14/22 13:05				U	mg/L		-20	20			
WG546479LCSW	LCSW	07/14/22 13:07	PCN65843	1000		974	mg/L	97	80	120			
WG545954PBS	PBS	07/14/22 13:10				U	mg/L		-40	40			
WG546248PBS	PBS	07/14/22 13:59				U	mg/L		-40	40			
L74217-02DUP	DUP	07/14/22 14:05			U	U	mg/L				0	10	RA

Selenium (TCLP) M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546630													
WG546630ICV	ICV	07/19/22 0:08	II220621-2	4		3.953	mg/L	99	90	110			
WG546630ICB	ICB	07/19/22 0:12				U	mg/L		-0.15	0.15			
WG545816PBS	PBS	07/19/22 0:36				U	mg/L		-0.15	0.15			
WG545816LFB	LFB	07/19/22 0:40	IITCLPSPIKE	1.001		1.1	mg/L	110	80	120			
L74217-01DUP	DUP	07/19/22 0:48			U	U	mg/L				0	20	RA
L74217-01MS	MS	07/19/22 0:52	IITCLPSPIKE	1.001	U	1.072	mg/L	107	75	125			
L74217-01MSD	MSD	07/19/22 0:56	IITCLPSPIKE	1.001	U	1.074	mg/L	107	75	125	0	20	
WG546243PBS	PBS	07/19/22 1:00				U	mg/L		-0.15	0.15			
WG546243LFB	LFB	07/19/22 1:04	IITCLPSPIKE	1.001		1.067	mg/L	107	80	120			

Silver (TCLP) M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546630													
WG546630ICV	ICV	07/19/22 0:08	II220621-2	1		.975	mg/L	98	90	110			
WG546630ICB	ICB	07/19/22 0:12				U	mg/L		-0.03	0.03			
WG545816PBS	PBS	07/19/22 0:36				U	mg/L		-0.03	0.03			
WG545816LFB	LFB	07/19/22 0:40	IITCLPSPIKE	.501		.489	mg/L	98	80	120			
L74217-01DUP	DUP	07/19/22 0:48			U	U	mg/L				0	20	RA
L74217-01MS	MS	07/19/22 0:52	IITCLPSPIKE	.501	U	.498	mg/L	99	75	125			
L74217-01MSD	MSD	07/19/22 0:56	IITCLPSPIKE	.501	U	.486	mg/L	97	75	125	2	20	
WG546243PBS	PBS	07/19/22 1:00				U	mg/L		-0.03	0.03			
WG546243LFB	LFB	07/19/22 1:04	IITCLPSPIKE	.501		.484	mg/L	97	80	120			

Sodium (1312) M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	100		100.2	mg/L	100	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.6	0.6			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.6	0.6			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	100.0023		97.21	mg/L	97	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	100.0023	U	99.63	mg/L	100	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	100.0023	U	98.5	mg/L	98	75	125	1	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

GIR

ACZ Project ID: **L74217**

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.

Strontium (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		1.993	mg/L	100	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.027	0.027			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.027	0.027			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	.5005		.5353	mg/L	107	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	.5005	.0153	.5637	mg/L	110	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	.5005	.0153	.5557	mg/L	108	75	125	1	20	
L74217-02DUP	DUP	07/23/22 6:33			.0153	.0153	mg/L				0	20	RA

Sulfate (1312 DI)

D516-07 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546564													
WG546564ICB	ICB	07/18/22 11:56				U	mg/L		-3	3			
WG546564ICV	ICV	07/18/22 11:56	WI220714-1	19.54		19.6	mg/L	100	90	110			
WG546193PBS	PBS	07/18/22 15:18				U	mg/L		-3	3			
WG546564LFB	LFB	07/18/22 15:18	WI220415-3	9.95		10	mg/L	101	90	110			
L74217-02DUP	DUP	07/18/22 15:18			1.2	1.1	mg/L				9	20	RA
WG546244PBS	PBS	07/18/22 15:18				U	mg/L		-3	3			
L74448-02AS	AS	07/18/22 15:47	SO4TURB5X	10	151	158.7	mg/L	77	90	110			M3

Sulfide, soluble (Water)

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546285													
WG546285ICV	ICV	07/12/22 14:09	WC220712-3	.34266		.358	mg/L	104	90	110			
WG546285ICB	ICB	07/12/22 14:15				U	mg/L		-0.05	0.05			
WG546292													
WG546292ICV	ICV	07/12/22 14:47	WC220712-3	.34266		.358	mg/L	104	90	110			
WG546292ICB	ICB	07/12/22 14:59				U	mg/L		-0.05	0.05			
WG546292LFB	LFB	07/12/22 15:12	WC220712-6	.21956		.246	mg/L	112	80	120			
WG545333PBS	PBS	07/12/22 15:24				U	mg/Kg		-1.25	1.25			
WG546029PBS	PBS	07/12/22 15:50				U	mg/Kg		-1.25	1.25			
L74216-01AS	AS	07/12/22 16:15	WC220712-6	1.0978	U	.325	mg/Kg	30	75	125			M2
L74216-01DUP	DUP	07/12/22 16:28			U	U	mg/Kg				0	20	RA

Sulfur (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	50.025		50.68	mg/L	101	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.75	0.75			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.75	0.75			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	5		5.21	mg/L	104	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	5	.69	5.9	mg/L	104	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	5	.69	5.79	mg/L	102	75	125	2	20	
L74217-02DUP	DUP	07/23/22 6:33			.69	.76	mg/L				10	20	RA

GIR

ACZ Project ID: **L74217**

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.

Sulfur Organic Residual

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546192													
L74217-02DUP	DUP	07/13/22 11:08			U	U	%				0	20	RA

Sulfur Pyritic Sulfide

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546192													
L74217-02DUP	DUP	07/13/22 11:08			.29	.31	%				7	20	

Sulfur Sulfate

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546192													
WG546192PBS	PBS	07/13/22 10:53				U	%		-0.03	0.03			
L74217-02DUP	DUP	07/13/22 11:08			.03	.02	%				40	20	RA

Sulfur Total

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546192													
WG546192PBS	PBS	07/13/22 8:41				U	%		-0.03	0.03			
WG546192LCSS	LCSS	07/13/22 8:44	PCN63156	4.01		3.81	%	95	80	120			
L74217-02MS	MS	07/13/22 8:49	PCN62543	1.3	.32	1.63	%	101	80	120			
L74217-02DUP	DUP	07/13/22 8:53			.32	.33	%				3	20	
WG546192LCSS	LCSS	07/13/22 9:46	PCN63156	4.01		3.92	%	98	80	120			
WG546192PBS	PBS	07/13/22 9:49				U	%		-0.03	0.03			

Thallium (1312)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546592													
WG546592ICV	ICV	07/15/22 20:13	MS220701-3	.05		.05275	mg/L	106	90	110			
WG546592ICB	ICB	07/15/22 20:15				U	mg/L		-0.0003	0.0003			
WG546248PBS	PBS	07/15/22 20:24				U	mg/L		-0.0003	0.0003			
WG546248LFB2	LFB	07/15/22 20:26	MS220627-2	.05		.04896	mg/L	98	80	120			
L74217-02MS2	MS	07/15/22 20:31	MS220627-2	.05	U	.05063	mg/L	101	75	125			
L74217-02MSD2	MSD	07/15/22 20:33	MS220627-2	.05	U	.05037	mg/L	101	75	125	1	20	
L74217-02DUP	DUP	07/15/22 20:35			U	U	mg/L				0	20	RA

Tin (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		2.053	mg/L	103	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.12	0.12			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.12	0.12			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	1.002		1.034	mg/L	103	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	1.002	U	1.053	mg/L	105	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	1.002	U	1.033	mg/L	103	75	125	2	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

GIR

ACZ Project ID: **L74217**

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.

Titanium (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		2.021	mg/L	101	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.015	0.015			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.015	0.015			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	1.0007		1.04	mg/L	104	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	1.0007	U	1.063	mg/L	106	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	1.0007	U	1.051	mg/L	105	75	125	1	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Total Sulfur Minus Sulfate

M600/2-78-054 3.2.4-MOD

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546192													
WG546192PBS	PBS	07/13/22 10:53				U	%		-0.03	0.03			
L74217-02DUP	DUP	07/13/22 11:08			.29	.31	%				7	20	

Uranium (1312)

M6020B ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG546592													
WG546592ICV	ICV	07/15/22 20:13	MS220701-3	.05		.05235	mg/L	105	90	110			
WG546592ICB	ICB	07/15/22 20:15				U	mg/L		-0.0003	0.0003			
WG546248PBS	PBS	07/15/22 20:24				U	mg/L		-0.0003	0.0003			
WG546248LFB2	LFB	07/15/22 20:26	MS220627-2	.05		.04893	mg/L	98	80	120			
L74217-02MS2	MS	07/15/22 20:31	MS220627-2	.05	U	.05065	mg/L	101	75	125			
L74217-02MSD2	MSD	07/15/22 20:33	MS220627-2	.05	U	.05079	mg/L	102	75	125	0	20	
L74217-02DUP	DUP	07/15/22 20:35			U	U	mg/L				0	20	RA

Vanadium (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		2.039	mg/L	102	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.03	0.03			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.03	0.03			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	.5005		.5079	mg/L	101	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	.5005	U	.517	mg/L	103	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	.5005	U	.515	mg/L	103	75	125	0	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Zinc (1312)

M6010D ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec%	Lower	Upper	RPD	Limit	Qual
WG547029													
WG547029ICV	ICV	07/23/22 5:42	II220720-4	2		1.995	mg/L	100	90	110			
WG547029ICB	ICB	07/23/22 5:46				U	mg/L		-0.06	0.06			
WG546248PBS	PBS	07/23/22 6:10				U	mg/L		-0.06	0.06			
WG546248LFB1	LFB	07/23/22 6:14	II220628-3	.50045		.522	mg/L	104	80	120			
L74217-02MS1	MS	07/23/22 6:25	II220628-3	.50045	U	.543	mg/L	109	75	125			
L74217-02MSD1	MSD	07/23/22 6:29	II220628-3	.50045	U	.533	mg/L	107	75	125	2	20	
L74217-02DUP	DUP	07/23/22 6:33			U	U	mg/L				0	20	RA

Grand Island Resources, LLC

ACZ Project ID: **L74217**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L74217-01	WG546630	Arsenic (TCLP)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Chromium (TCLP)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546480	Mercury (TCLP)	M7470A CVAA	H4	Sample was extracted past required extraction holding time, but analyzed within analysis holding time.
			M7470A CVAA	Q6	Sample was received above recommended temperature.
			M7470A CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546630	Selenium (TCLP)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Silver (TCLP)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546292	Sulfide, soluble (Water)	SM4500S2-D	DE	Sample required dilution. See Case Narrative.
			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.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546029	Water Extraction	ASA No. 9 10-2.3.2	Z2	Sample reported on a wet weight basis.

Grand Island Resources, LLC

ACZ Project ID: **L74217**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L74217-02	WG547214	Acidity (1312)	SM2310B - 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).
	WG547029	Aluminum (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546592	Antimony (1312)	M6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Arsenic (1312)	M6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG547029	Barium (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546739	Beryllium (1312)	M6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546472	Bicarbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG547029	Bismuth (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546592	Cadmium (1312)	M6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546472	Carbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG547819	Chloride (1312 DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546592	Chromium (1312)	M6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG547029	Cobalt (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546472	Conductivity @25C (1312)	SM2510B	Q6	Sample was received above recommended temperature.
	WG547029	Copper (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546548	Fluoride (1312 DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG547029	Gallium (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546472	Hydroxide as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG547029	Iron (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546592	Lead (1312)	M6020B ICP-MS	RD	For a solid matrix, the duplicate RPD (spike or matrix) exceeded the control limit, which is attributable to the non-homogeneity of the sample.
			M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG547029	Lithium (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Magnesium (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

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Grand Island Resources, LLC

ACZ Project ID: **L74217**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
		Manganese (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546483	Mercury (1312)	M7470A CVAA	Q6	Sample was received above recommended temperature.
			M7470A CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546592	Molybdenum (1312)	M6020B ICP-MS	ZG	The ICP or ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 50 times the MDL.
	WG547029	Nickel (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546315	Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG547376	Nitrogen, ammonia (1312-DI)	M350.1 Auto Salicylate w/gas diffusion	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M350.1 Auto Salicylate w/gas diffusion	Q6	Sample was received above recommended temperature.
			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).
	WG547029	Phosphorus (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546479	Residue, Filterable (TDS) @180C (1312)	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).
			SM2540C	Z3	Sample volume yielded a residue less than 2.5 mg
	WG547029	Sodium (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Strontium (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546564	Sulfate (1312 DI)	D516-07 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-07 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG547029	Sulfur (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546192	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Sulfur Sulfate	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546592	Thallium (1312)	M6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG547029	Tin (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated

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Grand Island Resources, LLC

ACZ Project ID: **L74217**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
		Titanium (1312)	M6010D ICP	RA	sample is too low for accurate evaluation (< 10x MDL). Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546472	Total Alkalinity	SM2320B - Titration SM2320B - Titration	Q6 RA	Sample was received above recommended temperature. Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG546592	Uranium (1312)	M6020B ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG547029	Vanadium (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Zinc (1312)	M6010D ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).

Grand Island Resources, LLC

ACZ Project ID: **L74217**

Metals Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Bismuth (1312)	M6010D ICP
Gallium (1312)	M6010D ICP
Sulfur (1312)	M6010D ICP

Soil Analysis

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Net Acid Generation Procedure	NAG - EGI 2002
Neutralization Potential as CaCO ₃	M600/2-78-054 3.2.3
pH, Saturated Paste	EPA 600/2-78-054 section 3.2.2
Sulfur HCl Residue	M600/2-78-054 3.2.4-MOD
Sulfur HNO ₃ Residue	M600/2-78-054 3.2.4-MOD
Sulfur Total	M600/2-78-054 3.2.4-MOD

Wet Chemistry

The following parameters are not offered for certification or are not covered by NELAC certificate #ACZ.

Acidity (1312)	SM2310B - Titration
Bicarbonate as CaCO ₃	SM2320B - Titration
Carbonate as CaCO ₃	SM2320B - Titration
Chloride (1312 DI)	SM4500Cl-E
Conductivity @25C (1312)	SM2510B
Fluoride (1312 DI)	SM4500F-C
Hydroxide as CaCO ₃	SM2320B - Titration
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction
Nitrogen, ammonia (1312-DI)	M350.1 Auto Salicylate w/gas diffusion
Residue, Filterable (TDS) @180C (1312)	SM2540C
Sulfate (1312 DI)	D516-07 - Turbidimetric
Sulfide, soluble (Water)	SM4500S2-D
Total Alkalinity	SM2320B - Titration

Grand Island Resources, LLC

ACZ Project ID: L74217

Date Received: 06/29/2022 12:15

Received By:

Date Printed: 6/30/2022

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?	☒	☐	☐
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

The 'Relinquished By' field on the COC was not completed. The project manager is contacting the client.

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Temp Criteria (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA37872	22.2	NA	15	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not 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.

Grand Island Resources, LLC

ACZ Project ID: L74217

Date Received: 06/29/2022 12:15

Received By:

Date Printed: 6/30/2022

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).



Accredited
Environmental
Testing

2773 Downhill Drive
Steamboat Springs, CO 80487
(970) 879-6590

L 74217

CHAIN of CUSTODY

Report to:

Name: Patrick Delaney

Company: Grand Island Resources

E-mail: pdelaney@blackfoxmining.com

Address: 12567 West Cedar Dr. Ste. 250

Lakewood, CO 80228

Telephone: 315-414-6986

Copy of Report to:

Name: Richard Mittasch

Company: Grand Island Resources

E-mail: rmittasch@nedmining.com

Telephone: 516-582-0833

Invoice to:

Name: Richard Mittasch

Company: Grand Island Resources

E-mail: rmittasch@nedmining.com

Address: 12567 West Cedar Dr. Ste. 250

Lakewood, CO 80228

Telephone: 516-582-0833

Copy of Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses?

YES

NO

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

Are samples for SDWA Compliance Monitoring?

Yes

No

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

Sampler's Name: Brooke Moran

Sampler's Site Information

State CO

Zip code 80466

Time Zone MT

*Sampler's Signature: Brooke Moran

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: TCLP-FILT-BAG

PO#:

Reporting state for compliance testing:

Check box if samples include NRC licensed material?

SAMPLE IDENTIFICATION

DATE:TIME

Matrix

of Containers

TCLP

Acid Base

Backwash Sludge

5/27/2022 10:00

ww/SL

1

✓

✓

Apache Ore

6/22/2022 09:00

Other

1

✓

✓

Matrix

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

REMARKS

Other matrix: rock

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

CRQ

6-29-22
14:43

Qualtrax ID: 1984

Revision #: 2

White - Return with sample.

Yellow - Retain for your records.



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