STATE OF COLORADO

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

Additional Information Required, Water Treatment Filters, Cross Gold, M1977-410

Rmittasch@nedmining.com <Rmittasch@nedmining.com> Tue, Oct 15, 2024 at 5:06 PM
To: "Lennberg - DNR, Patrick" <patrick.lennberg@state.co.us>
Cc: Daniel Takami <danieltakami@gmail.com>

Thought for 5 seconds

Subject: Update on Spent Filter Bags and Lab Results

Dear Patrick,

As stated in my previous memo, some filter bags were pulled aside prior to shipping for additional testing. The test results on these bags have just come back, and they are consistent with the previous tests conducted in 2022. I have prepared a memo analyzing the results and have attached both the memo and the lab reports for your review.

Please let me know if you have any questions or require further information.

Thank you for your attention to this matter.

[Quoted text hidden]

2 attachments

L90289.pdf
400K

Memo 101524 GIR DRMS FilterTCLP M1977410.pdf
253K

GRAND ISLAND RESOURCES

12567 W Cedar Dr. Suite 110
Lakewood, CO 80228
October 15, 2024

Memorandum

To:
Patrick Lennberg
Environmental Protection Specialist
Division of Reclamation, Mining and Safety
313 Sherman Street, Room 215
Denver, CO 80203

From:
Richard Mittasch
Grand Island Resources LLC
12567 West Cedar Dr., Suite 110
Lakewood, CO 80228

Subject: Submission of Updated TCLP Analysis Results for Spent Water Treatment Filters at Cross Gold Mine (Permit No. M-1977-410)

Dear Mr. Lennberg,

As previously communicated, we have recently conducted additional sampling and analysis of the spent water treatment filters from the Cross Gold Mine. I am pleased to provide you with the results of the latest Toxicity Characteristic Leaching Procedure (TCLP) analysis, performed on samples collected on September 12, 2024.

1. Updated TCLP Analysis Results

The TCLP analysis was conducted by an accredited laboratory, and the results are as follows:

Analyte	EPA Method	Result (mg/L)	MDL (mg/L)	PQL (mg/L)	Regulatory Level (mg/L)
Arsenic (TCLP)	EPA 6010D	<0.04 (U)	0.04	0.2	5.0
Barium (TCLP)	EPA 6010D	1.64	0.009	0.035	100
Cadmium (TCLP)	EPA 6010D	0.544	0.008	0.025	1.0
Chromium (TCLP)	EPA 6010D	<0.02 (U)	0.02	0.05	5.0
Lead (TCLP)	EPA 6010D	2.28	0.03	0.15	5.0
Mercury (TCLP)	EPA 7470A	<0.0002 (U)	0.0002	0.001	0.2
Selenium (TCLP)	EPA 6010D	<0.05 (U)	0.05	0.25	1.0
Silver (TCLP)	EPA 6010D	<0.01 (U)	0.01	0.025	5.0
Sulfide, Soluble (Water)	SM 4500-S2 D-2011	<1.25 (U)	1.25	12.5	N/A

Notes:

GRAND ISLAND RESOURCES

12567 W Cedar Dr. Suite 110
Lakewood, CO 80228
October 15, 2024

- **MDL (Method Detection Limit):** The lowest concentration of a substance that can be reliably measured.
- **PQL (Practical Quantitation Limit):** The lowest concentration that can be quantitatively reported with a specified level of confidence.
- **Qualifier "U":** Indicates the analyte was not detected above the method detection limit.
- **Regulatory Levels:** Based on the Resource Conservation and Recovery Act (RCRA) hazardous waste thresholds.

2. Interpretation of Results

The updated TCLP results confirm that the concentrations of all analyzed constituents are below the regulatory thresholds established by RCRA for hazardous waste classification:

- **Arsenic (TCLP):** Not detected (<0.04 mg/L), below the regulatory level of 5.0 mg/L.
- **Barium (TCLP):** Detected at 1.64 mg/L, significantly below the regulatory level of 100 mg/L.
- **Cadmium (TCLP):** Detected at 0.544 mg/L, below the regulatory level of 1.0 mg/L.
- **Chromium (TCLP):** Not detected (<0.02 mg/L), below the regulatory level of 5.0 mg/L.
- **Lead (TCLP):** Detected at 2.28 mg/L, below the regulatory level of 5.0 mg/L.
- **Mercury (TCLP):** Not detected (<0.0002 mg/L), below the regulatory level of 0.2 mg/L.
- **Selenium (TCLP):** Not detected (<0.05 mg/L), below the regulatory level of 1.0 mg/L.
- **Silver (TCLP):** Not detected (<0.01 mg/L), below the regulatory level of 5.0 mg/L.
- **Sulfide, Soluble (Water):** Not detected (<1.25 mg/L); while not specifically regulated under TCLP, this confirms the absence of significant soluble sulfide content.

Conclusion:

Based on these results, the spent water treatment filters are classified as **non-hazardous solid waste**. This classification is consistent with our previous findings and supports the disposal methods we have employed.

3. Next Steps and Documentation

The spent filters have been managed in accordance with all applicable regulations:

- **Removal and Sampling:** Prior to disposal, specific filter bags were removed and sent for this updated TCLP analysis to ensure ongoing compliance.
- **Disposal:** The filters have been transported to Mitchell Energy Services (MES) in Waco, Texas, where they are being managed responsibly.

Please find attached the laboratory report detailing the analysis for your records.

4. Commitment to Compliance

Grand Island Resources LLC remains committed to maintaining transparency and compliance with the Division of Reclamation, Mining and Safety. We will continue to monitor and manage our waste streams diligently and keep you informed of any developments.

GRAND ISLAND
RESOURCES

12567 W Cedar Dr. Suite 110
Lakewood, CO 80228
October 15, 2024

Should you have any questions or require further information, please do not hesitate to contact me.

Thank you for your attention to this matter.

Sincerely,

Richard Mittasch

Grand Island Resources LLC
12567 West Cedar Dr., Suite 110
Lakewood, CO 80228

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

Analytical Report

October 14, 2024

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: L90289

Richard Mittasch:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on September 16, 2024. This project has been assigned to ACZ's project number, L90289. 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 L90289. 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 13, 2024. 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.

Madeleine Murray
Madeleine Murray has reviewed and approved this report.

Grand Island Resources, LLC

October 14, 2024

Project ID:
ACZ Project ID: L90289

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 1 miscellaneous sample from Grand Island Resources, LLC on September 16, 2024. The sample was received in good condition. Upon receipt, the sample custodian removed the sample from the cooler, inspected the contents, and logged the sample into ACZ's computerized Laboratory Information Management System (LIMS). The sample was assigned ACZ LIMS project number L90289. 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

This sample was analyzed for inorganic parameters. The individual methods are referenced on both, the ACZ invoice and the analytical reports. The following required further detail not provided by the Extended Qualifier Report:

1. The below is from WG598395, Qualifier: N1, Applies to: L90289-01/WATER EXTRACTION - Filter matrix required dilution of 25x for extraction.

2. The below is from WG598914, Qualifier: B1, Applies to: L90289-01/BARIUM - Barium detected in prep / method blank (PBS) at or above the method reporting limit. Trace levels of Ba are present in the TCLP extraction reagents.

Grand Island Resources, LLC
Project ID:
Sample ID: SPENT FILTERS

ACZ Sample ID: ***L90289-01***
Date Sampled: *09/12/24 12:06*
Date Received: *09/16/24*
Sample Matrix: *Miscellaneous*

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion (TCLP)	EPA 3010A								10/07/24 13:50	smw

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic (TCLP)	EPA 6010D	1	<0.04	U	*	mg/L	0.04	0.2	10/09/24 14:54	msp
Barium (TCLP)	EPA 6010D	1	1.64		*	mg/L	0.009	0.035	10/09/24 14:54	msp
Cadmium (TCLP)	EPA 6010D	1	0.544		*	mg/L	0.008	0.025	10/09/24 14:54	msp
Chromium (TCLP)	EPA 6010D	1	<0.02	U	*	mg/L	0.02	0.05	10/09/24 14:54	msp
Lead (TCLP)	EPA 6010D	1	2.28		*	mg/L	0.03	0.15	10/09/24 14:54	msp
Mercury (TCLP)	EPA 7470A	1	<0.0002	U	*	mg/L	0.0002	0.001	10/10/24 16:28	aew
Selenium (TCLP)	EPA 6010D	1	<0.05	U	*	mg/L	0.05	0.25	10/09/24 14:54	msp
Silver (TCLP)	EPA 6010D	1	<0.01	U	*	mg/L	0.01	0.025	10/09/24 14:54	msp

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
TCLP Metal Extraction	EPA 1311								10/03/24 20:40	bat2
Water Extraction	ASA No. 9 10-2.3.2				*				10/01/24 12:00	rsh

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfide, soluble (Water)	SM 4500-S2 D-2011	25	<1.25	U	*	mg/L	1.25	12.5	10/08/24 17:11	jck

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.
(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.
(4) EPA SW-846. Test Methods for Evaluating Solid Waste.
(5) Standard Methods for the Examination of Water and Wastewater.

Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.
(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.
(4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
(5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:
https://acz.com/wp-content/uploads/2019/04/Ext-Qual-List.pdf

REP001.03.15.02

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

Inorganic Extended Qualifier Report

Grand Island Resources, LLC

ACZ Project ID: ***L90289***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L90289-01	WG598914	Arsenic (TCLP)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Barium (TCLP)	EPA 6010D	B1	Target analyte detected in prep / method blank at or above the method reporting limit. See Case Narrative.
		Cadmium (TCLP)	EPA 6010D	RA	Relative 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)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
		Lead (TCLP)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG599057	Mercury (TCLP)	EPA 7470A	Q6	Sample was received above recommended temperature.
			EPA 7470A	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG598914	Selenium (TCLP)	EPA 6010D	RA	Relative 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)	EPA 6010D	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG598936	Sulfide, soluble (Water)	SM 4500-S2 D-2011	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM 4500-S2 D-2011	RA	Relative Percent Difference (RPD) was not used for data validation because the concentration of the duplicated sample is too low for accurate evaluation (< 10x MDL).
	WG598395	Water Extraction	ASA No. 9 10-2.3.2	N1	See Case Narrative.

Certification Qualifiers

Grand Island Resources, LLC

ACZ Project ID: ***L90289***

Wet Chemistry

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

Sulfide, soluble (Water)	SM 4500-S2 D-2011

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

Sample Receipt

Grand Island Resources, LLC

ACZ Project ID: L90289
Date Received: 09/16/2024 12:03
Received By:
Date Printed: 9/18/2024

Receipt Verification

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

Samples/Containers

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

NA indicates Not Applicable

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp(°C)	Temp Criteria(°C)	Rad(µR/Hr)	Custody Seal Intact?
NA42930	20.6	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.

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

Sample Receipt

Grand Island Resources, LLC

ACZ Project ID:	L90289
Date Received:	09/16/2024 12:03
Received By:	
Date Printed:	9/18/2024

[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 | Accredited Environmental Testing | 2773 Downhill Drive, Steamboat Springs, CO 80487, (970) 879-6590 | L90289

CHAIN of CUSTODY

Report to:

Name: Richard Mittasch	Address: 12567 W Cedar Dr. Suite 110
Company: Grand Island Resources, LLc	Lakwood, CO 80228
E-mail: rmittasch@nedmining.com	Telephone: 5165820833

Copy of Report to:

Name:	E-mail:
Company:	Telephone:

Invoice to:

Name: Richard Mittasch	Address: 12567 W Cedar Dr. Suite 110
Company: Grand Island Resources, LLc	Lakewood, CO 80228
E-mail: rmittasch@nedmining.com	Telephone: 5165820833

Copy of Invoice to:

Name:	Address:
Company:	
E-mail:	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: Richard Mittasch **Sampler's Site Information** **State** CO **Zip code** 80466 **Time Zone** MT

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

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

PROJECT INFORMATION

Quote #: TCLP-FILT-BAG

PO#:

Reporting state for compliance testing:

Check box if samples include NRC licensed material? ☐

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers								
Spent Filters	9/12/2024 12:06	Misc	1								

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

REMARKS

Matrix: Filter Bags

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Richard Mittasch	9/13/24 1:00	[signature]	9/16/24 12:03

Qualtrax ID: 1984 Revision #: 2 White - Return with sample. Yellow - Retain for your records.