

October 25, 2012

## Report to:

Brenda Lamiroy  
SG Interests I, Ltd.  
1485 Florida Rd. Suite 202  
Durango, CO 81301

## Bill to:

Brenda Lamiroy  
SG Interests I, Ltd.  
1485 Florida Rd.  
Durango, CO 81301

cc: Eric Petterson

Project ID: Jacobs 29-1 Env Qual Assmt  
ACZ Project ID: L97212

Brenda Lamiroy:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 09, 2012. This project has been assigned to ACZ's project number, L97212. 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 L97212. 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 25, 2012. 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.



**SG Interests I, Ltd.**

Project ID: Jacobs 29-1 Env Qual Assm  
Sample ID: JACOBS 29-1 BACKGROUND NORTHWEST

ACZ Sample ID: **L97212-01**  
Date Sampled: 10/08/12 11:00  
Date Received: 10/09/12  
Sample Matrix: Soil

## Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	1.6		*	mg/Kg	0.1	0.5	10/23/12 17:36	msh

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	92.9		*	%	0.1	0.5	10/24/12 13:50	mjj

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							10/16/12 10:46	mjj
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3							10/19/12 9:00	brd
Digestion - Hot Plate	M3050B ICP-MS							10/19/12 12:20	brd

**SG Interests I, Ltd.**

Project ID: Jacobs 29-1 Env Qual Assm  
Sample ID: JACOBS 29-1 BACKGROUND WEST

ACZ Sample ID: **L97212-02**  
Date Sampled: 10/08/12 11:00  
Date Received: 10/09/12  
Sample Matrix: Soil

## Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	1.4		*	mg/Kg	0.1	0.5	10/23/12 17:42	msh

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	93.3		*	%	0.1	0.5	10/24/12 16:18	mjj

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							10/16/12 10:50	mjj
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3							10/19/12 10:00	brd
Digestion - Hot Plate	M3050B ICP-MS							10/19/12 14:05	brd

**SG Interests I, Ltd.**

Project ID: Jacobs 29-1 Env Qual Assm  
Sample ID: JACOBS 29-1 BACKGROUND SOUTH

ACZ Sample ID: **L97212-03**  
Date Sampled: 10/08/12 11:00  
Date Received: 10/09/12  
Sample Matrix: Soil

## Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, total (3050)	M6020 ICP-MS	1.8		*	mg/Kg	0.1	0.5	10/23/12 17:46	msh

## Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	88.6		*	%	0.1	0.5	10/24/12 18:47	mjj

## Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972							10/16/12 10:55	mjj
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3							10/19/12 11:00	brd
Digestion - Hot Plate	M3050B ICP-MS							10/19/12 14:40	brd

## 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. 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, typically 5 times the MDL.
<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:

<http://www.acz.com/public/extquallist.pdf>

SG Interests I, Ltd.

ACZ Project ID: **L97212**

**Arsenic, total (3050)**

M6020 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG332709</b>													
WG332709ICV	ICV	10/23/12 17:08	MS121001-5	.05		.0516	mg/L	103.2	90	110			
WG332709ICB	ICB	10/23/12 17:12				U	mg/L		-0.0006	0.0006			
WG332507PBS	PBS	10/23/12 17:25				.15	mg/Kg		-0.3	0.3			
WG332507LCSS	LCSS	10/23/12 17:29	PCN41127	94.5		102.2	mg/Kg		77.7	111			
WG332507LCSSD	LCSSD	10/23/12 17:32	PCN41127	94.5		102.6	mg/Kg		77.7	111	0.4	20	
L97270-01MS	MS	10/23/12 17:52	MS120820-3	27.27725	2060	2084.63	mg/Kg	90.3	75	125			
L97270-01MSD	MSD	10/23/12 18:02	MS120820-3	27.27725	2060	1779.43	mg/Kg	-1028.6	75	125	15.8	20	M3

**Solids, Percent**

CLPSOW390, PART F, D-98

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
<b>WG332712</b>													
WG332712PBS	PBS	10/23/12 18:00				U	%		99.9	100.1			
L97270-01DUP	DUP	10/24/12 23:45			15.2	15.16	%				0.3	20	

SG Interests I, Ltd.

ACZ Project ID: **L97212**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
<b>L97212-01</b>	WG332709	Arsenic, total (3050)	M6020 ICP-MS	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.
			M6020 ICP-MS	ZB	The ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 100 times the MDL.
<b>L97212-02</b>	WG332709	Arsenic, total (3050)	M6020 ICP-MS	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.
			M6020 ICP-MS	ZB	The ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 100 times the MDL.
<b>L97212-03</b>	WG332709	Arsenic, total (3050)	M6020 ICP-MS	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.
			M6020 ICP-MS	ZB	The ICP-MS Serial Dilution was not used for data validation because the sample concentration was less than 100 times the MDL.

**SG Interests I, Ltd.**

ACZ Project ID: **L97212**

Soil Analysis

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

Solids, Percent

CLPSOW390, PART F, D-98



**SG Interests I, Ltd.**  
Jacobs 29-1 Env Qual Assmt

ACZ Project ID: L97212  
Date Received: 10/09/2012 09:30  
Received By: ksj  
Date Printed: 10/9/2012

### Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate? The 'sampled by' field on the Chain of Custody was not completed.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

### Samples/Containers

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

### Chain of Custody Related Remarks

### Client Contact Remarks

### Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
2564	13.9	13	Yes

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



Laboratories, Inc.

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

CHAIN OF CUSTODY

Name: Brenda Lomiroy  
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 E-mail: blomiroy@sginterests.com

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Durango, Co. 81301  
 Telephone: 970-385-0696

Name: Eric Petterson  
 Company: RMES

E-mail: epetterson@rmes-inc.com  
 Telephone: 970-945-9558

Name: Brenda Lomiroy  
 Company: SG Interests  
 E-mail: blomiroy@sginterests.com

Address: 1485 Florida Rd. Suite 202  
Durango, Co. 81301  
 Telephone: 970-385-0696

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: \_\_\_\_\_ Sampler's site Information \_\_\_\_\_ State \_\_\_\_\_ Zip code \_\_\_\_\_ Time Zone \_\_\_\_\_

Quote #: AS-SOIL  
 Project/PO #: Jacobs 29-1 ENV-qual assmt.  
 Reporting state for compliance testing: \_\_\_\_\_  
 Check box if samples include NRC licensed material? ☐

# of Containers

Jacobs 29-1 Background 10-8-12 11:30am SD  
North West  
Jacobs 29-1 Background 10-8-12 11:00am SD  
West  
Jacobs 29-1 Background 10-8-12 11:00 SD  
South  
Q.M.

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

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

10-8-12 11:15pm  
10-8-12 9:30

10-8-12 Chain of Custody