

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/440-1000/KINETIC-WEEK 8

ACZ Sample ID: **L24142-10**

Date Sampled: 07/07/15 17:00

Date Received: 04/03/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	07/08/15 17:37	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	07/08/15 17:37	mfm
Copper, dissolved	M200.7 ICP	1	0.08		*	mg/L	0.01	0.05	07/09/15 19:40	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/09/15 19:40	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0010		*	mg/L	0.0001	0.0005	07/08/15 17:37	mfm
Zinc, dissolved	M200.7 ICP	1	0.05		*	mg/L	0.01	0.05	07/09/15 19:40	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	WG386710	1	***65.3***		*	umhos/cm	1	10	07/06/15 10:36	UPLD
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	175			g			07/06/15 0:00	pta
Leachate Volume Added		1	1000			mL			07/06/15 0:00	pta
Leachate Volume Recovered		1	868			g			07/06/15 0:00	pta
Oxidation Reduction Potential (Eh)	WG386714	1	***289***		*	mv	1	1	07/06/15 12:12	UPLD
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	***4.7***			units	0.1	0.1	07/06/15 0:00	UPLD
pH measured at		1	***22.3***			C	0.1	0.1	07/06/15 0:00	UPLD

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO3			*****							NEED
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1		U	*	mg/L	2	20	07/08/15 0:00	enb
Carbonate as CaCO3		1		U	*	mg/L	2	20	07/08/15 0:00	enb
Hydroxide as CaCO3		1		U	*	mg/L	2	20	07/08/15 0:00	enb
Total Alkalinity		1		U	*	mg/L	2	20	07/08/15 0:00	enb
Sulfate	D516-02/-07 - Turbidimetric	1	18.4		*	mg/L	1	5	07/08/15 14:23	mss2

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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: L24142

Date Received: 04/03/2015 10:10

Received By: ddp

Date Printed: 5/6/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody 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 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?	☒	☐	☐

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)	Rad (µR/Hr)	Custody Seal Intact?
NA21553	17.1	16	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.

Adrian Brown Consultants, Inc.

ACZ Project ID: L24142

Date Received: 04/03/2015 10:10

Received By: ddp

Date Printed: 5/6/2015

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).

Preliminary



Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: JEFFREY WINICK

Company: SCHLUMBERGER WATER SERV.

E-mail: JWINICK@SLB.COM

Address: 1875 LAWRENCE STREET, SUITE 500

DENVER, CO 80215

Telephone: +1.303.244.8224

Copy of Report to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: abrown@abch2o.com

Telephone: (303) 698-9080

Invoice to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: lbrown@abch2o.com

Address: 130 W 4th Ave

Denver CO USA 80223

Telephone: (303) 698-9080

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 CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: CO HYDROGEOCHEMICAL STUDY

Project/PO #:

Reporting state for compliance testing:

Sampler's Name: Beverly Furfaro/ALS

Are any samples NRC licensable material? Yes/No

SAMPLE IDENTIFICATION DATE: TIME Matrix

CPC143/440-600/Static 2-Apr-15 SO

CPC14-3/600-800/Static 2-Apr-15 SO

CPC14-3/800-1000/Static 2-Apr-15 SO

CPC14-3/1000-1200/Static 7-Apr-15 SO

CPC14-3/1200-1400/Static 7-Apr-15 SO

CPC14-3/1400-1600/Static 7-Apr-15 SO

CPC14-3/1600-1800/Static 7-Apr-15 SO

CPC14-3/1000-1800/Kinetic 7-Apr-15 SO

CPC14-3/440-1000/Kinetic 2-Apr-15 SO

of Containers

Total Metals

NMP (ABA)

NAG

NAG Lendite Metals

Total Carbon Leach

TDC Combustion IR

ABA Sulfur forms

Grain Size

HCT

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

REMARKS

Prior to ACZ analysis per quote and COC, from each static pulp comp., pls prepare 200g representative riffle split sample for each static composite for XRD. For each <1/4" kinetic comp., pls split 500g representative material. This should then be sub-split into 2, equal 250g split samples (1 sample for isotopes and 1 for mineral separations). Sample splits will be shipped to laboratories as designated by Jeff Winick. Please contact 303.244.8224 for further instruction.

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

RELINQUISHED BY:

DATE: TIME

RECEIVED BY:

DATE: TIME

FRMAD050.01.15.09

White - Return with sample.

Yellow

Retain for your records.

May 20, 2015

Report to:

Jeffrey Winick
Schlumberger Water Services
1875 Lawrence Street
Suite 500
Denver, CO 80202

Bill to:

Accounts Payable
Adrian Brown Consultants, Inc.
130 W 4th Avenue
Denver, CO 80223

cc: Adrian Brown

Project ID:

ACZ Project ID: L24195

Jeffrey Winick:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 08, 2015. This project has been assigned to ACZ's project number, L24195. 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 L24195. 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 June 19, 2015. 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.



Scott Habermehl has reviewed
and approved this report.



Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/440-600/STATIC-NAG

ACZ Sample ID: **L24195-01**

Date Sampled: 04/02/15 00:00

Date Received: 05/08/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	05/12/15 17:24	aeb
Antimony, dissolved	M200.8 ICP-MS	1	0.0005	B	*	mg/L	0.0004	0.002	05/16/15 0:51	pmc
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	05/16/15 0:51	pmc
Barium, dissolved	M200.7 ICP	1	0.611		*	mg/L	0.003	0.02	05/12/15 17:24	aeb
Beryllium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.00005	0.0003	05/16/15 0:51	pmc
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/12/15 17:24	aeb
Boron, dissolved	M200.7 ICP	1	0.07		*	mg/L	0.01	0.05	05/12/15 17:24	aeb
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	05/16/15 0:51	pmc
Calcium, dissolved	M200.7 ICP	1	1.1		*	mg/L	0.1	0.5	05/12/15 17:24	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/12/15 17:24	aeb
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/12/15 17:24	aeb
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/12/15 17:24	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:24	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	05/12/15 17:24	aeb
Lead, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	05/16/15 0:51	pmc
Lithium, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	05/12/15 17:24	aeb
Magnesium, dissolved	M200.7 ICP	1	0.5	B	*	mg/L	0.2	1	05/12/15 17:24	aeb
Manganese, dissolved	M200.7 ICP	1	0.037		*	mg/L	0.005	0.03	05/12/15 17:24	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	05/08/15 15:03	mfm
Molybdenum, dissolved	M200.7 ICP	1	0.03	B	*	mg/L	0.02	0.1	05/12/15 17:24	aeb
Nickel, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	05/12/15 17:24	aeb
Potassium, dissolved	M200.7 ICP	1	10.4		*	mg/L	0.2	1	05/12/15 17:24	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:24	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0003		*	mg/L	0.0001	0.0003	05/16/15 0:51	pmc
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	05/12/15 17:24	aeb
Sodium, dissolved	M200.7 ICP	1	1.3		*	mg/L	0.2	1	05/12/15 17:24	aeb
Strontium, dissolved	M200.7 ICP	1	13.300		*	mg/L	0.005	0.03	05/12/15 17:24	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	05/16/15 0:51	pmc
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/13/15 21:33	aeb
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/12/15 17:24	aeb
Vanadium, dissolved	M200.7 ICP	1	0.010	B	*	mg/L	0.005	0.03	05/12/15 17:24	aeb
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/12/15 17:24	aeb

Arizona license number: AZ0102

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/600-800/STATIC-NAG

ACZ Sample ID: **L24195-02**

Date Sampled: 04/02/15 00:00

Date Received: 05/08/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	5	1.2		*	mg/L	0.2	0.8	05/12/15 17:34	aeb
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	05/16/15 0:54	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0002	0.001	05/16/15 0:54	pmc
Barium, dissolved	M200.7 ICP	5	0.15		*	mg/L	0.02	0.08	05/12/15 17:34	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00086		*	mg/L	0.00005	0.0003	05/16/15 0:54	pmc
Bismuth, dissolved	M200.7 ICP	5		U	*	mg/L	0.2	1	05/12/15 17:34	aeb
Boron, dissolved	M200.7 ICP	5	0.14	B	*	mg/L	0.05	0.3	05/12/15 17:34	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	05/16/15 0:54	pmc
Calcium, dissolved	M200.7 ICP	5	1.8	B	*	mg/L	0.5	3	05/12/15 17:34	aeb
Chromium, dissolved	M200.7 ICP	5		U	*	mg/L	0.05	0.3	05/12/15 17:34	aeb
Cobalt, dissolved	M200.7 ICP	5		U	*	mg/L	0.05	0.3	05/12/15 17:34	aeb
Copper, dissolved	M200.7 ICP	5		U	*	mg/L	0.05	0.3	05/12/15 17:34	aeb
Gallium, dissolved	M200.7 ICP	5		U	*	mg/L	0.5	3	05/12/15 17:34	aeb
Iron, dissolved	M200.7 ICP	5		U	*	mg/L	0.1	0.3	05/12/15 17:34	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0001	0.0005	05/16/15 0:54	pmc
Lithium, dissolved	M200.7 ICP	5		U	*	mg/L	0.04	0.2	05/12/15 17:34	aeb
Magnesium, dissolved	M200.7 ICP	5	2	B	*	mg/L	1	5	05/12/15 17:34	aeb
Manganese, dissolved	M200.7 ICP	5	0.05	B	*	mg/L	0.03	0.1	05/12/15 17:34	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	05/08/15 15:13	mfm
Molybdenum, dissolved	M200.7 ICP	5	0.1	B	*	mg/L	0.1	0.5	05/12/15 17:34	aeb
Nickel, dissolved	M200.7 ICP	5		U	*	mg/L	0.04	0.2	05/12/15 17:34	aeb
Potassium, dissolved	M200.7 ICP	5	13		*	mg/L	1	5	05/12/15 17:34	aeb
Scandium, dissolved	M200.7 ICP	5		U	*	mg/L	0.5	3	05/12/15 17:34	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0021		*	mg/L	0.0001	0.0003	05/16/15 0:54	pmc
Silver, dissolved	M200.7 ICP	5		U	*	mg/L	0.05	0.1	05/12/15 17:34	aeb
Sodium, dissolved	M200.7 ICP	5	2	B	*	mg/L	1	5	05/12/15 17:34	aeb
Strontium, dissolved	M200.7 ICP	5	10.60		*	mg/L	0.03	0.1	05/12/15 17:34	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	05/16/15 0:54	pmc
Tin, dissolved	M200.7 ICP	5		U	*	mg/L	0.2	1	05/13/15 21:43	aeb
Titanium, dissolved	M200.7 ICP	5		U	*	mg/L	0.03	0.1	05/12/15 17:34	aeb
Vanadium, dissolved	M200.7 ICP	5		U	*	mg/L	0.03	0.1	05/12/15 17:34	aeb
Zinc, dissolved	M200.7 ICP	5	0.07	B	*	mg/L	0.05	0.3	05/12/15 17:34	aeb

Arizona license number: AZ0102

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/800-1000/STATIC-NAG

ACZ Sample ID: **L24195-03**

Date Sampled: 04/02/15 00:00

Date Received: 05/08/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	11.90		*	mg/L	0.03	0.2	05/12/15 17:37	aeb
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	05/16/15 0:58	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B	*	mg/L	0.0002	0.001	05/16/15 0:58	pmc
Barium, dissolved	M200.7 ICP	1	0.074		*	mg/L	0.003	0.02	05/12/15 17:37	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00113		*	mg/L	0.00005	0.0003	05/16/15 0:58	pmc
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/12/15 17:37	aeb
Boron, dissolved	M200.7 ICP	1	0.10		*	mg/L	0.01	0.05	05/12/15 17:37	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0012		*	mg/L	0.0001	0.0005	05/16/15 0:58	pmc
Calcium, dissolved	M200.7 ICP	1	0.8		*	mg/L	0.1	0.5	05/12/15 17:37	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/12/15 17:37	aeb
Cobalt, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	05/12/15 17:37	aeb
Copper, dissolved	M200.7 ICP	1	0.19		*	mg/L	0.01	0.05	05/12/15 17:37	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:37	aeb
Iron, dissolved	M200.7 ICP	1	1.14		*	mg/L	0.02	0.05	05/12/15 17:37	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0022		*	mg/L	0.0001	0.0005	05/16/15 0:58	pmc
Lithium, dissolved	M200.7 ICP	1	0.020	B	*	mg/L	0.008	0.04	05/12/15 17:37	aeb
Magnesium, dissolved	M200.7 ICP	1	0.7	B	*	mg/L	0.2	1	05/12/15 17:37	aeb
Manganese, dissolved	M200.7 ICP	1	0.062		*	mg/L	0.005	0.03	05/12/15 17:37	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	05/08/15 15:15	mfm
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	05/12/15 17:37	aeb
Nickel, dissolved	M200.7 ICP	1	0.015	B	*	mg/L	0.008	0.04	05/12/15 17:37	aeb
Potassium, dissolved	M200.7 ICP	1	11		*	mg/L	0.2	1	05/12/15 17:37	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:37	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0072		*	mg/L	0.0001	0.0003	05/16/15 0:58	pmc
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	05/12/15 17:37	aeb
Sodium, dissolved	M200.7 ICP	1	1.5		*	mg/L	0.2	1	05/12/15 17:37	aeb
Strontium, dissolved	M200.7 ICP	2	23.80		*	mg/L	0.01	0.05	05/13/15 21:46	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0001	0.0005	05/16/15 0:58	pmc
Tin, dissolved	M200.7 ICP	2		U	*	mg/L	0.08	0.4	05/13/15 21:46	aeb
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/12/15 17:37	aeb
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/12/15 17:37	aeb
Zinc, dissolved	M200.7 ICP	1	0.11		*	mg/L	0.01	0.05	05/12/15 17:37	aeb

Arizona license number: AZ0102

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1000-1200/STATIC-NAG

ACZ Sample ID: **L24195-04**

Date Sampled: 04/07/15 00:00

Date Received: 05/08/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	23.20		*	mg/L	0.03	0.2	05/12/15 17:40	aeb
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	05/16/15 1:01	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0029		*	mg/L	0.0002	0.001	05/16/15 1:01	pmc
Barium, dissolved	M200.7 ICP	1	0.075		*	mg/L	0.003	0.02	05/12/15 17:40	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00155		*	mg/L	0.00005	0.0003	05/16/15 1:01	pmc
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/12/15 17:40	aeb
Boron, dissolved	M200.7 ICP	1	0.13		*	mg/L	0.01	0.05	05/12/15 17:40	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0313		*	mg/L	0.0001	0.0005	05/16/15 1:01	pmc
Calcium, dissolved	M200.7 ICP	1	1.6		*	mg/L	0.1	0.5	05/12/15 17:40	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/12/15 17:40	aeb
Cobalt, dissolved	M200.7 ICP	1	0.15		*	mg/L	0.01	0.05	05/12/15 17:40	aeb
Copper, dissolved	M200.7 ICP	1	0.75		*	mg/L	0.01	0.05	05/12/15 17:40	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:40	aeb
Iron, dissolved	M200.7 ICP	1	36.80		*	mg/L	0.02	0.05	05/12/15 17:40	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0046		*	mg/L	0.0001	0.0005	05/16/15 1:01	pmc
Lithium, dissolved	M200.7 ICP	1	0.031	B	*	mg/L	0.008	0.04	05/12/15 17:40	aeb
Magnesium, dissolved	M200.7 ICP	1	1.5		*	mg/L	0.2	1	05/12/15 17:40	aeb
Manganese, dissolved	M200.7 ICP	1	0.109		*	mg/L	0.005	0.03	05/12/15 17:40	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	05/08/15 15:17	mfm
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	05/12/15 17:40	aeb
Nickel, dissolved	M200.7 ICP	1	0.079		*	mg/L	0.008	0.04	05/12/15 17:40	aeb
Potassium, dissolved	M200.7 ICP	1	10.1		*	mg/L	0.2	1	05/12/15 17:40	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:40	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0079		*	mg/L	0.0001	0.0003	05/16/15 1:01	pmc
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	05/12/15 17:40	aeb
Sodium, dissolved	M200.7 ICP	1	2.1		*	mg/L	0.2	1	05/12/15 17:40	aeb
Strontium, dissolved	M200.7 ICP	1	14.500		*	mg/L	0.005	0.03	05/12/15 17:40	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0014		*	mg/L	0.0001	0.0005	05/16/15 1:01	pmc
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/13/15 21:49	aeb
Titanium, dissolved	M200.7 ICP	1	0.006	B	*	mg/L	0.005	0.03	05/12/15 17:40	aeb
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/12/15 17:40	aeb
Zinc, dissolved	M200.7 ICP	1	0.22		*	mg/L	0.01	0.05	05/12/15 17:40	aeb

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Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1200-1400/STATIC-NAG

ACZ Sample ID: **L24195-05**

Date Sampled: 04/07/15 00:00

Date Received: 05/08/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	23.80		*	mg/L	0.03	0.2	05/12/15 17:43	aeb
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	05/16/15 1:04	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0028		*	mg/L	0.0002	0.001	05/16/15 1:04	pmc
Barium, dissolved	M200.7 ICP	1	0.056		*	mg/L	0.003	0.02	05/12/15 17:43	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00241		*	mg/L	0.00005	0.0003	05/16/15 1:04	pmc
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/12/15 17:43	aeb
Boron, dissolved	M200.7 ICP	1	0.06		*	mg/L	0.01	0.05	05/12/15 17:43	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0243		*	mg/L	0.0001	0.0005	05/16/15 1:04	pmc
Calcium, dissolved	M200.7 ICP	1	1.7		*	mg/L	0.1	0.5	05/12/15 17:43	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/12/15 17:43	aeb
Cobalt, dissolved	M200.7 ICP	1	0.19		*	mg/L	0.01	0.05	05/12/15 17:43	aeb
Copper, dissolved	M200.7 ICP	1	1.43		*	mg/L	0.01	0.05	05/12/15 17:43	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:43	aeb
Iron, dissolved	M200.7 ICP	1	102		*	mg/L	0.02	0.05	05/12/15 17:43	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0001	0.0005	05/16/15 1:04	pmc
Lithium, dissolved	M200.7 ICP	1	0.021	B	*	mg/L	0.008	0.04	05/12/15 17:43	aeb
Magnesium, dissolved	M200.7 ICP	1	1.5		*	mg/L	0.2	1	05/12/15 17:43	aeb
Manganese, dissolved	M200.7 ICP	1	0.187		*	mg/L	0.005	0.03	05/12/15 17:43	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	05/08/15 15:19	mfm
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	05/12/15 17:43	aeb
Nickel, dissolved	M200.7 ICP	1	0.114		*	mg/L	0.008	0.04	05/12/15 17:43	aeb
Potassium, dissolved	M200.7 ICP	1	11.9		*	mg/L	0.2	1	05/12/15 17:43	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:43	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0087		*	mg/L	0.0001	0.0003	05/16/15 1:04	pmc
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	05/12/15 17:43	aeb
Sodium, dissolved	M200.7 ICP	1	3.2		*	mg/L	0.2	1	05/12/15 17:43	aeb
Strontium, dissolved	M200.7 ICP	1	2.260		*	mg/L	0.005	0.03	05/12/15 17:43	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0001	0.0005	05/16/15 1:04	pmc
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/13/15 21:52	aeb
Titanium, dissolved	M200.7 ICP	1	0.005	B	*	mg/L	0.005	0.03	05/12/15 17:43	aeb
Vanadium, dissolved	M200.7 ICP	1	0.010	B	*	mg/L	0.005	0.03	05/12/15 17:43	aeb
Zinc, dissolved	M200.7 ICP	1	0.97		*	mg/L	0.01	0.05	05/12/15 17:43	aeb

Arizona license number: AZ0102

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1400-1600/STATIC-NAG

ACZ Sample ID: **L24195-06**

Date Sampled: 04/07/15 00:00

Date Received: 05/08/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	15.80		*	mg/L	0.03	0.2	05/12/15 17:46	aeb
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	05/16/15 1:08	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0017		*	mg/L	0.0002	0.001	05/16/15 1:08	pmc
Barium, dissolved	M200.7 ICP	1	0.126		*	mg/L	0.003	0.02	05/12/15 17:46	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00263		*	mg/L	0.00005	0.0003	05/16/15 1:08	pmc
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/12/15 17:46	aeb
Boron, dissolved	M200.7 ICP	1	0.04	B	*	mg/L	0.01	0.05	05/12/15 17:46	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0016		*	mg/L	0.0001	0.0005	05/16/15 1:08	pmc
Calcium, dissolved	M200.7 ICP	1	12.4		*	mg/L	0.1	0.5	05/12/15 17:46	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/12/15 17:46	aeb
Cobalt, dissolved	M200.7 ICP	1	0.15		*	mg/L	0.01	0.05	05/12/15 17:46	aeb
Copper, dissolved	M200.7 ICP	1	0.21		*	mg/L	0.01	0.05	05/12/15 17:46	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:46	aeb
Iron, dissolved	M200.7 ICP	1	71.30		*	mg/L	0.02	0.05	05/12/15 17:46	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0551		*	mg/L	0.0001	0.0005	05/16/15 1:08	pmc
Lithium, dissolved	M200.7 ICP	1	0.024	B	*	mg/L	0.008	0.04	05/12/15 17:46	aeb
Magnesium, dissolved	M200.7 ICP	1	1.7		*	mg/L	0.2	1	05/12/15 17:46	aeb
Manganese, dissolved	M200.7 ICP	1	22.600		*	mg/L	0.005	0.03	05/12/15 17:46	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	05/08/15 15:21	mfm
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	05/12/15 17:46	aeb
Nickel, dissolved	M200.7 ICP	1	0.068		*	mg/L	0.008	0.04	05/12/15 17:46	aeb
Potassium, dissolved	M200.7 ICP	1	14.7		*	mg/L	0.2	1	05/12/15 17:46	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:46	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0095		*	mg/L	0.0001	0.0003	05/16/15 1:08	pmc
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	05/12/15 17:46	aeb
Sodium, dissolved	M200.7 ICP	1	5.1		*	mg/L	0.2	1	05/12/15 17:46	aeb
Strontium, dissolved	M200.7 ICP	1	1.530		*	mg/L	0.005	0.03	05/12/15 17:46	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0013		*	mg/L	0.0001	0.0005	05/16/15 1:08	pmc
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/13/15 21:55	aeb
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/12/15 17:46	aeb
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/12/15 17:46	aeb
Zinc, dissolved	M200.7 ICP	1	1.30		*	mg/L	0.01	0.05	05/12/15 17:46	aeb

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1600-1800/STATIC-NAG

ACZ Sample ID: **L24195-07**

Date Sampled: 04/07/15 00:00

Date Received: 05/08/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	16.20		*	mg/L	0.03	0.2	05/12/15 17:49	aeb
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	05/16/15 1:11	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0021		*	mg/L	0.0002	0.001	05/16/15 1:11	pmc
Barium, dissolved	M200.7 ICP	1	0.080		*	mg/L	0.003	0.02	05/12/15 17:49	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00804		*	mg/L	0.00005	0.0003	05/16/15 1:11	pmc
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/12/15 17:49	aeb
Boron, dissolved	M200.7 ICP	1	0.06		*	mg/L	0.01	0.05	05/12/15 17:49	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0033		*	mg/L	0.0001	0.0005	05/16/15 1:11	pmc
Calcium, dissolved	M200.7 ICP	1	12.7		*	mg/L	0.1	0.5	05/12/15 17:49	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/12/15 17:49	aeb
Cobalt, dissolved	M200.7 ICP	1	0.12		*	mg/L	0.01	0.05	05/12/15 17:49	aeb
Copper, dissolved	M200.7 ICP	1	0.28		*	mg/L	0.01	0.05	05/12/15 17:49	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:49	aeb
Iron, dissolved	M200.7 ICP	1	62.60		*	mg/L	0.02	0.05	05/12/15 17:49	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.1179		*	mg/L	0.0001	0.0005	05/16/15 1:11	pmc
Lithium, dissolved	M200.7 ICP	1	0.042		*	mg/L	0.008	0.04	05/12/15 17:49	aeb
Magnesium, dissolved	M200.7 ICP	1	3		*	mg/L	0.2	1	05/12/15 17:49	aeb
Manganese, dissolved	M200.7 ICP	1	12.100		*	mg/L	0.005	0.03	05/12/15 17:49	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	05/08/15 15:23	mfm
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	05/12/15 17:49	aeb
Nickel, dissolved	M200.7 ICP	1	0.060		*	mg/L	0.008	0.04	05/12/15 17:49	aeb
Potassium, dissolved	M200.7 ICP	1	14.1		*	mg/L	0.2	1	05/12/15 17:49	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/12/15 17:49	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0117		*	mg/L	0.0001	0.0003	05/16/15 1:11	pmc
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	05/12/15 17:49	aeb
Sodium, dissolved	M200.7 ICP	1	5.3		*	mg/L	0.2	1	05/12/15 17:49	aeb
Strontium, dissolved	M200.7 ICP	1	1.460		*	mg/L	0.005	0.03	05/12/15 17:49	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0001	0.0005	05/16/15 1:11	pmc
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/13/15 21:59	aeb
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/12/15 17:49	aeb
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/12/15 17:49	aeb
Zinc, dissolved	M200.7 ICP	1	0.79		*	mg/L	0.01	0.05	05/12/15 17:49	aeb

Arizona license number: AZ0102

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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24195**

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.008	mg/L	100	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.09	0.09			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	1.0015		1.079	mg/L	108	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	1.0015	U	1.085	mg/L	108	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	1.0015	U	1.113	mg/L	111	85	115	3	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383591													
WG383591ICV	ICV	05/16/15 0:40	MS150312-3	.02		.02158	mg/L	108	90	110			
WG383591ICB	ICB	05/16/15 0:44				.00069	mg/L		-0.0012	0.0012			
WG383591LFB	LFB	05/16/15 0:47	MS150429-2	.01001		.01024	mg/L	102	85	115			
L24196-01AS	AS	05/16/15 1:17	MS150429-2	.01001	U	.00953	mg/L	95	70	130			
L24196-01ASD	ASD	05/16/15 1:28	MS150429-2	.01001	U	.00969	mg/L	97	70	130	2	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383591													
WG383591ICV	ICV	05/16/15 0:40	MS150312-3	.05		.05101	mg/L	102	90	110			
WG383591ICB	ICB	05/16/15 0:44				U	mg/L		-0.0006	0.0006			
WG383591LFB	LFB	05/16/15 0:47	MS150429-2	.0501		.04853	mg/L	97	85	115			
L24196-01AS	AS	05/16/15 1:17	MS150429-2	.0501	.0007	.05813	mg/L	115	70	130			
L24196-01ASD	ASD	05/16/15 1:28	MS150429-2	.0501	.0007	.05648	mg/L	111	70	130	3	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.0075	mg/L	100	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.009	0.009			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.5		.5019	mg/L	100	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.5	.611	1.068	mg/L	91	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.5	.611	1.086	mg/L	95	85	115	2	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383591													
WG383591ICV	ICV	05/16/15 0:40	MS150312-3	.05		.04908	mg/L	98	90	110			
WG383591ICB	ICB	05/16/15 0:44				U	mg/L		-0.00015	0.00015			
WG383591LFB	LFB	05/16/15 0:47	MS150429-2	.05005		.04773	mg/L	95	85	115			
L24196-01AS	AS	05/16/15 1:17	MS150429-2	.05005	U	.04708	mg/L	94	70	130			
L24196-01ASD	ASD	05/16/15 1:28	MS150429-2	.05005	U	.04721	mg/L	94	70	130	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24195**

Bismuth, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.008	mg/L	100	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.12	0.12			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	1		1.026	mg/L	103	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	1	U	1.016	mg/L	102	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	1	U	1.055	mg/L	106	85	115	4	20	

Boron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.051	mg/L	103	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.03	0.03			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.5005		.511	mg/L	102	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.5005	.07	.588	mg/L	103	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.5005	.07	.606	mg/L	107	85	115	3	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383591													
WG383591ICV	ICV	05/16/15 0:40	MS150312-3	.05		.05019	mg/L	100	90	110			
WG383591ICB	ICB	05/16/15 0:44				U	mg/L		-0.0003	0.0003			
WG383591LFB	LFB	05/16/15 0:47	MS150429-2	.05005		.04889	mg/L	98	85	115			
L24196-01AS	AS	05/16/15 1:17	MS150429-2	.05005	U	.05226	mg/L	104	70	130			
L24196-01ASD	ASD	05/16/15 1:28	MS150429-2	.05005	U	.05235	mg/L	105	70	130	0	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	100		99.67	mg/L	100	95	105			
WG383313ICB	ICB	05/12/15 17:09				.12	mg/L		-0.3	0.3			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	67.98862		71.29	mg/L	105	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	67.98862	1.1	72.81	mg/L	105	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	67.98862	1.1	74.13	mg/L	107	85	115	2	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		1.974	mg/L	99	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.03	0.03			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.5005		.492	mg/L	98	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.5005	U	.492	mg/L	98	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.5005	U	.503	mg/L	100	85	115	2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24195**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2.002		2.011	mg/L	100	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.03	0.03			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.5005		.5	mg/L	100	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.5005	U	.501	mg/L	100	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.5005	U	.517	mg/L	103	85	115	3	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		1.984	mg/L	99	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.03	0.03			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.499		.507	mg/L	102	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.499	U	.503	mg/L	101	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.499	U	.511	mg/L	102	85	115	2	20	

Gallium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.09	mg/L	105	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.3	0.3			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	1		1.03	mg/L	103	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	1	U	1.01	mg/L	101	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	1	U	1.04	mg/L	104	85	115	3	20	

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.003	mg/L	100	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.06	0.06			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	1.0001		1.023	mg/L	102	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	1.0001	U	1.007	mg/L	101	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	1.0001	U	1.035	mg/L	103	85	115	3	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383591													
WG383591ICV	ICV	05/16/15 0:40	MS150312-3	.05		.04982	mg/L	100	90	110			
WG383591ICB	ICB	05/16/15 0:44				U	mg/L		-0.0003	0.0003			
WG383591LFB	LFB	05/16/15 0:47	MS150429-2	.05005		.04703	mg/L	94	85	115			
L24196-01AS	AS	05/16/15 1:17	MS150429-2	.05005	.0003	.0488	mg/L	97	70	130			
L24196-01ASD	ASD	05/16/15 1:28	MS150429-2	.05005	.0003	.04826	mg/L	96	70	130	1	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24195**

Lithium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.0345	mg/L	102	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.024	0.024			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	1.001		1.015	mg/L	101	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	1.001	U	1.001	mg/L	100	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	1.001	U	1.022	mg/L	102	85	115	2	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	100		95.89	mg/L	96	95	105			
WG383313ICB	ICB	05/12/15 17:09				.2	mg/L		-0.6	0.6			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	50.00339		48.74	mg/L	97	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	50.00339	.5	49.32	mg/L	98	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	50.00339	.5	50.03	mg/L	99	85	115	1	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		1.993	mg/L	100	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.015	0.015			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.499		.4965	mg/L	99	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.499	.037	.526	mg/L	98	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.499	.037	.5394	mg/L	101	85	115	3	20	

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383104													
WG383104ICV	ICV	05/08/15 11:16	II150422-1	.005		.00477	mg/L	95	95	105			
WG383104ICB	ICB	05/08/15 11:18				U	mg/L		-0.0002	0.0002			
WG383186													
WG383186LRB	LRB	05/08/15 14:23				U	mg/L		-0.00044	0.00044			
WG383186LFB	LFB	05/08/15 14:25	II150416-2	.002		.00185	mg/L	93	85	115			
L24195-01LFM	LFM	05/08/15 15:05	II150416-2	.002	U	.0015	mg/L	75	85	115			M2
L24195-01LFMD	LFMD	05/08/15 15:07	II150416-2	.002	U	.0014	mg/L	70	85	115	7	20	M2

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.05	mg/L	103	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.06	0.06			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.4995		.532	mg/L	107	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.4995	.03	.565	mg/L	107	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.4995	.03	.567	mg/L	108	85	115	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24195**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		1.989	mg/L	99	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.024	0.024			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.501		.5025	mg/L	100	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.501	U	.5032	mg/L	100	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.501	U	.5236	mg/L	105	85	115	4	20	

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	20		19.5	mg/L	98	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.6	0.6			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	99.93386		98.23	mg/L	98	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	99.93386	10.4	108	mg/L	98	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	99.93386	10.4	109.5	mg/L	99	85	115	1	20	

Scandium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.02	mg/L	101	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.3	0.3			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.999		1.03	mg/L	103	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.999	U	1.01	mg/L	101	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.999	U	1.04	mg/L	104	85	115	3	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383591													
WG383591ICV	ICV	05/16/15 0:40	MS150312-3	.05		.05007	mg/L	100	90	110			
WG383591ICB	ICB	05/16/15 0:44				U	mg/L		-0.0003	0.0003			
WG383591LFB	LFB	05/16/15 0:47	MS150429-2	.05015		.04912	mg/L	98	85	115			
L24196-01AS	AS	05/16/15 1:17	MS150429-2	.05015	.0016	.06274	mg/L	122	70	130			
L24196-01ASD	ASD	05/16/15 1:28	MS150429-2	.05015	.0016	.06338	mg/L	123	70	130	1	20	

Silver, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	1.001		.991	mg/L	99	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.03	0.03			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.502		.507	mg/L	101	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.502	U	.412	mg/L	82	85	115			MA ZA
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.502	U	.439	mg/L	87	85	115	6	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24195**

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	100		96.2	mg/L	96	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.6	0.6			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	100.0188		97.56	mg/L	98	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	100.0188	1.3	99.15	mg/L	98	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	100.0188	1.3	101.1	mg/L	100	85	115	2	20	

Strontium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		1.9798	mg/L	99	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.015	0.015			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.5005		.5148	mg/L	103	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.5005	13.3	12.59	mg/L	-142	85	115			M3
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.5005	13.3	12.77	mg/L	-106	85	115	1	20	M3
WG383384													
WG383384ICV	ICV	05/13/15 21:11	II150418-3	2		1.9748	mg/L	99	95	105			
WG383384ICB	ICB	05/13/15 21:17				.0054	mg/L		-0.015	0.015			
WG383384LFB	LFB	05/13/15 21:30	II150425-2	.5005		.5227	mg/L	104	85	115			
L24195-01AS	AS	05/13/15 21:36	II150425-2	.5005	12	12.21	mg/L	42	85	115			M3
L24195-01ASD	ASD	05/13/15 21:39	II150425-2	.5005	12	12.26	mg/L	52	85	115	0	20	M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383591													
WG383591ICV	ICV	05/16/15 0:40	MS150312-3	.05		.05226	mg/L	105	90	110			
WG383591ICB	ICB	05/16/15 0:44				U	mg/L		-0.0003	0.0003			
WG383591LFB	LFB	05/16/15 0:47	MS150429-2	.0501		.04916	mg/L	98	85	115			
L24196-01AS	AS	05/16/15 1:17	MS150429-2	.0501	U	.05023	mg/L	100	70	130			
L24196-01ASD	ASD	05/16/15 1:28	MS150429-2	.0501	U	.05008	mg/L	100	70	130	0	20	

Tin, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383384													
WG383384ICV	ICV	05/13/15 21:11	II150418-3	2		2.04	mg/L	102	95	105			
WG383384ICB	ICB	05/13/15 21:17				U	mg/L		-0.12	0.12			
WG383384LFB	LFB	05/13/15 21:30	II150425-2	1.001		1.012	mg/L	101	85	115			
L24195-01AS	AS	05/13/15 21:36	II150425-2	1.001	U	1.007	mg/L	101	85	115			
L24195-01ASD	ASD	05/13/15 21:39	II150425-2	1.001	U	1.008	mg/L	101	85	115	0	20	

Titanium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.0125	mg/L	101	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.015	0.015			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	1.005		1.031	mg/L	103	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	1.005	U	1.021	mg/L	102	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	1.005	U	1.044	mg/L	104	85	115	2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24195**

Vanadium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		2.0462	mg/L	102	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.015	0.015			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.5		.5321	mg/L	106	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.5	.01	.5384	mg/L	106	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.5	.01	.5472	mg/L	107	85	115	2	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383313													
WG383313ICV	ICV	05/12/15 17:03	II150418-3	2		1.955	mg/L	98	95	105			
WG383313ICB	ICB	05/12/15 17:09				U	mg/L		-0.03	0.03			
WG383313LFB	LFB	05/12/15 17:21	II150425-2	.5005		.511	mg/L	102	85	115			
L24195-01AS	AS	05/12/15 17:27	II150425-2	.5005	U	.528	mg/L	105	85	115			
L24195-01ASD	ASD	05/12/15 17:31	II150425-2	.5005	U	.574	mg/L	115	85	115	8	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24195**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24195-01	WG383186	Mercury, dissolved	M245.1 CVAA	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG383313	Silver, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L24195-02	WG383313	Bismuth, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Boron, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Calcium, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Chromium, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Cobalt, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Copper, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Gallium, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Iron, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Lithium, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Magnesium, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Manganese, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
	WG383186	Mercury, dissolved	M245.1 CVAA	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG383313	Molybdenum, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Nickel, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Scandium, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Silver, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
			M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Sodium, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG383384	Tin, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
	WG383313	Titanium, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Vanadium, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
		Zinc, dissolved	M200.7 ICP	DA	Sample required dilution due to reactivity.
L24195-03	WG383186	Mercury, dissolved	M245.1 CVAA	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG383313	Silver, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
	WG383384	Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24195**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24195-04	WG383186	Mercury, dissolved	M245.1 CVAA	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG383313	Silver, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L24195-05	WG383186	Mercury, dissolved	M245.1 CVAA	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG383313	Silver, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L24195-06	WG383186	Mercury, dissolved	M245.1 CVAA	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG383313	Silver, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L24195-07	WG383186	Mercury, dissolved	M245.1 CVAA	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG383313	Silver, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Metals Analysis

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP
Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

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

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP

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Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: L24195

Date Received: 05/08/2015 08:52

Received By: ddp

Date Printed: 5/8/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples? A change was made in the ID Line 4 section prior to ACZ custody.	☒	☐	☐

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 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? Some parameters were received past hold time.	☐	☒	☐

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)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
UNKNOWN			

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Adrian Brown Consultants, Inc.

ACZ Project ID: L24195

Date Received: 05/08/2015 08:52

Received By: ddp

Date Printed: 5/8/2015

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

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).



Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: JEFFREY WINICK

Company: SCHLUMBERGER WATER SERV.

E-mail: JWINICK@SLB.COM

Address: 1875 LAWRENCE STREET, SUITE 500

DENVER, CO 80215

Telephone: +1.303.244.8224

Copy of Report to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: abrown@abch2o.com

Telephone: (303) 698-9080

Invoice to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: lbrown@abch2o.com

Address: 130 W 4th Ave

Denver CO USA 80223

Telephone: (303) 698-9080

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 CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: CO HYDROGEOCHEMICAL STUDY

Project/PO #:

Reporting state for compliance testing:

Sampler's Name: Beverly Furfaro/ALS

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	Total Met-Is	NINP (ABA)	NAG	NAG Leachate Met-Is	Total Carbon Leach	TDC Combustion IR	ABA Sulfur forms	Grain Size	HCT
CPC14-3/440-600/Static	2-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/600-800/Static	2-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/800-1000/Static	2-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1000-1200/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1200-1400/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1400-1600/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1600-1800/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1800-2000/Kinetic	7-Apr-15	SO	9kg	X	X	X	X	X	X	X	X	X
CPC14-3/440-1000/Kinetic	2-Apr-15	SO	9kg	X	X	X	X	X	X	X	X	X

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

REMARKS

Prior to ACZ analysis per quote and COC, from each static pulp comp., pls prepare 200g representative riffle split sample for each static composite for XRD. For each <1/4" kinetic comp., pls split 500g representative material. This should then be sub-split into 2, equal 250g split samples (1 sample for isotopes and 1 for mineral separations). Sample splits will be shipped to laboratories as designated by Jeff Winick. Please contact 303.244.8224 for further instruction.

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
		JPL	58.15 0900

FRMAD050.01.15.09

White - Return with sample.

Yellow - Retain for your records.

June 02, 2015

Report to:

Jeffrey Winick
Schlumberger Water Services
1875 Lawrence Street
Suite 500
Denver, CO 80202

Bill to:

Accounts Payable
Adrian Brown Consultants, Inc.
130 W 4th Avenue
Denver, CO 80223

cc: Adrian Brown

Project ID:

ACZ Project ID: L24454

Jeffrey Winick:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 21, 2015. This project has been assigned to ACZ's project number, L24454. 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 L24454. 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 July 02, 2015. 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.



Scott Habermehl has reviewed
and approved this report.



Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1000-1800/KINETIC

ACZ Sample ID: **L24454-01**

Date Sampled: 04/07/15 10:00

Date Received: 05/21/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	11.10		*	mg/L	0.03	0.2	05/22/15 20:05	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	05/30/15 0:04	scp
Arsenic, dissolved	M200.8 ICP-MS	1	0.0031		*	mg/L	0.0002	0.001	05/30/15 0:04	scp
Barium, dissolved	M200.7 ICP	1	0.094		*	mg/L	0.003	0.02	05/22/15 20:05	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00238		*	mg/L	0.00005	0.0003	05/30/15 0:04	scp
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/22/15 20:05	jjc
Boron, dissolved	M200.7 ICP	1	0.16		*	mg/L	0.01	0.05	05/22/15 20:05	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0140		*	mg/L	0.0001	0.0005	05/30/15 0:04	scp
Calcium, dissolved	M200.7 ICP	1	8.4		*	mg/L	0.1	0.5	05/22/15 20:05	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/22/15 20:05	jjc
Cobalt, dissolved	M200.7 ICP	1	0.14		*	mg/L	0.01	0.05	05/22/15 20:05	jjc
Copper, dissolved	M200.7 ICP	1	0.64		*	mg/L	0.01	0.05	05/22/15 20:05	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/26/15 22:29	jjc
Iron, dissolved	M200.7 ICP	1	55.30		*	mg/L	0.02	0.05	05/22/15 20:05	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0316		*	mg/L	0.0001	0.0005	05/30/15 0:04	scp
Lithium, dissolved	M200.7 ICP	1	0.019	B	*	mg/L	0.008	0.04	05/22/15 20:05	jjc
Magnesium, dissolved	M200.7 ICP	1	1.6		*	mg/L	0.2	1	05/22/15 20:05	jjc
Manganese, dissolved	M200.7 ICP	1	9.890		*	mg/L	0.005	0.03	05/22/15 20:05	jjc
Mercury, dissolved	M245.1 CVAA	1		UH	*	mg/L	0.0002	0.001	05/26/15 18:11	mfm
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	05/22/15 20:05	jjc
Nickel, dissolved	M200.7 ICP	1	0.079		*	mg/L	0.008	0.04	05/22/15 20:05	jjc
Potassium, dissolved	M200.7 ICP	1	6.8		*	mg/L	0.2	1	05/22/15 20:05	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/22/15 20:05	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0073		*	mg/L	0.0001	0.0003	05/30/15 0:04	scp
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	05/22/15 20:05	jjc
Sodium, dissolved	M200.7 ICP	1	2.2		*	mg/L	0.2	1	05/22/15 20:05	jjc
Strontium, dissolved	M200.7 ICP	1	6.580		*	mg/L	0.005	0.03	05/22/15 20:05	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0008		*	mg/L	0.0001	0.0005	05/30/15 0:04	scp
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/26/15 22:29	jjc
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/22/15 20:05	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/22/15 20:05	jjc
Zinc, dissolved	M200.7 ICP	1	0.72		*	mg/L	0.01	0.05	05/26/15 22:29	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24139-01

Arizona license number: AZ0102

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/440-1000/KINETIC

ACZ Sample ID: **L24454-02**

Date Sampled: 04/02/15 10:00

Date Received: 05/21/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	5.34		*	mg/L	0.03	0.2	05/22/15 20:08	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	05/30/15 0:20	scp
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B	*	mg/L	0.0002	0.001	05/30/15 0:20	scp
Barium, dissolved	M200.7 ICP	1	0.073		*	mg/L	0.003	0.02	05/22/15 20:08	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00088		*	mg/L	0.00005	0.0003	05/30/15 0:20	scp
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/22/15 20:08	jjc
Boron, dissolved	M200.7 ICP	1	0.09		*	mg/L	0.01	0.05	05/22/15 20:08	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	05/30/15 0:20	scp
Calcium, dissolved	M200.7 ICP	1	0.9		*	mg/L	0.1	0.5	05/22/15 20:08	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	05/22/15 20:08	jjc
Cobalt, dissolved	M200.7 ICP	1	0.04	B	*	mg/L	0.01	0.05	05/22/15 20:08	jjc
Copper, dissolved	M200.7 ICP	1	0.08		*	mg/L	0.01	0.05	05/22/15 20:08	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/26/15 22:32	jjc
Iron, dissolved	M200.7 ICP	1	0.49		*	mg/L	0.02	0.05	05/22/15 20:08	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0031		*	mg/L	0.0001	0.0005	05/30/15 0:20	scp
Lithium, dissolved	M200.7 ICP	1	0.013	B	*	mg/L	0.008	0.04	05/22/15 20:08	jjc
Magnesium, dissolved	M200.7 ICP	1	0.4	B	*	mg/L	0.2	1	05/22/15 20:08	jjc
Manganese, dissolved	M200.7 ICP	1	0.050		*	mg/L	0.005	0.03	05/22/15 20:08	jjc
Mercury, dissolved	M245.1 CVAA	1		UH	*	mg/L	0.0002	0.001	05/26/15 18:14	mfm
Molybdenum, dissolved	M200.7 ICP	1	0.06	B	*	mg/L	0.02	0.1	05/22/15 20:08	jjc
Nickel, dissolved	M200.7 ICP	1	0.009	B	*	mg/L	0.008	0.04	05/22/15 20:08	jjc
Potassium, dissolved	M200.7 ICP	1	6.8		*	mg/L	0.2	1	05/22/15 20:08	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	05/22/15 20:08	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0034		*	mg/L	0.0001	0.0003	05/30/15 0:20	scp
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	05/22/15 20:08	jjc
Sodium, dissolved	M200.7 ICP	1	0.9	B	*	mg/L	0.2	1	05/22/15 20:08	jjc
Strontium, dissolved	M200.7 ICP	1	15.600		*	mg/L	0.005	0.03	05/22/15 20:08	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	05/30/15 0:20	scp
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	05/26/15 22:32	jjc
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	05/22/15 20:08	jjc
Vanadium, dissolved	M200.7 ICP	1	0.008	B	*	mg/L	0.005	0.03	05/22/15 20:08	jjc
Zinc, dissolved	M200.7 ICP	1	0.06		*	mg/L	0.01	0.05	05/26/15 22:32	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24140-01

Arizona license number: AZ0102



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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24454**

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.037	mg/L	102	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.09	0.09			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	1.0015		1.13	mg/L	113	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	1.0015	U	1.165	mg/L	116	85	115			MA
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	1.0015	U	1.136	mg/L	113	85	115	3	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384377													
WG384377ICV	ICV	05/29/15 22:55	MS150312-3	.02		.02057	mg/L	103	90	110			
WG384377ICB	ICB	05/29/15 22:58				U	mg/L		-0.0012	0.0012			
WG384377LFB	LFB	05/29/15 23:01	MS150522-2	.01001		.00959	mg/L	96	85	115			
L24454-01AS	AS	05/30/15 0:07	MS150522-2	.01001	U	.00959	mg/L	96	70	130			
L24454-01ASD	ASD	05/30/15 0:17	MS150522-2	.01001	U	.00952	mg/L	95	70	130	1	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384377													
WG384377ICV	ICV	05/29/15 22:55	MS150312-3	.05		.05105	mg/L	102	90	110			
WG384377ICB	ICB	05/29/15 22:58				U	mg/L		-0.0006	0.0006			
WG384377LFB	LFB	05/29/15 23:01	MS150522-2	.0501		.04925	mg/L	98	85	115			
L24454-01AS	AS	05/30/15 0:07	MS150522-2	.0501	.0031	.05634	mg/L	106	70	130			
L24454-01ASD	ASD	05/30/15 0:17	MS150522-2	.0501	.0031	.0576	mg/L	109	70	130	2	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.0348	mg/L	102	95	105			
WG383967ICB	ICB	05/22/15 18:28				.0032	mg/L		-0.009	0.009			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.5		.5166	mg/L	103	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.5	.047	.5647	mg/L	104	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.5	.047	.5582	mg/L	102	85	115	1	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384377													
WG384377ICV	ICV	05/29/15 22:55	MS150312-3	.05		.04585	mg/L	92	90	110			
WG384377ICB	ICB	05/29/15 22:58				U	mg/L		-0.00015	0.00015			
WG384377LFB	LFB	05/29/15 23:01	MS150522-2	.05005		.04673	mg/L	93	85	115			
L24454-01AS	AS	05/30/15 0:07	MS150522-2	.05005	.00238	.05197	mg/L	99	70	130			
L24454-01ASD	ASD	05/30/15 0:17	MS150522-2	.05005	.00238	.052	mg/L	99	70	130	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24454**

Bismuth, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.086	mg/L	104	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.12	0.12			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	1		1.056	mg/L	106	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	1	U	1.065	mg/L	107	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	1	U	1.073	mg/L	107	85	115	1	20	

Boron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.059	mg/L	103	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.03	0.03			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.5005		.519	mg/L	104	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.5005	.04	.569	mg/L	106	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.5005	.04	.571	mg/L	106	85	115	0	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384377													
WG384377ICV	ICV	05/29/15 22:55	MS150312-3	.05		.0503	mg/L	101	90	110			
WG384377ICB	ICB	05/29/15 22:58				U	mg/L		-0.0003	0.0003			
WG384377LFB	LFB	05/29/15 23:01	MS150522-2	.05005		.0489	mg/L	98	85	115			
L24454-01AS	AS	05/30/15 0:07	MS150522-2	.05005	.014	.06605	mg/L	104	70	130			
L24454-01ASD	ASD	05/30/15 0:17	MS150522-2	.05005	.014	.06573	mg/L	103	70	130	0	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	100		103.75	mg/L	104	95	105			
WG383967ICB	ICB	05/22/15 18:28				.1	mg/L		-0.3	0.3			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	67.98862		74.77	mg/L	110	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	67.98862	206	274.7	mg/L	101	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	67.98862	206	271.3	mg/L	96	85	115	1	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		1.996	mg/L	100	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.03	0.03			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.5005		.502	mg/L	100	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.5005	U	.512	mg/L	102	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.5005	U	.501	mg/L	100	85	115	2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24454**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2.002		2.029	mg/L	101	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.03	0.03			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.5005		.508	mg/L	101	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.5005	U	.514	mg/L	103	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.5005	U	.506	mg/L	101	85	115	2	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.031	mg/L	102	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.03	0.03			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.499		.52	mg/L	104	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.499	U	.528	mg/L	106	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.499	U	.518	mg/L	104	85	115	2	20	

Gallium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384100													
WG384100ICV	ICV	05/26/15 21:45	II150514-1	2		2.09	mg/L	105	95	105			
WG384100ICB	ICB	05/26/15 21:51				U	mg/L		-0.3	0.3			
WG384100LFB	LFB	05/26/15 22:04	II150515-4	1		1.02	mg/L	102	85	115			
L24438-05AS	AS	05/26/15 22:23	II150515-4	5	U	5.14	mg/L	103	85	115			
L24438-05ASD	ASD	05/26/15 22:26	II150515-4	5	U	5.03	mg/L	101	85	115	2	20	

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.053	mg/L	103	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.06	0.06			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	1.0001		1.064	mg/L	106	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	1.0001	.1	1.145	mg/L	104	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	1.0001	.1	1.133	mg/L	103	85	115	1	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384377													
WG384377ICV	ICV	05/29/15 22:55	MS150312-3	.05		.05211	mg/L	104	90	110			
WG384377ICB	ICB	05/29/15 22:58				U	mg/L		-0.0003	0.0003			
WG384377LFB	LFB	05/29/15 23:01	MS150522-2	.05005		.04989	mg/L	100	85	115			
L24454-01AS	AS	05/30/15 0:07	MS150522-2	.05005	.0316	.08289	mg/L	102	70	130			
L24454-01ASD	ASD	05/30/15 0:17	MS150522-2	.05005	.0316	.08328	mg/L	103	70	130	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24454**

Lithium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.0562	mg/L	103	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.024	0.024			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	1.001		1.032	mg/L	103	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	1.001	U	1.058	mg/L	106	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	1.001	U	1.044	mg/L	104	85	115	1	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	100		99.03	mg/L	99	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.6	0.6			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	50.00339		50.93	mg/L	102	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	50.00339	26.8	78.13	mg/L	103	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	50.00339	26.8	77.05	mg/L	100	85	115	1	20	

Manganese, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.0105	mg/L	101	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.015	0.015			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.499		.5084	mg/L	102	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.499	.088	.5959	mg/L	102	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.499	.088	.5895	mg/L	101	85	115	1	20	

Mercury, dissolved M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384073													
WG384073LRB	LRB	05/26/15 17:10				U	mg/L		-0.00044	0.00044			
WG384073LFB	LFB	05/26/15 17:12	II150526-2	.002004		.00179	mg/L	89	85	115			
L24345-02LFM	LFM	05/26/15 17:53	II150526-2	.002004	U	.00178	mg/L	89	85	115			
L24345-02LFMD	LFMD	05/26/15 17:55	II150526-2	.002004	U	.00184	mg/L	92	85	115	3	20	

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.084	mg/L	104	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.06	0.06			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.4995		.546	mg/L	109	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.4995	U	.571	mg/L	114	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.4995	U	.561	mg/L	112	85	115	2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24454**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.0458	mg/L	102	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.024	0.024			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.501		.5298	mg/L	106	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.501	.024	.5454	mg/L	104	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.501	.024	.5401	mg/L	103	85	115	1	20	

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	20		20.02	mg/L	100	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.6	0.6			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	99.93386		103.5	mg/L	104	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	99.93386	1.5	107.2	mg/L	106	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	99.93386	1.5	105.7	mg/L	104	85	115	1	20	

Scandium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.05	mg/L	103	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.3	0.3			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.999		1.03	mg/L	103	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.999	U	1.04	mg/L	104	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.999	U	1.03	mg/L	103	85	115	1	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384377													
WG384377ICV	ICV	05/29/15 22:55	MS150312-3	.05		.04907	mg/L	98	90	110			
WG384377ICB	ICB	05/29/15 22:58				U	mg/L		-0.0003	0.0003			
WG384377LFB	LFB	05/29/15 23:01	MS150522-2	.05015		.04932	mg/L	98	85	115			
L24454-01AS	AS	05/30/15 0:07	MS150522-2	.05015	.0073	.06913	mg/L	123	70	130			
L24454-01ASD	ASD	05/30/15 0:17	MS150522-2	.05015	.0073	.06914	mg/L	123	70	130	0	20	

Silver, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	1.001		.985	mg/L	98	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.03	0.03			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.502		.507	mg/L	101	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.502	U	.416	mg/L	83	85	115			M2 ZA
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.502	U	.392	mg/L	78	85	115	6	20	M2 ZA

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24454**

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	100		99.68	mg/L	100	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.6	0.6			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	100.0188		103	mg/L	103	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	100.0188	41.8	145.6	mg/L	104	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	100.0188	41.8	143.7	mg/L	102	85	115	1	20	

Strontium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.0305	mg/L	102	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.015	0.015			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.5005		.5366	mg/L	107	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.5005	16.3	16.24	mg/L	-12	85	115			M3
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.5005	16.3	16.02	mg/L	-56	85	115	1	20	M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384377													
WG384377ICV	ICV	05/29/15 22:55	MS150312-3	.05		.054	mg/L	108	90	110			
WG384377ICB	ICB	05/29/15 22:58				U	mg/L		-0.0003	0.0003			
WG384377LFB	LFB	05/29/15 23:01	MS150522-2	.0501		.0508	mg/L	101	85	115			
L24454-01AS	AS	05/30/15 0:07	MS150522-2	.0501	.0008	.05298	mg/L	104	70	130			
L24454-01ASD	ASD	05/30/15 0:17	MS150522-2	.0501	.0008	.05283	mg/L	104	70	130	0	20	

Tin, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384100													
WG384100ICV	ICV	05/26/15 21:45	II150514-1	2		2.048	mg/L	102	95	105			
WG384100ICB	ICB	05/26/15 21:51				U	mg/L		-0.12	0.12			
WG384100LFB	LFB	05/26/15 22:04	II150515-4	1.001		1.006	mg/L	100	85	115			
L24438-05AS	AS	05/26/15 22:23	II150515-4	5.005	U	4.99	mg/L	100	85	115			
L24438-05ASD	ASD	05/26/15 22:26	II150515-4	5.005	U	5.06	mg/L	101	85	115	1	20	

Titanium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.0562	mg/L	103	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.015	0.015			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	1.005		1.049	mg/L	104	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	1.005	U	1.057	mg/L	105	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	1.005	U	1.04	mg/L	103	85	115	2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24454**

Vanadium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG383967													
WG383967ICV	ICV	05/22/15 18:22	II150514-1	2		2.0768	mg/L	104	95	105			
WG383967ICB	ICB	05/22/15 18:28				U	mg/L		-0.015	0.015			
WG383967LFB	LFB	05/22/15 18:41	II150515-4	.5		.5445	mg/L	109	85	115			
L24453-01AS	AS	05/22/15 19:34	II150515-4	.5	U	.5488	mg/L	110	85	115			
L24453-01ASD	ASD	05/22/15 19:37	II150515-4	.5	U	.5399	mg/L	108	85	115	2	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG384100													
WG384100ICV	ICV	05/26/15 21:45	II150514-1	2		1.946	mg/L	97	95	105			
WG384100ICB	ICB	05/26/15 21:51				U	mg/L		-0.03	0.03			
WG384100LFB	LFB	05/26/15 22:04	II150515-4	.5005		.52	mg/L	104	85	115			
L24438-05AS	AS	05/26/15 22:23	II150515-4	2.5025	U	2.591	mg/L	104	85	115			
L24438-05ASD	ASD	05/26/15 22:26	II150515-4	2.5025	U	2.629	mg/L	105	85	115	1	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24454**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24454-01	WG383967	Aluminum, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG384073	Mercury, dissolved	M245.1 CVAA	H3	Sample was received and analyzed past holding time.
	WG383967	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L24454-02	WG383967	Aluminum, dissolved	M200.7 ICP	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG384073	Mercury, dissolved	M245.1 CVAA	H3	Sample was received and analyzed past holding time.
	WG383967	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24454**

Metals Analysis

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP
Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

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

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24454**

Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: L24454

Date Received: 05/21/2015 09:58

Received By: ddp

Date Printed: 5/21/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody 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 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?	☒	☐	☐

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
UNKNOWN			

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.

Adrian Brown Consultants, Inc.

ACZ Project ID: L24454

Date Received: 05/21/2015 09:58

Received By: ddp

Date Printed: 5/21/2015

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).

L24454

Additions

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: JEFFREY WINICK
Company: SCHLUMBERGER WATER SERV.
E-mail: JWINICK@SLB.COM

Address: 1875 LAWRENCE STREET, SUITE 500
DENVER, CO 80215
Telephone: +1.303.244.8224

Copy of Report to:

Name: ADRIAN BROWN
Company: ADRIAN BROWN CONSULTANTS

E-mail: abrown@abch2o.com
Telephone: (303) 698-9080

Invoice to:

Name: ADRIAN BROWN
Company: ADRIAN BROWN CONSULTANTS
E-mail: lbrown@abch2o.com

Address: 130 W 4th Ave
Denver CO USA 80223
Telephone: (303) 698-9080

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 CO DW Compliance Monitoring?

YES ☐
NO ☒

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: CO HYDROGEOCHEMICAL STUDY

Project/PO #:

Reporting state for compliance testing:

Sampler's Name: Beverly Furfaro/ALS

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	Total Metals	NINP (ABA)	NAG	NAG Leachate Metals	Total Carbon Leach	TDC Combustion IR	ABA Sulfur forms	Grain Size	HCT
CPC143/440-600/Static	2-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/600-800/Static	2-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/800-1000/Static	2-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1000-1200/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1200-1400/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1400-1600/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1600-1800/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1800-2000/Kinetic	7-Apr-15	SO	1kg	X	X	X	X	X	X	X	X	
CPC14-3/440-1000/Kinetic	2-Apr-15	SO	1kg	X	X	X	X	X	X	X	X	

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

REMARKS

Prior to ACZ analysis per quote and COC, from each static pulp comp., pls prepare 200g representative riffle split sample for each static composite for XRD. For each <1/4" kinetic comp., pls split 500g representative material. This should then be sub-split into 2, equal 250g split samples (1 sample for isotopes and 1 for mineral separations). Sample splits will be shipped to laboratories as designated by Jeff Winick. Please contact 303.244.8224 for further instruction.

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

RELINQUISHED BY:

DATE/TIME

RECEIVED BY:

DATE/TIME

			APL	5-6-15	1009

FRMAD050.01.15.09

White - Return with sample. Yellow - Retain for your records.

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: JEFFREY WINICK

Company: SCHLUMBERGER WATER SERV.

E-mail: JWINICK@SLB.COM

Address: 1875 LAWRENCE STREET, SUITE 500

DENVER, CO 80215

Telephone: +1.303.244.8224

Copy of Report to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: abrown@abch2o.com

Telephone: (303) 698-9080

Invoice to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: lbrown@abch2o.com

Address: 130 W 4th Ave

Denver CO USA 80223

Telephone: (303) 698-9080

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 CO DW Compliance Monitoring?

YES

NO

X

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: CO HYDROGEOCHEMICAL STUDY

Project/PO #:

Reporting state for compliance testing:

Sampler's Name: Beverly Furfaro/ALS

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	Total Met-Is	NMP (ABA)	NAG	NAG Leachate Metals	Total Carbon Leach	TDC Combustion IR	ABA Sulfur foras	Grain Size	HCT
CPC143/440-600/Static	2-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/600-800/Static	2-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/800-1000/Static	2-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1000-1200/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1200-1400/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1400-1600/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1600-1800/Static	7-Apr-15	SO	1kg	X	X	X	X	X	X	X		
CPC14-3/1800-2000/Kinetic	7-Apr-15	SO	1kg	X	X	X	X	X	X	X	X	
CPC14-3/440-1000/Kinetic	2-Apr-15	SO	1kg	X	X	X	X	X	X	X	X	

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

REMARKS

Prior to ACZ analysis per quote and COC, from each static pulp comp., pls prepare 200g representative riffle split sample for each static composite for XRD. For each <1/4" kinetic comp., pls split 500g representative material. This should then be sub-split into 2, equal 250g split samples (1 sample for isotopes and 1 for mineral separations). Sample splits will be shipped to laboratories as designated by Jeff Winick. Please contact 303.244.8224 for further instruction.

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

RELINQUISHED BY:

DATE/TIME

RECEIVED BY:

DATE/TIME

		CTF	5/6/19	1/38

FRMAD050.01.15.09

White - Return with sample. Yellow - Retain for your records.

June 17, 2015

Report to:

Jeffrey Winick
Schlumberger Water Services
1875 Lawrence Street
Suite 500
Denver, CO 80202

Bill to:

Accounts Payable
Adrian Brown Consultants, Inc.
130 W 4th Avenue
Denver, CO 80223

cc: Adrian Brown

Project ID:

ACZ Project ID: L24518

Jeffrey Winick:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 26, 2015. This project has been assigned to ACZ's project number, L24518. 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 L24518. 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 July 17, 2015. 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.



Scott Habermehl has reviewed
and approved this report.



Adrian Brown Consultants, Inc.
Project ID:
Sample ID: CPC14-3/1800-2000/ST

ACZ Sample ID: **L24518-01**
Date Sampled: 05/21/15 00:00
Date Received: 05/26/15
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		143			t CaCO3/Kt	0.31	3.1	06/17/15 9:24	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		17.0			t CaCO3/Kt	1	5	06/17/15 9:24	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-126			t CaCO3/Kt			06/17/15 9:24	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/12/15 21:16	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1		U	*	%	0.1	0.5	06/12/15 21:16	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.2	B	*	%	0.1	0.5	06/12/15 21:16	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	88		*	Kg H2SO4/t	1	1	06/11/15 0:00	cra
pH After Oxidation		1	2.2		*	units	0.1	0.1	06/11/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	1.7		*	%	0.1	0.5	06/12/15 16:31	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	4.08		*	%	0.01	0.1	06/11/15 0:00	cra
Sulfur HNO3 Residue		1	0.02	B	*	%	0.01	0.1	06/11/15 0:00	cra
Sulfur Organic Residual		1	0.02	B	*	%	0.01	0.1	06/11/15 0:00	cra
Sulfur Pyritic Sulfide		1	4.06		*	%	0.01	0.1	06/11/15 0:00	cra
Sulfur Sulfate		1	0.49		*	%	0.01	0.1	06/11/15 0:00	cra
Sulfur Total		1	4.57		*	%	0.01	0.1	06/11/15 0:00	cra
Total Sulfur minus Sulfate		1	4.08		*	%	0.01	0.1	06/11/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/05/15 9:00	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/08/15 9:00	brd

Adrian Brown Consultants, Inc.
Project ID:
Sample ID: CPC14-3/2000-2200/

ACZ Sample ID: **L24518-02**
Date Sampled: 05/21/15 00:00
Date Received: 05/26/15
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		135			t CaCO3/Kt	0.31	3.1	06/17/15 9:24	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		28.0			t CaCO3/Kt	1	5	06/17/15 9:24	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-107			t CaCO3/Kt			06/17/15 9:24	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.3	B	*	%	0.1	0.5	06/13/15 8:33	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.2	B	*	%	0.1	0.5	06/13/15 8:33	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/13/15 8:33	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	76		*	Kg H2SO4/t	1	1	06/11/15 0:00	cra
pH After Oxidation		1	2.3		*	units	0.1	0.1	06/11/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	2.8		*	%	0.1	0.5	06/12/15 21:26	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	3.81		*	%	0.01	0.1	06/11/15 0:00	cra
Sulfur HNO3 Residue		1	0.02	B	*	%	0.01	0.1	06/11/15 0:00	cra
Sulfur Organic Residual		1	0.02	B	*	%	0.01	0.1	06/11/15 0:00	cra
Sulfur Pyritic Sulfide		1	3.79		*	%	0.01	0.1	06/11/15 0:00	cra
Sulfur Sulfate		1	0.52		*	%	0.01	0.1	06/11/15 0:00	cra
Sulfur Total		1	4.33		*	%	0.01	0.1	06/11/15 0:00	cra
Total Sulfur minus Sulfate		1	3.81		*	%	0.01	0.1	06/11/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/05/15 9:53	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/08/15 9:26	brd

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2200-2400/STATIC CO

ACZ Sample ID: **L24518-03**

Date Sampled: 05/21/15 00:00

Date Received: 05/26/15

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		160			t CaCO3/Kt	0.31	3.1	06/17/15 9:24	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		31.0			t CaCO3/Kt	1	5	06/17/15 9:24	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-129			t CaCO3/Kt			06/17/15 9:24	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.3	B	*	%	0.1	0.5	06/13/15 14:12	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.2	B	*	%	0.1	0.5	06/13/15 14:12	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/13/15 14:12	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	78		*	Kg H2SO4/t	1	1	06/12/15 0:00	cra
pH After Oxidation		1	2.2		*	units	0.1	0.1	06/12/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	3.1		*	%	0.1	0.5	06/13/15 7:17	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	3.47		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur HNO3 Residue		1	0.03	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Organic Residual		1	0.03	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Pyritic Sulfide		1	3.44		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Sulfate		1	1.65		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Total		1	5.12		*	%	0.01	0.1	06/12/15 0:00	cra
Total Sulfur minus Sulfate		1	3.47		*	%	0.01	0.1	06/12/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/05/15 10:46	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/08/15 9:53	brd

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2400-2600/STAT COM

ACZ Sample ID: **L24518-04**

Date Sampled: 05/21/15 00:00

Date Received: 05/26/15

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		175			t CaCO3/Kt	0.31	3.1	06/17/15 9:24	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		16.0			t CaCO3/Kt	1	5	06/17/15 9:24	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-159			t CaCO3/Kt			06/17/15 9:24	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/13/15 19:50	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1		U	*	%	0.1	0.5	06/13/15 19:50	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/13/15 19:50	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	60		*	Kg H2SO4/t	1	1	06/12/15 0:00	cra
pH After Oxidation		1	2.3		*	units	0.1	0.1	06/12/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	1.6		*	%	0.1	0.5	06/13/15 12:12	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	2.08		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur HNO3 Residue		1	0.02	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Organic Residual		1	0.02	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Pyritic Sulfide		1	2.06		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Sulfate		1	3.53		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Total		1	5.61		*	%	0.01	0.1	06/12/15 0:00	cra
Total Sulfur minus Sulfate		1	2.08		*	%	0.01	0.1	06/12/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/05/15 11:40	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/08/15 10:20	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 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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24518**

Carbon, total (TC)

ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385031													
WG385031PBS	PBS	06/12/15 10:00				U	%		-0.3	0.3			
WG385031LCSS	LCSS	06/12/15 15:38	PCN42342	4.19		4.2	%		80	120			
L24518-01DUP	DUP	06/13/15 2:55			.1	.1	%				0	20	RA

Carbon, total inorganic (TIC)

ASA No. 9 29-2.2.4 (calc TC - TOC)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385031													
WG385031PBS	PBS	06/12/15 10:00				U	%		-0.3	0.3			
L24518-01DUP	DUP	06/13/15 2:55			U	U	%				0	20	RA

Carbon, total organic (TOC)

ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385031													
WG385031PBS	PBS	06/12/15 10:00				U	%		-0.3	0.3			
L24518-01DUP	DUP	06/13/15 2:55			.2	.2	%				0	20	RA

Net Acid Generation

Single NAG - EGI 2002

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385036													
L24518-01DUP	DUP	06/11/15 14:12			88	87	g H ₂ SO ₄ /				1	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
WG385099													
WG385099PBS	PBS	06/12/15 6:41				U	%		-0.2	0.2			
WG385099LCSS	LCSS	06/12/15 11:36	PCN47543	4.96		5.24	%	106	80	120			
L24518-02MS	MS	06/13/15 2:22	SI141024-1	1	2.8	3.58	%	78	70	130			
L24518-04DUP	DUP	06/13/15 17:07			1.6	1.43	%				11	20	

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
WG385022													
L24518-01DUP	DUP	06/11/15 19:23			.02	.02	%				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
WG385022													
L24518-01DUP	DUP	06/11/15 19:23			4.06	4.15	%				2	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
WG385022													
L24518-01DUP	DUP	06/11/15 19:23			.49	.49	%				0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24518**

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
WG385022													
WG385022PBS	PBS	06/11/15 9:00				U	%		-0.03	0.03			
WG385022LCSS	LCSS	06/11/15 11:35	PCN42342	4.07		4.09	%	100	80	120			
L24518-01MS	MS	06/11/15 16:47	PCN47988	1.1	4.57	5.75	%	107	80	120			
L24518-01DUP	DUP	06/11/15 19:23			4.57	4.66	%				2	20	

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
WG385022													
L24518-01DUP	DUP	06/11/15 19:23			4.08	4.17	%				2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24518**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24518-01	WG385031	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385022	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L24518-02	WG385031	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385022	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24518**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24518-03	WG385031	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385022	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L24518-04	WG385031	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385022	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24518**

Soil Analysis

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

Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
NAG	Single NAG - EGI 2002
Neutralization Potential as CaCO ₃	M600/2-78-054 3.2.3
pH After Oxidation	Single NAG - EGI 2002
Sulfur HCl Residue	M600/2-78-054 3.2.4-MOD
Sulfur HNO ₃ Residue	M600/2-78-054 3.2.4-MOD
Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD
Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4-MOD
Sulfur Sulfate	M600/2-78-054 3.2.4-MOD
Sulfur Total	M600/2-78-054 3.2.4-MOD
Total Sulfur minus Sulfate	M600/2-78-054 3.2.4-MOD

Adrian Brown Consultants, Inc.

ACZ Project ID: L24518

Date Received: 05/26/2015 09:55

Received By: ddp

Date Printed: 5/26/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples? A change was made in the Sample Identification: Line 1,2. section prior to ACZ custody.	☒	☐	☐

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 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?	☒	☐	☐

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)	Rad (µR/Hr)	Custody Seal Intact?
NA21857	17.3	14	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.

Adrian Brown Consultants, Inc.

ACZ Project ID: L24518

Date Received: 05/26/2015 09:55

Received By: ddp

Date Printed: 5/26/2015

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).

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C

ACZ Sample ID: **L24525-01**

Date Sampled: 05/21/15 00:00

Date Received: 05/26/15

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		146			t CaCO ₃ /Kt	0.31	3.1	10/01/15 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		23.0			t CaCO ₃ /Kt	1	5	10/01/15 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-123			t CaCO ₃ /Kt			10/01/15 0:00	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.2	B	*	%	0.1	0.5	06/14/15 7:07	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.1	B	*	%	0.1	0.5	06/14/15 7:07	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/14/15 7:07	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	67		*	Kg H ₂ SO ₄ /t	1	1	06/12/15 0:00	cra
pH After Oxidation		1	2.3		*	units	0.1	0.1	06/12/15 0:00	cra
Neutralization Potential as CaCO ₃	M600/2-78-054 3.2.3	1	2.3		*	%	0.1	0.5	06/13/15 22:03	pta
Sieve- 63 um (230 mesh)	ASA No.9, 15-4.2.2	1	2.6		*	% Passing	0.1	0.5	06/09/15 2:00	brd
Sieve- 125 um (120 mesh)	ASA No.9, 15-4.2.2	1	4.5		*	% Passing	0.1	0.5	06/09/15 2:00	brd
Sieve- 250 um (60 mesh)	ASA No.9, 15-4.2.2	1	7.2		*	% Passing	0.1	0.5	06/09/15 2:00	brd
Sieve- 500 um (35 mesh)	ASA No.9, 15-4.2.2	1	11.4		*	% Passing	0.1	0.5	06/09/15 2:00	brd
Sieve- 850 um (20 mesh)	ASA No.9, 15-4.2.2	1	15.7		*	% Passing	0.1	0.5	06/09/15 2:00	brd
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	1	27.8		*	% Passing	0.1	0.5	06/09/15 2:00	brd
Sieve- 4000 um (4.0mm)	ASA No.9, 15-4.2.2	1	50.7		*	% Passing	0.1	0.5	06/09/15 2:00	brd
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	3.75		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur HNO ₃ Residue		1	0.03	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Organic Residual		1	0.03	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Pyritic Sulfide		1	3.72		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Sulfate		1	0.91		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Total		1	4.66		*	%	0.01	0.1	06/12/15 0:00	cra
Total Sulfur minus Sulfate		1	3.75		*	%	0.01	0.1	06/12/15 0:00	cra

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C

ACZ Sample ID: **L24525-01**

Date Sampled: 05/21/15 00:00

Date Received: 05/26/15

Sample Matrix: Soil

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/05/15 12:33	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/08/15 10:46	brd
Humidity Cell Test	D5744-12									
Grain Size		1	<6.3mm						06/08/15 0:00	rjv
Sample Weight		1	1000			g			06/08/15 0:00	rjv

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 0

ACZ Sample ID: **L24525-02**

Date Sampled: 06/09/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	06/11/15 20:40	aeb
Antimony, dissolved	M200.8 ICP-MS	1	0.0020		*	mg/L	0.0004	0.002	06/11/15 2:19	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0002	0.001	06/11/15 2:19	msh
Barium, dissolved	M200.7 ICP	1	0.061		*	mg/L	0.003	0.02	06/11/15 20:40	aeb
Beryllium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.00005	0.0003	06/11/15 2:19	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/11/15 20:40	aeb
Boron, dissolved	M200.7 ICP	1	0.03	B	*	mg/L	0.01	0.05	06/11/15 20:40	aeb
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	06/11/15 2:19	msh
Calcium, dissolved	M200.7 ICP	1	243		*	mg/L	0.1	0.5	06/11/15 20:40	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/11/15 20:40	aeb
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/11/15 20:40	aeb
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/11/15 20:40	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/11/15 20:40	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	06/11/15 20:40	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0012		*	mg/L	0.0001	0.0005	06/11/15 2:19	msh
Lithium, dissolved	M200.7 ICP	1	0.022	B	*	mg/L	0.008	0.04	06/11/15 20:40	aeb
Magnesium, dissolved	M200.7 ICP	1	4.6		*	mg/L	0.2	1	06/11/15 20:40	aeb
Manganese, dissolved	M200.7 ICP	1	1.530		*	mg/L	0.005	0.03	06/11/15 20:40	aeb
Mercury, dissolved	M245.1 CVAA	1	0.0006	B	*	mg/L	0.0002	0.001	06/11/15 16:36	mfm/nc o
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/11/15 20:40	aeb
Nickel, dissolved	M200.7 ICP	1	0.017	B	*	mg/L	0.008	0.04	06/11/15 20:40	aeb
Potassium, dissolved	M200.7 ICP	1	8.8		*	mg/L	0.2	1	06/11/15 20:40	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/11/15 20:40	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0001	0.0003	06/11/15 2:19	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/11/15 20:40	aeb
Sodium, dissolved	M200.7 ICP	1	22.5		*	mg/L	0.2	1	06/11/15 20:40	aeb
Strontium, dissolved	M200.7 ICP	1	6.300		*	mg/L	0.005	0.03	06/11/15 20:40	aeb
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	06/11/15 2:19	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/11/15 20:40	aeb
Titanium, dissolved	M200.7 ICP	1	0.005	B	*	mg/L	0.005	0.03	06/11/15 20:40	aeb
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/11/15 20:40	aeb
Zinc, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	06/11/15 20:40	aeb

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 0

ACZ Sample ID: **L24525-02**

Date Sampled: 06/09/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1310		*	umhos/cm	1	10	06/08/15 16:00	rjv
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	89			g			06/09/15 0:00	rjv
Leachate Volume Added		1	1000			mL			06/09/15 0:00	rjv
Leachate Volume Recovered		1	903			g			06/09/15 0:00	rjv
Oxidation Reduction Potential (Eh)	D1498-08	1	426		*	mv	1	1	06/08/15 16:21	rjv
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	06/08/15 0:00	rjv
pH measured at		1	20.2			C	0.1	0.1	06/08/15 0:00	rjv

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	06/11/15 12:37	id
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	8.4	B	*	mg/L	2	20	06/10/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	06/10/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	06/10/15 0:00	abd
Total Alkalinity		1	8.4	B	*	mg/L	2	20	06/10/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	50	650		*	mg/L	50	250	06/10/15 15:52	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 1

ACZ Sample ID: **L24525-03**

Date Sampled: 06/16/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	06/18/15 16:37	jjc
Antimony, dissolved	M200.8 ICP-MS	1	0.0009	B	*	mg/L	0.0004	0.002	06/23/15 4:55	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0006	B	*	mg/L	0.0002	0.001	06/17/15 18:04	mfm
Barium, dissolved	M200.7 ICP	1	0.045		*	mg/L	0.003	0.02	06/18/15 16:37	jjc
Beryllium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.00005	0.0003	06/17/15 18:04	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 16:37	jjc
Boron, dissolved	M200.7 ICP	1	0.04	B	*	mg/L	0.01	0.05	06/18/15 16:37	jjc
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	06/17/15 18:04	mfm
Calcium, dissolved	M200.7 ICP	1	196		*	mg/L	0.1	0.5	06/18/15 16:37	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 16:37	jjc
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 16:37	jjc
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 16:37	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 16:37	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	06/19/15 19:49	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0009		*	mg/L	0.0001	0.0005	06/17/15 18:04	mfm
Lithium, dissolved	M200.7 ICP	1	0.020	B	*	mg/L	0.008	0.04	06/18/15 16:37	jjc
Magnesium, dissolved	M200.7 ICP	1	4.1		*	mg/L	0.2	1	06/18/15 16:37	jjc
Manganese, dissolved	M200.7 ICP	1	1.550		*	mg/L	0.005	0.03	06/18/15 16:37	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/18/15 9:25	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/18/15 16:37	jjc
Nickel, dissolved	M200.7 ICP	1	0.008	B	*	mg/L	0.008	0.04	06/18/15 16:37	jjc
Potassium, dissolved	M200.7 ICP	1	3.7		*	mg/L	0.2	1	06/18/15 16:37	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 16:37	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0010		*	mg/L	0.0001	0.0003	06/17/15 18:04	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/18/15 16:37	jjc
Sodium, dissolved	M200.7 ICP	1	9.3		*	mg/L	0.2	1	06/18/15 16:37	jjc
Strontium, dissolved	M200.7 ICP	1	5.230		*	mg/L	0.005	0.03	06/18/15 16:37	jjc
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	06/17/15 18:04	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 16:37	jjc
Titanium, dissolved	M200.7 ICP	1	0.006	B	*	mg/L	0.005	0.03	06/18/15 16:37	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/18/15 16:37	jjc
Zinc, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	06/18/15 16:37	jjc

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 1

ACZ Sample ID: **L24525-03**

Date Sampled: 06/16/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1130		*	umhos/cm	1	10	06/15/15 16:00	rjv
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	68			g			06/16/15 0:00	rjv
Leachate Volume Added		1	1000			mL			06/16/15 0:00	rjv
Leachate Volume Recovered		1	923			g			06/16/15 0:00	rjv
Oxidation Reduction Potential (Eh)	D1498-08	1	421		*	mv	1	1	06/15/15 16:21	rjv
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.7			units	0.1	0.1	06/15/15 0:00	rjv
pH measured at		1	21.0			C	0.1	0.1	06/15/15 0:00	rjv

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1	12	B	*	mg/L	10	20	06/18/15 13:52	tms
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	3.5	B	*	mg/L	2	20	06/17/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	06/17/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	06/17/15 0:00	abd
Total Alkalinity		1	3.5	B	*	mg/L	2	20	06/17/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	50	516			mg/L	50	250	06/18/15 15:57	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 2

ACZ Sample ID: **L24525-04**

Date Sampled: 06/23/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0002	0.001	06/24/15 18:50	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	06/24/15 18:50	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/24/15 17:41	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	06/24/15 17:41	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	06/24/15 18:50	mfm
Zinc, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	06/24/15 17:41	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	984		*	umhos/cm	1	10	06/22/15 14:00	rjv
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	66			g			07/02/15 0:00	pta
Leachate Volume Added		1	1000			mL			07/02/15 0:00	pta
Leachate Volume Recovered		1	916			g			07/02/15 0:00	pta
Oxidation Reduction Potential (Eh)	D1498-08	1	393		*	mv	1	1	06/22/15 14:40	rjv
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.1			units	0.1	0.1	06/22/15 0:00	rjv
pH measured at		1	20.5			C	0.1	0.1	06/22/15 0:00	rjv

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	06/25/15 10:41	id
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	2.6	B	*	mg/L	2	20	06/25/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	06/25/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	06/25/15 0:00	abd
Total Alkalinity		1	2.6	B	*	mg/L	2	20	06/25/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	406		*	mg/L	20	100	06/24/15 10:00	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 3

ACZ Sample ID: **L24525-05**

Date Sampled: 06/30/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0002	0.001	07/01/15 22:35	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/01/15 22:35	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/02/15 11:49	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/02/15 11:49	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0013		*	mg/L	0.0001	0.0005	07/01/15 22:35	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/02/15 11:49	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	647		*	umhos/cm	1	10	06/29/15 13:34	cra
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	71			g			07/02/15 0:00	pta/cra
Leachate Volume Added		1	1000			mL			07/02/15 0:00	pta/cra
Leachate Volume Recovered		1	917			g			07/02/15 0:00	pta/cra
Oxidation Reduction Potential (Eh)	D1498-08	1	410		*	mv	1	1	06/29/15 14:20	cra
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.6			units	0.1	0.1	06/29/15 0:00	cra
pH measured at		1	20.8			C	0.1	0.1	06/29/15 0:00	cra

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/02/15 9:54	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	07/01/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/01/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/01/15 0:00	tms
Total Alkalinity		1		U	*	mg/L	2	20	07/01/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	20	326		*	mg/L	20	100	07/02/15 13:32	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 4

ACZ Sample ID: **L24525-06**

Date Sampled: 07/07/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0008	B	*	mg/L	0.0002	0.001	07/08/15 17:14	msh
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/08/15 17:14	msh
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/09/15 19:46	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/09/15 19:46	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	07/08/15 17:14	msh
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/09/15 19:46	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	683		*	umhos/cm	1	10	07/06/15 12:12	cra
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	62			g			07/06/15 0:00	pta
Leachate Volume Added		1	1000			mL			07/06/15 0:00	pta
Leachate Volume Recovered		1	918			g			07/06/15 0:00	pta
Oxidation Reduction Potential (Eh)	D1498-08	1	352		*	mv	1	1	07/06/15 10:36	cra
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.8			units	0.1	0.1	07/06/15 0:00	cra
pH measured at		1	22.2			C	0.1	0.1	07/06/15 0:00	cra

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/15/15 11:22	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	4.6	B	*	mg/L	2	20	07/08/15 0:00	enb
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/08/15 0:00	enb
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/08/15 0:00	enb
Total Alkalinity		1	4.6	B	*	mg/L	2	20	07/08/15 0:00	enb
Sulfate	D516-02/-07 - Turbidimetric	20	496		*	mg/L	20	100	07/08/15 14:32	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 5

ACZ Sample ID: **L24525-07**

Date Sampled: 07/14/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	07/16/15 20:15	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/16/15 20:15	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/15/15 15:36	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/15/15 15:36	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0001	0.0005	07/16/15 20:15	mfm
Zinc, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	07/15/15 15:36	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	553		*	umhos/cm	1	10	07/13/15 11:54	pta
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	63			g			07/13/15 0:00	arc
Leachate Volume Added		1	1000			mL			07/13/15 0:00	arc
Leachate Volume Recovered		1	923			g			07/13/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	316		*	mv	1	1	07/13/15 13:00	pta
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.6			units	0.1	0.1	07/13/15 0:00	pta
pH measured at		1	22.3			C	0.1	0.1	07/13/15 0:00	pta

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/23/15 14:07	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	07/15/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/15/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/15/15 0:00	abd
Total Alkalinity		1		U	*	mg/L	2	20	07/15/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	259		*	mg/L	20	100	07/15/15 12:55	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 6

ACZ Sample ID: **L24525-08**

Date Sampled: 07/21/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	07/22/15 20:54	jjc
Antimony, dissolved	M200.8 ICP-MS	1	0.0008	B	*	mg/L	0.0004	0.002	07/22/15 11:33	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0002	0.001	07/22/15 11:33	mfm
Barium, dissolved	M200.7 ICP	1	0.048		*	mg/L	0.003	0.02	07/22/15 20:54	jjc
Beryllium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.00005	0.0003	07/23/15 18:08	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	07/22/15 20:54	jjc
Boron, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 20:54	jjc
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/22/15 11:33	mfm
Calcium, dissolved	M200.7 ICP	1	130		*	mg/L	0.1	0.5	07/22/15 20:54	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 20:54	jjc
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 20:54	jjc
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 20:54	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	07/22/15 20:54	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/22/15 20:54	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0006		*	mg/L	0.0001	0.0005	07/22/15 11:33	mfm
Lithium, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	07/22/15 20:54	jjc
Magnesium, dissolved	M200.7 ICP	1	2		*	mg/L	0.2	1	07/22/15 20:54	jjc
Manganese, dissolved	M200.7 ICP	1	1.490		*	mg/L	0.005	0.03	07/22/15 20:54	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	07/27/15 16:34	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	07/23/15 13:03	jjc
Nickel, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	07/22/15 20:54	jjc
Potassium, dissolved	M200.7 ICP	1	1.6		*	mg/L	0.2	1	07/22/15 20:54	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	07/22/15 20:54	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0003	07/22/15 11:33	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	07/23/15 17:02	jjc
Sodium, dissolved	M200.7 ICP	1	0.5	B	*	mg/L	0.2	1	07/22/15 20:54	jjc
Strontium, dissolved	M200.7 ICP	1	4.610		*	mg/L	0.005	0.03	07/22/15 20:54	jjc
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/22/15 11:33	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	07/22/15 20:54	jjc
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	07/22/15 20:54	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	07/22/15 20:54	jjc
Zinc, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	07/22/15 20:54	jjc

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 6

ACZ Sample ID: **L24525-08**

Date Sampled: 07/21/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	675		*	umhos/cm	1	10	07/20/15 11:16	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	81			g			07/20/15 0:00	arc
Leachate Volume Added		1	1000			mL			07/20/15 0:00	arc
Leachate Volume Recovered		1	975			g			07/20/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	318		*	mv	1	1	07/20/15 12:48	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.6			units	0.1	0.1	07/20/15 0:00	arc
pH measured at		1	22.4			C	0.1	0.1	07/20/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/24/15 11:35	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	2.8	B	*	mg/L	2	20	07/22/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/22/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/22/15 0:00	abd
Total Alkalinity		1	2.8	B	*	mg/L	2	20	07/22/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	325		*	mg/L	20	100	07/22/15 12:34	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 7

ACZ Sample ID: **L24525-09**

Date Sampled: 07/28/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	07/29/15 20:51	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/29/15 20:51	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/29/15 12:00	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/29/15 12:00	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	07/29/15 20:51	mfm
Zinc, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	07/29/15 12:00	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	534		*	umhos/cm	1	10	07/27/15 10:27	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	58			g			07/27/15 0:00	arc
Leachate Volume Added		1	1000			mL			07/27/15 0:00	arc
Leachate Volume Recovered		1	928			g			07/27/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	425		*	mv	1	1	07/27/15 12:29	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.6			units	0.1	0.1	07/27/15 0:00	arc
pH measured at		1	21.1			C	0.1	0.1	07/27/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/05/15 10:41	apk
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	2.0	B	*	mg/L	2	20	07/29/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/29/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/29/15 0:00	abd
Total Alkalinity		1	2.0	B	*	mg/L	2	20	07/29/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	246		*	mg/L	20	100	07/29/15 13:53	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 8

ACZ Sample ID: **L24525-10**

Date Sampled: 08/04/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	08/05/15 15:23	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	08/05/15 15:23	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/05/15 15:27	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/05/15 15:27	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0008		*	mg/L	0.0001	0.0005	08/05/15 15:23	mfm
Zinc, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	08/05/15 15:27	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	411		*	umhos/cm	1	10	08/03/15 11:16	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	127			g			08/03/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/03/15 0:00	arc
Leachate Volume Recovered		1	856			g			08/03/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	438		*	mv	1	1	08/03/15 12:48	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.5			units	0.1	0.1	08/03/15 0:00	arc
pH measured at		1	21.5			C	0.1	0.1	08/03/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/05/15 10:59	apk
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	08/05/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	08/05/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	08/05/15 0:00	abd
Total Alkalinity		1		U	*	mg/L	2	20	08/05/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	190		*	mg/L	20	100	08/06/15 13:02	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK 9

ACZ Sample ID: **L24525-11**

Date Sampled: 08/11/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	08/12/15 18:19	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	08/12/15 18:19	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/12/15 19:56	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/13/15 14:49	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	08/12/15 18:19	mfm
Zinc, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	08/12/15 19:56	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	485		*	umhos/cm	1	10	08/10/15 11:16	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	63			g			08/10/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/10/15 0:00	arc
Leachate Volume Recovered		1	978			g			08/10/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	397		*	mv	1	1	08/10/15 12:48	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	08/10/15 0:00	arc
pH measured at		1	20.8			C	0.1	0.1	08/10/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/19/15 11:20	tms
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	08/14/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	08/14/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	08/14/15 0:00	abd
Total Alkalinity		1		U	*	mg/L	2	20	08/14/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	232		*	mg/L	20	100	08/12/15 12:40	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK10

ACZ Sample ID: **L24525-12**

Date Sampled: 08/18/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	08/19/15 11:37	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	08/19/15 11:37	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/26/15 16:29	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/26/15 16:29	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0008		*	mg/L	0.0001	0.0005	08/19/15 11:37	mfm
Zinc, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	08/26/15 16:29	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	483		*	umhos/cm	1	10	08/17/15 11:16	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	68			g			08/17/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/17/15 0:00	arc
Leachate Volume Recovered		1	913			g			08/17/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	415		*	mv	1	1	08/17/15 12:48	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.9			units	0.1	0.1	08/17/15 0:00	arc
pH measured at		1	21.4			C	0.1	0.1	08/17/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/27/15 13:19	tms
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	08/19/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	08/19/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	08/19/15 0:00	abd
Total Alkalinity		1		U	*	mg/L	2	20	08/19/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	202		*	mg/L	20	100	08/20/15 12:10	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK11

ACZ Sample ID: **L24525-13**

Date Sampled: 08/25/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	08/26/15 17:25	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	08/26/15 17:25	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/26/15 18:46	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/26/15 18:46	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0008		*	mg/L	0.0001	0.0005	08/26/15 17:25	mfm
Zinc, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	08/26/15 18:46	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	451		*	umhos/cm	1	10	08/24/15 11:00	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	73			g			08/24/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/24/15 0:00	arc
Leachate Volume Recovered		1	909			g			08/24/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	389		*	mv	1	1	08/24/15 12:30	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.9			units	0.1	0.1	08/24/15 0:00	arc
pH measured at		1	21.0			C	0.1	0.1	08/24/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO3	SM2310B - Titration	1		U	*	mg/L	10	20	09/08/15 14:48	id
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1		U	*	mg/L	2	20	09/02/15 0:00	tms
Carbonate as CaCO3		1		U	*	mg/L	2	20	09/02/15 0:00	tms
Hydroxide as CaCO3		1		U	*	mg/L	2	20	09/02/15 0:00	tms
Total Alkalinity		1		U	*	mg/L	2	20	09/02/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	20	185			mg/L	20	100	08/27/15 13:48	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK12

ACZ Sample ID: **L24525-14**

Date Sampled: 09/01/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	09/04/15 22:13	aeb
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	09/04/15 17:15	msh
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	09/04/15 17:15	msh
Barium, dissolved	M200.7 ICP	1	0.024		*	mg/L	0.003	0.02	09/04/15 22:13	aeb
Beryllium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.00005	0.0003	09/04/15 17:15	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	09/04/15 22:13	aeb
Boron, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:13	aeb
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/04/15 17:15	msh
Calcium, dissolved	M200.7 ICP	1	72.7		*	mg/L	0.1	0.5	09/04/15 22:13	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:13	aeb
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:13	aeb
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:13	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	09/04/15 22:13	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/04/15 22:13	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	09/04/15 17:15	msh
Lithium, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	09/04/15 22:13	aeb
Magnesium, dissolved	M200.7 ICP	1	2		*	mg/L	0.2	1	09/04/15 22:13	aeb
Manganese, dissolved	M200.7 ICP	1	1.810		*	mg/L	0.005	0.03	09/04/15 22:13	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	09/29/15 13:35	pta
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	09/04/15 22:13	aeb
Nickel, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	09/04/15 22:13	aeb
Potassium, dissolved	M200.7 ICP	1	0.9	B	*	mg/L	0.2	1	09/04/15 22:13	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	09/04/15 22:13	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0006		*	mg/L	0.0001	0.0003	09/04/15 17:15	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	09/04/15 22:13	aeb
Sodium, dissolved	M200.7 ICP	1	0.2	B	*	mg/L	0.2	1	09/04/15 22:13	aeb
Strontium, dissolved	M200.7 ICP	1	2.490		*	mg/L	0.005	0.03	09/04/15 22:13	aeb
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/04/15 17:15	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	09/05/15 10:00	aeb
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	09/04/15 22:13	aeb
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	09/04/15 22:13	aeb
Zinc, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	09/04/15 22:13	aeb

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK12

ACZ Sample ID: **L24525-14**

Date Sampled: 09/01/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	413		*	umhos/cm	1	10	09/01/15 11:00	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	66			g			08/31/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/31/15 0:00	arc
Leachate Volume Recovered		1	980			g			08/31/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	420		*	mv	1	1	09/01/15 12:30	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.7			units	0.1	0.1	09/01/15 0:00	arc
pH measured at		1	20.1			C	0.1	0.1	09/01/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/08/15 15:05	id
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Total Alkalinity		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	20	188		*	mg/L	20	100	09/03/15 11:40	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK13

ACZ Sample ID: **L24525-15**

Date Sampled: 09/08/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	09/11/15 12:28	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/11/15 12:28	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/15/15 10:55	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/15/15 10:55	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0012		*	mg/L	0.0001	0.0005	09/11/15 12:28	mfm
Zinc, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	09/15/15 10:55	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	408		*	umhos/cm	1	10	09/07/15 11:00	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	54			g			09/07/15 0:00	arc
Leachate Volume Added		1	1000			mL			09/07/15 0:00	arc
Leachate Volume Recovered		1	925			g			09/07/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	484		*	mv	1	1	09/07/15 12:30	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.8			units	0.1	0.1	09/07/15 0:00	arc
pH measured at		1	20.8			C	0.1	0.1	09/07/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/16/15 12:54	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Total Alkalinity		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	5	192			mg/L	5	25	09/10/15 12:58	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK14

ACZ Sample ID: **L24525-16**

Date Sampled: 09/15/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	09/17/15 18:10	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/17/15 18:10	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/18/15 21:13	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/18/15 21:13	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0001	0.0005	09/17/15 18:10	mfm
Zinc, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	09/18/15 21:13	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	370		*	umhos/cm	1	10	09/14/15 11:00	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	55			g			09/14/15 0:00	arc
Leachate Volume Added		1	1000			mL			09/14/15 0:00	arc
Leachate Volume Recovered		1	926			g			09/14/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	307		*	mv	1	1	09/14/15 12:12	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.9			units	0.1	0.1	09/14/15 0:00	arc
pH measured at		1	20.4			C	0.1	0.1	09/14/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/25/15 11:43	sck
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	20.7		*	mg/L	2	20	09/23/15 0:00	enb
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/23/15 0:00	enb
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/23/15 0:00	enb
Total Alkalinity		1	20.7		*	mg/L	2	20	09/23/15 0:00	enb
Sulfate	D516-02/-07 - Turbidimetric	5	166			mg/L	5	25	09/17/15 11:25	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK15

ACZ Sample ID: **L24525-17**

Date Sampled: 09/22/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	09/23/15 12:31	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/23/15 12:31	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/25/15 16:50	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/25/15 16:50	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0010		*	mg/L	0.0001	0.0005	09/23/15 12:31	mfm
Zinc, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	09/25/15 16:50	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	349		*	umhos/cm	1	10	09/21/15 11:00	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	67			g			09/21/15 0:00	arc
Leachate Volume Added		1	1000			mL			09/21/15 0:00	arc
Leachate Volume Recovered		1	910			g			09/21/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	247		*	mv	1	1	09/21/15 12:12	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.9			units	0.1	0.1	09/21/15 0:00	arc
pH measured at		1	20.2			C	0.1	0.1	09/21/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/29/15 13:00	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	09/24/15 0:00	enb
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/24/15 0:00	enb
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/24/15 0:00	enb
Total Alkalinity		1		U	*	mg/L	2	20	09/24/15 0:00	enb
Sulfate	WG391257	5	***157***			mg/L	5	25	09/28/15 11:35	AREV

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-HCT WEEK16

ACZ Sample ID: **L24525-18**

Date Sampled: 09/29/15 17:00

Date Received: 05/26/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved			*****							NEED
Cadmium, dissolved			*****							NEED
Copper, dissolved			*****							NEED
Iron, dissolved			*****							NEED
Lead, dissolved			*****							NEED
Zinc, dissolved			*****							NEED

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	WG391407	1	***365***		*	umhos/cm	1	10	09/28/15 11:00	AREV
End of leach volumes and mass	D5744-12									
Interstitial Weight			*****							NEED
Leachate Volume Added			*****							NEED
Leachate Volume Recovered			*****							NEED
Oxidation Reduction Potential (Eh)	WG391443	1	***441***		*	mv	1	1	09/28/15 12:12	AREV
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	***5.8***			units	0.1	0.1	09/28/15 0:00	AREV
pH measured at		1	***19.3***			C	0.1	0.1	09/28/15 0:00	AREV

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO3	WG391508		*****							WIP
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3			*****							NEED
Carbonate as CaCO3			*****							NEED
Hydroxide as CaCO3			*****							NEED
Total Alkalinity			*****							NEED
Sulfate			*****							NEED

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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: L24525

Date Received: 05/26/2015 09:55

Received By: ddp

Date Printed: 5/26/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			X
2) Is the Chain of Custody 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 complete and accurate? The date/time was not present on the sample containers or on the COC. The "Relinquished By" date was used to enter the samples. The sample matrix was entered per the requested quotation.		X	
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples? A change was made in the Sample Identification: Line 1,2,3,4. section prior to ACZ custody.	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 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		

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)	Rad (µR/Hr)	Custody Seal Intact?
NA21857	17.3	14	N/A

Adrian Brown Consultants, Inc.

ACZ Project ID: L24525

Date Received: 05/26/2015 09:55

Received By: ddp

Date Printed: 5/26/2015

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.

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).

Preliminary

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: JEFFREY WINICK

Company: SCHLUMBERGER WATER SERV.

E-mail: JWINICK@SLB.COM

Address: 1875 LAWRENCE STREET, SUITE 500

DENVER, CO 80215

Telephone: +1.303.244.8224

Copy of Report to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: abrown@abch2o.com

Telephone: (303) 698-9080

Invoice to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: lbrown@abch2o.com

Address: 130 W 4th Ave

Denver CO USA 80223

Telephone: (303) 698-9080

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 CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: CO HYDROGEOCHEMICAL STUDY

Project/PO #:

Reporting state for compliance testing:

Sampler's Name: Beverly Furfaro/ALS

Are any samples NRC licensable material? Yes/No

SAMPLE IDENTIFICATION

DATE: TIME

Matrix

of Containers

CO - Hydrogeo
HCT - PRE

CPC14-371800-2600/Kinetic C-21-May-15

Rock

8 (kg)

X

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

REMARKS

Please contact Jeff Winick at 303.244.8224 for further instructions

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

RELINQUISHED BY:

DATE: TIME

RECEIVED BY:

DATE: TIME

SH

9.26.15

COT

9/26/15

1200

June 19, 2015

Report to:

Jeffrey Winick
Schlumberger Water Services
1875 Lawrence Street
Suite 500
Denver, CO 80202

Bill to:

Accounts Payable
Adrian Brown Consultants, Inc.
130 W 4th Avenue
Denver, CO 80223

cc: Adrian Brown

Project ID:

ACZ Project ID: L24526

Jeffrey Winick:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 22, 2015. This project has been assigned to ACZ's project number, L24526. 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 L24526. 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 July 19, 2015. 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.



Scott Habermehl has reviewed
and approved this report.



Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-3600/STATIC CO

ACZ Sample ID: **L24526-01**

Date Sampled: 05/20/15 00:00

Date Received: 05/22/15

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		111			t CaCO3/Kt	0.31	3.1	06/19/15 11:04	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		45.0			t CaCO3/Kt	1	5	06/19/15 11:04	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-65.6			t CaCO3/Kt			06/19/15 11:04	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.5		*	%	0.1	0.5	06/14/15 12:46	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.4	B	*	%	0.1	0.5	06/14/15 12:46	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/14/15 12:46	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	42		*	Kg H2SO4/t	1	1	06/12/15 0:00	cra
pH After Oxidation		1	2.4		*	units	0.1	0.1	06/12/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	4.5		*	%	0.1	0.5	06/14/15 2:58	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	2.52		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur HNO3 Residue		1	0.03	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Organic Residual		1	0.03	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Pyritic Sulfide		1	2.49		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Sulfate		1	1.02		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Total		1	3.54		*	%	0.01	0.1	06/12/15 0:00	cra
Total Sulfur minus Sulfate		1	2.52		*	%	0.01	0.1	06/12/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/05/15 13:26	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/08/15 11:13	brd

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3600-3800/STATIC CO

ACZ Sample ID: **L24526-02**

Date Sampled: 05/20/15 00:00

Date Received: 05/22/15

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		141			t CaCO3/Kt	0.31	3.1	06/19/15 11:05	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		45.0			t CaCO3/Kt	1	5	06/19/15 11:05	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-95.9			t CaCO3/Kt			06/19/15 11:05	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.5		*	%	0.1	0.5	06/14/15 18:24	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.5		*	%	0.1	0.5	06/14/15 18:24	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1		U	*	%	0.1	0.5	06/14/15 18:24	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	44		*	Kg H2SO4/t	1	1	06/12/15 0:00	cra
pH After Oxidation		1	2.5		*	units	0.1	0.1	06/12/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	4.5		*	%	0.1	0.5	06/14/15 12:49	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	3.39		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur HNO3 Residue		1		U	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Organic Residual		1		U	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Pyritic Sulfide		1	3.39		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Sulfate		1	1.12		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Total		1	4.51		*	%	0.01	0.1	06/12/15 0:00	cra
Total Sulfur minus Sulfate		1	3.39		*	%	0.01	0.1	06/12/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/05/15 14:20	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/08/15 11:40	brd

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3800-4000/STATIC CO

ACZ Sample ID: **L24526-03**

Date Sampled: 05/20/15 00:00

Date Received: 05/22/15

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		141			t CaCO3/Kt	0.31	3.1	06/19/15 11:05	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		27.0			t CaCO3/Kt	1	5	06/19/15 11:05	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-114			t CaCO3/Kt			06/19/15 11:05	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.2	B	*	%	0.1	0.5	06/15/15 0:03	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.2	B	*	%	0.1	0.5	06/15/15 0:03	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1		U	*	%	0.1	0.5	06/15/15 0:03	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	63		*	Kg H2SO4/t	1	1	06/13/15 0:00	cra
pH After Oxidation		1	2.4		*	units	0.1	0.1	06/13/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	2.7		*	%	0.1	0.5	06/14/15 17:44	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	3.25		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur HNO3 Residue		1	0.02	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Organic Residual		1	0.02	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Pyritic Sulfide		1	3.23		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Sulfate		1	1.26		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Total		1	4.51		*	%	0.01	0.1	06/12/15 0:00	cra
Total Sulfur minus Sulfate		1	3.25		*	%	0.01	0.1	06/12/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/05/15 15:13	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/08/15 12:06	brd

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/4000-4200/STATIC COM

ACZ Sample ID: **L24526-04**

Date Sampled: 05/20/15 00:00

Date Received: 05/22/15

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		128			t CaCO3/Kt	0.31	3.1	06/19/15 11:05	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		24.0			t CaCO3/Kt	1	5	06/19/15 11:05	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-104			t CaCO3/Kt			06/19/15 11:05	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/15/15 5:41	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1		U	*	%	0.1	0.5	06/15/15 5:41	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/15/15 5:41	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	54		*	Kg H2SO4/t	1	1	06/13/15 0:00	cra
pH After Oxidation		1	2.3		*	units	0.1	0.1	06/13/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	2.4		*	%	0.1	0.5	06/14/15 22:39	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	2.40		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur HNO3 Residue		1	0.01	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Organic Residual		1	0.01	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Pyritic Sulfide		1	2.39		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Sulfate		1	1.68		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Total		1	4.08		*	%	0.01	0.1	06/12/15 0:00	cra
Total Sulfur minus Sulfate		1	2.40		*	%	0.01	0.1	06/12/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/05/15 16:06	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/08/15 12:33	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 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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24526**

Carbon, total (TC)

ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385031													
WG385031PBS	PBS	06/12/15 10:00				U	%		-0.3	0.3			
WG385031LCSS	LCSS	06/12/15 15:38	PCN42342	4.19		4.2	%		80	120			
L24518-01DUP	DUP	06/13/15 2:55			.1	.1	%				0	20	RA

Carbon, total inorganic (TIC)

ASA No. 9 29-2.2.4 (calc TC - TOC)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385031													
WG385031PBS	PBS	06/12/15 10:00				U	%		-0.3	0.3			
L24518-01DUP	DUP	06/13/15 2:55			U	U	%				0	20	RA

Carbon, total organic (TOC)

ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385031													
WG385031PBS	PBS	06/12/15 10:00				U	%		-0.3	0.3			
L24518-01DUP	DUP	06/13/15 2:55			.2	.2	%				0	20	RA

Net Acid Generation

Single NAG - EGI 2002

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385036													
L24518-01DUP	DUP	06/11/15 14:12			88	87	g H ₂ SO ₄ /				1	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
WG385099													
WG385099PBS	PBS	06/12/15 6:41				U	%		-0.2	0.2			
WG385099LCSS	LCSS	06/12/15 11:36	PCN47543	4.96		5.24	%	106	80	120			
L24518-02MS	MS	06/13/15 2:22	SI141024-1	1	2.8	3.58	%	78	70	130			
L24518-04DUP	DUP	06/13/15 17:07			1.6	1.43	%				11	20	

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
WG385022													
L24518-01DUP	DUP	06/11/15 19:23			.02	.02	%				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
WG385022													
L24518-01DUP	DUP	06/11/15 19:23			4.06	4.15	%				2	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
WG385022													
L24518-01DUP	DUP	06/11/15 19:23			.49	.49	%				0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24526**

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
WG385022													
WG385022PBS	PBS	06/11/15 9:00				U	%		-0.03	0.03			
WG385022LCSS	LCSS	06/11/15 11:35	PCN42342	4.07		4.09	%	100	80	120			
L24518-01MS	MS	06/11/15 16:47	PCN47988	1.1	4.57	5.75	%	107	80	120			
L24518-01DUP	DUP	06/11/15 19:23			4.57	4.66	%				2	20	

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
WG385022													
L24518-01DUP	DUP	06/11/15 19:23			4.08	4.17	%				2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24526**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24526-01	WG385031	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385022	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L24526-02	WG385031	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385022	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24526**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24526-03	WG385031	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385022	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L24526-04	WG385031	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385022	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24526**

Soil Analysis

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

Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
NAG	Single NAG - EGI 2002
Neutralization Potential as CaCO ₃	M600/2-78-054 3.2.3
pH After Oxidation	Single NAG - EGI 2002
Sulfur HCl Residue	M600/2-78-054 3.2.4-MOD
Sulfur HNO ₃ Residue	M600/2-78-054 3.2.4-MOD
Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD
Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4-MOD
Sulfur Sulfate	M600/2-78-054 3.2.4-MOD
Sulfur Total	M600/2-78-054 3.2.4-MOD
Total Sulfur minus Sulfate	M600/2-78-054 3.2.4-MOD

Adrian Brown Consultants, Inc.

ACZ Project ID: L24526

Date Received: 05/22/2015 09:58

Received By: ddp

Date Printed: 5/26/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate? The sample matrix was entered per the requested quotation.	☐	☒	☐
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples? A change was made in the Sample Identification: Line 5 section prior to ACZ custody.	☒	☐	☐

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 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?	☒	☐	☐

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)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA21847	18.2	15	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Adrian Brown Consultants, Inc.

ACZ Project ID: L24526

Date Received: 05/22/2015 09:58

Received By: ddp

Date Printed: 5/26/2015

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

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

L 24526

ACZ**Laboratories, Inc.**

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

CHAIN of CUSTODY

Report to:

Name: JEFFREY WINICK

Company: SCHLUMBERGER WATER SERV.

E-mail: JWINICK@SLB.COM

Address: 1875 LAWRENCE STREET, SUITE 500

DENVER, CO 80215

Telephone: +1.303.244.8224

Copy of Report to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: abrown@abch2o.com

Telephone: (303) 698-9080

Invoice to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: lbrown@abch2o.com

Address: 130 W 4th Ave

Denver CO USA 80223

Telephone: (303) 698-9080

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 CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

Quote #: CO HYDROGEOCHEMICAL STUDY

Project/PO #:

Reporting state for compliance testing:

Sampler's Name: Beverly Furfaro/ALS

Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)**SAMPLE IDENTIFICATION**

DATE: TIME

Matrix

of Containers

CO-HYDRO GEO
-CHEMCO-HYDRO GEO
-PRE-HT

CPC14-3/3400-3600/Static Co 20-May-15: rock 1 (kg)

CPC14-3/3600-3800/Static Co 20-May-15: rock 1 (kg)

CPC14-3/3800-4000/Static Co 20-May-15: rock 1 (kg)

CC14-3/4000-4200/Static Co 20-May-15: rock 1 (kg)

CPC14-3/3600-4200/Kinetic C 20-May-15: rock 8 (kg)

SH 3400

5-26-15

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

REMARKS

Please contact Jeff Winick at 303.244.8224 for further instructions

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

RELINQUISHED BY:

DATE: TIME

RECEIVED BY:

DATE: TIME

L24526-1506191126

24526 Chain of Custody

COPY

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C

ACZ Sample ID: **L24527-01**

Date Sampled: 05/20/15 00:00

Date Received: 05/22/15

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		122			t CaCO3/Kt	0.31	3.1	10/01/15 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		35.0			t CaCO3/Kt	1	5	10/01/15 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-86.9			t CaCO3/Kt			10/01/15 0:00	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.4	B	*	%	0.1	0.5	06/15/15 11:20	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.4	B	*	%	0.1	0.5	06/15/15 11:20	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1		U	*	%	0.1	0.5	06/15/15 11:20	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	35		*	Kg H2SO4/t	1	1	06/13/15 0:00	cra
pH After Oxidation		1	2.5		*	units	0.1	0.1	06/13/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	3.5		*	%	0.1	0.5	06/15/15 3:34	pta
Sieve- 63 um (230 mesh)	ASA No.9, 15-4.2.2	1	1.6		*	% Passing	0.1	0.5	06/09/15 16:00	brd
Sieve- 125 um (120 mesh)	ASA No.9, 15-4.2.2	1	2.9		*	% Passing	0.1	0.5	06/09/15 16:00	brd
Sieve- 250 um (60 mesh)	ASA No.9, 15-4.2.2	1	4.1		*	% Passing	0.1	0.5	06/09/15 16:00	brd
Sieve- 500 um (35 mesh)	ASA No.9, 15-4.2.2	1	6.1		*	% Passing	0.1	0.5	06/09/15 16:00	brd
Sieve- 850 um (20 mesh)	ASA No.9, 15-4.2.2	1	9.1		*	% Passing	0.1	0.5	06/09/15 16:00	brd
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	1	20.9		*	% Passing	0.1	0.5	06/09/15 16:00	brd
Sieve- 4000 um (4.0mm)	ASA No.9, 15-4.2.2	1	42.9		*	% Passing	0.1	0.5	06/09/15 16:00	brd
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	2.74		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur HNO3 Residue		1	0.02	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Organic Residual		1	0.02	B	*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Pyritic Sulfide		1	2.72		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Sulfate		1	1.16		*	%	0.01	0.1	06/12/15 0:00	cra
Sulfur Total		1	3.90		*	%	0.01	0.1	06/12/15 0:00	cra
Total Sulfur minus Sulfate		1	2.74		*	%	0.01	0.1	06/12/15 0:00	cra

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C

ACZ Sample ID: **L24527-01**

Date Sampled: 05/20/15 00:00

Date Received: 05/22/15

Sample Matrix: Soil

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972								06/05/15 17:00	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3								06/08/15 13:00	brd
Humidity Cell Test	D5744-12									
Grain Size		1	<6.3mm						06/08/15 0:00	rjv
Sample Weight		1	1000			g			06/08/15 0:00	rjv

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 0

ACZ Sample ID: **L24527-02**

Date Sampled: 06/09/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	06/11/15 20:49	aeb
Antimony, dissolved	M200.8 ICP-MS	1	0.0020		*	mg/L	0.0004	0.002	06/11/15 2:22	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0017		*	mg/L	0.0002	0.001	06/11/15 2:22	msh
Barium, dissolved	M200.7 ICP	1	0.067		*	mg/L	0.003	0.02	06/11/15 20:49	aeb
Beryllium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.00005	0.0003	06/11/15 2:22	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/11/15 20:49	aeb
Boron, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	06/11/15 20:49	aeb
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	06/11/15 2:22	msh
Calcium, dissolved	M200.7 ICP	1	289		*	mg/L	0.1	0.5	06/11/15 20:49	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/11/15 20:49	aeb
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/11/15 20:49	aeb
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/11/15 20:49	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/11/15 20:49	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	06/11/15 20:49	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	06/11/15 2:22	msh
Lithium, dissolved	M200.7 ICP	1	0.025	B	*	mg/L	0.008	0.04	06/11/15 20:49	aeb
Magnesium, dissolved	M200.7 ICP	1	7.3		*	mg/L	0.2	1	06/11/15 20:49	aeb
Manganese, dissolved	M200.7 ICP	1	0.251		*	mg/L	0.005	0.03	06/11/15 20:49	aeb
Mercury, dissolved	M245.1 CVAA	1	0.0007	B	*	mg/L	0.0002	0.001	06/11/15 16:38	mfm/nc o
Molybdenum, dissolved	M200.7 ICP	1	0.05	B	*	mg/L	0.02	0.1	06/11/15 20:49	aeb
Nickel, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	06/11/15 20:49	aeb
Potassium, dissolved	M200.7 ICP	1	6.8		*	mg/L	0.2	1	06/11/15 20:49	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/11/15 20:49	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0003	06/11/15 2:22	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/11/15 20:49	aeb
Sodium, dissolved	M200.7 ICP	1	39.7		*	mg/L	0.2	1	06/11/15 20:49	aeb
Strontium, dissolved	M200.7 ICP	1	3.170		*	mg/L	0.005	0.03	06/11/15 20:49	aeb
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	06/11/15 2:22	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/11/15 20:49	aeb
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/11/15 20:49	aeb
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/11/15 20:49	aeb
Zinc, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	06/11/15 20:49	aeb

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 0

ACZ Sample ID: **L24527-02**

Date Sampled: 06/09/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1450		*	umhos/cm	1	10	06/08/15 17:00	rjv
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	87			g			06/09/15 0:00	rjv
Leachate Volume Added		1	1000			mL			06/09/15 0:00	rjv
Leachate Volume Recovered		1	911			g			06/09/15 0:00	rjv
Oxidation Reduction Potential (Eh)	D1498-08	1	432		*	mv	1	1	06/08/15 16:54	rjv
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.5			units	0.1	0.1	06/08/15 0:00	rjv
pH measured at		1	20.3			C	0.1	0.1	06/08/15 0:00	rjv

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	06/11/15 12:48	id
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	17.4	B	*	mg/L	2	20	06/10/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	06/10/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	06/10/15 0:00	abd
Total Alkalinity		1	17.4	B	*	mg/L	2	20	06/10/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	50	816		*	mg/L	50	250	06/10/15 15:53	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 1

ACZ Sample ID: **L24527-03**

Date Sampled: 06/16/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	0.05	B	*	mg/L	0.03	0.2	06/18/15 16:47	jjc
Antimony, dissolved	M200.8 ICP-MS	1	0.0009	B	*	mg/L	0.0004	0.002	06/23/15 4:58	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0015		*	mg/L	0.0002	0.001	06/17/15 18:07	mfm
Barium, dissolved	M200.7 ICP	1	0.059		*	mg/L	0.003	0.02	06/18/15 16:47	jjc
Beryllium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.00005	0.0003	06/17/15 18:07	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 16:47	jjc
Boron, dissolved	M200.7 ICP	1	0.03	B	*	mg/L	0.01	0.05	06/18/15 16:47	jjc
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	06/17/15 18:07	mfm
Calcium, dissolved	M200.7 ICP	1	233		*	mg/L	0.1	0.5	06/18/15 16:47	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 16:47	jjc
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 16:47	jjc
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 16:47	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 16:47	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	06/19/15 19:59	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	06/17/15 18:07	mfm
Lithium, dissolved	M200.7 ICP	1	0.023	B	*	mg/L	0.008	0.04	06/18/15 16:47	jjc
Magnesium, dissolved	M200.7 ICP	1	6.4		*	mg/L	0.2	1	06/18/15 16:47	jjc
Manganese, dissolved	M200.7 ICP	1	0.131		*	mg/L	0.005	0.03	06/18/15 16:47	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/18/15 9:27	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/18/15 16:47	jjc
Nickel, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	06/18/15 16:47	jjc
Potassium, dissolved	M200.7 ICP	1	3.6		*	mg/L	0.2	1	06/18/15 16:47	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 16:47	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0008		*	mg/L	0.0001	0.0003	06/17/15 18:07	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/18/15 16:47	jjc
Sodium, dissolved	M200.7 ICP	1	20.5		*	mg/L	0.2	1	06/18/15 16:47	jjc
Strontium, dissolved	M200.7 ICP	1	3.050		*	mg/L	0.005	0.03	06/18/15 16:47	jjc
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	06/17/15 18:07	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 16:47	jjc
Titanium, dissolved	M200.7 ICP	1	0.007	B	*	mg/L	0.005	0.03	06/18/15 16:47	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/18/15 16:47	jjc
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 16:47	jjc

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 1

ACZ Sample ID: **L24527-03**

Date Sampled: 06/16/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1260		*	umhos/cm	1	10	06/15/15 17:00	rjv
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	62			g			06/16/15 0:00	rjv
Leachate Volume Added		1	1000			mL			06/16/15 0:00	rjv
Leachate Volume Recovered		1	901			g			06/16/15 0:00	rjv
Oxidation Reduction Potential (Eh)	D1498-08	1	427		*	mv	1	1	06/15/15 16:54	rjv
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.4			units	0.1	0.1	06/15/15 0:00	rjv
pH measured at		1	20.6			C	0.1	0.1	06/15/15 0:00	rjv

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	06/18/15 14:06	tms
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	6.1	B	*	mg/L	2	20	06/17/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	06/17/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	06/17/15 0:00	abd
Total Alkalinity		1	6.1	B	*	mg/L	2	20	06/17/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	50	640			mg/L	50	250	06/18/15 15:57	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 2

ACZ Sample ID: **L24527-04**

Date Sampled: 06/23/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0012		*	mg/L	0.0002	0.001	06/24/15 18:53	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	06/24/15 18:53	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/24/15 17:44	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	06/24/15 17:44	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	06/24/15 18:53	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/24/15 17:44	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1140		*	umhos/cm	1	10	06/22/15 15:00	rjv
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	68			g			07/02/15 0:00	pta
Leachate Volume Added		1	1000			mL			07/02/15 0:00	pta
Leachate Volume Recovered		1	901			g			07/02/15 0:00	pta
Oxidation Reduction Potential (Eh)	D1498-08	1	375		*	mv	1	1	06/22/15 15:15	rjv
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.3			units	0.1	0.1	06/22/15 0:00	rjv
pH measured at		1	20.7			C	0.1	0.1	06/22/15 0:00	rjv

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	06/25/15 10:52	id
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	5.0	B	*	mg/L	2	20	06/25/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	06/25/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	06/25/15 0:00	abd
Total Alkalinity		1	5.0	B	*	mg/L	2	20	06/25/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	525		*	mg/L	20	100	06/24/15 10:00	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 3

ACZ Sample ID: **L24527-05**

Date Sampled: 06/30/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0002	0.001	07/01/15 22:44	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/01/15 22:44	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/02/15 11:58	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/02/15 11:58	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0008		*	mg/L	0.0001	0.0005	07/01/15 22:44	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/02/15 11:58	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	909		*	umhos/cm	1	10	06/29/15 14:42	cra
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	59			g			07/02/15 0:00	pta/cra
Leachate Volume Added		1	1000			mL			07/02/15 0:00	pta/cra
Leachate Volume Recovered		1	900			g			07/02/15 0:00	pta/cra
Oxidation Reduction Potential (Eh)	D1498-08	1	454		*	mv	1	1	06/29/15 15:00	cra
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.9			units	0.1	0.1	06/29/15 0:00	cra
pH measured at		1	22.1			C	0.1	0.1	06/29/15 0:00	cra

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/02/15 10:11	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	5.3	B	*	mg/L	2	20	07/01/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/01/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/01/15 0:00	tms
Total Alkalinity		1	5.3	B	*	mg/L	2	20	07/01/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	50	467		*	mg/L	50	250	07/02/15 13:28	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 4

ACZ Sample ID: **L24527-06**

Date Sampled: 07/07/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	07/08/15 17:17	msh
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	07/08/15 17:17	msh
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/09/15 19:49	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/09/15 19:49	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0001	0.0005	07/08/15 17:17	msh
Zinc, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	07/09/15 19:49	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	909		*	umhos/cm	1	10	07/06/15 13:00	cra
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	58			g			07/06/15 0:00	pta
Leachate Volume Added		1	1000			mL			07/06/15 0:00	pta
Leachate Volume Recovered		1	898			g			07/06/15 0:00	pta
Oxidation Reduction Potential (Eh)	D1498-08	1	382		*	mv	1	1	07/06/15 11:08	cra
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	07/06/15 0:00	cra
pH measured at		1	22.2			C	0.1	0.1	07/06/15 0:00	cra

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/15/15 11:35	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	3.0	B	*	mg/L	2	20	07/08/15 0:00	enb
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/08/15 0:00	enb
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/08/15 0:00	enb
Total Alkalinity		1	3.0	B	*	mg/L	2	20	07/08/15 0:00	enb
Sulfate	D516-02/-07 - Turbidimetric	20	333		*	mg/L	20	100	07/08/15 15:08	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 5

ACZ Sample ID: **L24527-07**

Date Sampled: 07/14/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	B	*	mg/L	0.0002	0.001	07/16/15 20:18	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/16/15 20:18	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/15/15 15:39	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/15/15 15:39	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0001	0.0005	07/16/15 20:18	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/15/15 15:39	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	842		*	umhos/cm	1	10	07/13/15 12:38	pta
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	57			g			07/13/15 0:00	arc
Leachate Volume Added		1	1000			mL			07/13/15 0:00	arc
Leachate Volume Recovered		1	903			g			07/13/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	334		*	mv	1	1	07/13/15 13:30	pta
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.1			units	0.1	0.1	07/13/15 0:00	pta
pH measured at		1	22.3			C	0.1	0.1	07/13/15 0:00	pta

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/24/15 11:49	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	4.2	B	*	mg/L	2	20	07/15/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/15/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/15/15 0:00	abd
Total Alkalinity		1	4.2	B	*	mg/L	2	20	07/15/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	441		*	mg/L	20	100	07/15/15 13:35	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 6

ACZ Sample ID: **L24527-08**

Date Sampled: 07/21/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	07/22/15 20:57	jjc
Antimony, dissolved	M200.8 ICP-MS	1	0.0011	B	*	mg/L	0.0004	0.002	07/22/15 11:36	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0002	0.001	07/22/15 11:36	mfm
Barium, dissolved	M200.7 ICP	1	0.024		*	mg/L	0.003	0.02	07/22/15 20:57	jjc
Beryllium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.00005	0.0003	07/23/15 18:11	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	07/22/15 20:57	jjc
Boron, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 20:57	jjc
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/22/15 11:36	mfm
Calcium, dissolved	M200.7 ICP	1	166		*	mg/L	0.1	0.5	07/22/15 20:57	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 20:57	jjc
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 20:57	jjc
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 20:57	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	07/22/15 20:57	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/22/15 20:57	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0001	0.0005	07/22/15 11:36	mfm
Lithium, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	07/22/15 20:57	jjc
Magnesium, dissolved	M200.7 ICP	1	1.8		*	mg/L	0.2	1	07/22/15 20:57	jjc
Manganese, dissolved	M200.7 ICP	1	0.081		*	mg/L	0.005	0.03	07/22/15 20:57	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	07/27/15 16:36	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	07/23/15 13:13	jjc
Nickel, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	07/22/15 20:57	jjc
Potassium, dissolved	M200.7 ICP	1	1.2		*	mg/L	0.2	1	07/22/15 20:57	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	07/22/15 20:57	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0003	07/22/15 11:36	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	07/23/15 17:11	jjc
Sodium, dissolved	M200.7 ICP	1	0.7	B	*	mg/L	0.2	1	07/22/15 20:57	jjc
Strontium, dissolved	M200.7 ICP	1	2.040		*	mg/L	0.005	0.03	07/22/15 20:57	jjc
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/22/15 11:36	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	07/22/15 20:57	jjc
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	07/22/15 20:57	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	07/22/15 20:57	jjc
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 20:57	jjc

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 6

ACZ Sample ID: **L24527-08**

Date Sampled: 07/21/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	806		*	umhos/cm	1	10	07/20/15 12:05	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	46			g			07/20/15 0:00	arc
Leachate Volume Added		1	1000			mL			07/20/15 0:00	arc
Leachate Volume Recovered		1	990			g			07/20/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	335		*	mv	1	1	07/20/15 13:24	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.1			units	0.1	0.1	07/20/15 0:00	arc
pH measured at		1	22.5			C	0.1	0.1	07/20/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/24/15 12:03	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	4.9	B	*	mg/L	2	20	07/22/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/22/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/22/15 0:00	abd
Total Alkalinity		1	4.9	B	*	mg/L	2	20	07/22/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	406		*	mg/L	20	100	07/22/15 12:35	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 7

ACZ Sample ID: **L24527-09**

Date Sampled: 07/28/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	B	*	mg/L	0.0002	0.001	07/29/15 21:00	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/29/15 21:00	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/29/15 12:03	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/29/15 12:03	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	07/29/15 21:00	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/29/15 12:03	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	781		*	umhos/cm	1	10	07/27/15 11:16	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	48			g			07/27/15 0:00	arc
Leachate Volume Added		1	1000			mL			07/27/15 0:00	arc
Leachate Volume Recovered		1	908			g			07/27/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	454		*	mv	1	1	07/27/15 13:08	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	07/27/15 0:00	arc
pH measured at		1	20.7			C	0.1	0.1	07/27/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/05/15 11:16	apk
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	4.3	B	*	mg/L	2	20	07/29/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/29/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/29/15 0:00	abd
Total Alkalinity		1	4.3	B	*	mg/L	2	20	07/29/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	398		*	mg/L	20	100	07/29/15 13:50	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 8

ACZ Sample ID: **L24527-10**

Date Sampled: 08/04/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0006	B	*	mg/L	0.0002	0.001	08/05/15 15:26	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	08/05/15 15:26	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/05/15 15:30	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/05/15 15:30	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	08/05/15 15:26	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/05/15 15:30	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	742		*	umhos/cm	1	10	08/03/15 12:05	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	40			g			08/03/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/03/15 0:00	arc
Leachate Volume Recovered		1	913			g			08/03/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	450		*	mv	1	1	08/03/15 13:24	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	08/03/15 0:00	arc
pH measured at		1	21.6			C	0.1	0.1	08/03/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/05/15 11:33	apk
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	3.8	B	*	mg/L	2	20	08/05/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	08/05/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	08/05/15 0:00	abd
Total Alkalinity		1	3.8	B	*	mg/L	2	20	08/05/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	363		*	mg/L	20	100	08/06/15 13:03	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK 9

ACZ Sample ID: **L24527-11**

Date Sampled: 08/11/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0006	B	*	mg/L	0.0002	0.001	08/12/15 18:23	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	08/12/15 18:23	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/12/15 19:59	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/13/15 14:52	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0001	0.0005	08/12/15 18:23	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/12/15 19:59	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	705		*	umhos/cm	1	10	08/10/15 12:05	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	40			g			08/10/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/10/15 0:00	arc
Leachate Volume Recovered		1	915			g			08/10/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	423		*	mv	1	1	08/10/15 13:24	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.3			units	0.1	0.1	08/10/15 0:00	arc
pH measured at		1	21.0			C	0.1	0.1	08/10/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/19/15 11:36	tms
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	3.7	B	*	mg/L	2	20	08/14/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	08/14/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	08/14/15 0:00	abd
Total Alkalinity		1	3.7	B	*	mg/L	2	20	08/14/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	361		*	mg/L	20	100	08/12/15 12:41	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK10

ACZ Sample ID: **L24527-12**

Date Sampled: 08/18/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B	*	mg/L	0.0002	0.001	08/19/15 11:40	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	08/19/15 11:40	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/26/15 16:32	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/26/15 16:32	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0001	0.0005	08/19/15 11:40	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/26/15 16:32	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	754		*	umhos/cm	1	10	08/17/15 12:05	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	40			g			08/17/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/17/15 0:00	arc
Leachate Volume Recovered		1	915			g			08/17/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	395		*	mv	1	1	08/17/15 13:24	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.4			units	0.1	0.1	08/17/15 0:00	arc
pH measured at		1	21.2			C	0.1	0.1	08/17/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO3	SM2310B - Titration	1		U	*	mg/L	10	20	08/27/15 13:33	tms
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	4.0	B	*	mg/L	2	20	08/19/15 0:00	abd
Carbonate as CaCO3		1		U	*	mg/L	2	20	08/19/15 0:00	abd
Hydroxide as CaCO3		1		U	*	mg/L	2	20	08/19/15 0:00	abd
Total Alkalinity		1	4.0	B	*	mg/L	2	20	08/19/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	372		*	mg/L	20	100	08/20/15 12:10	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK11

ACZ Sample ID: **L24527-13**

Date Sampled: 08/25/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	B	*	mg/L	0.0002	0.001	08/26/15 17:34	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	08/26/15 17:34	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/26/15 18:49	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/26/15 18:49	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	08/26/15 17:34	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/26/15 18:49	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	738		*	umhos/cm	1	10	08/24/15 11:45	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	39			g			08/24/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/24/15 0:00	arc
Leachate Volume Recovered		1	915			g			08/24/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	360		*	mv	1	1	08/24/15 13:03	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.3			units	0.1	0.1	08/24/15 0:00	arc
pH measured at		1	21.2			C	0.1	0.1	08/24/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/08/15 15:22	id
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	3.8	B	*	mg/L	2	20	09/02/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/02/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/02/15 0:00	tms
Total Alkalinity		1	3.8	B	*	mg/L	2	20	09/02/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	20	348			mg/L	20	100	08/27/15 13:49	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK12

ACZ Sample ID: **L24527-14**

Date Sampled: 09/01/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	09/04/15 22:16	aeb
Antimony, dissolved	M200.8 ICP-MS	1	0.0005	B	*	mg/L	0.0004	0.002	09/04/15 17:18	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0006	B	*	mg/L	0.0002	0.001	09/04/15 17:18	msh
Barium, dissolved	M200.7 ICP	1	0.032		*	mg/L	0.003	0.02	09/04/15 22:16	aeb
Beryllium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.00005	0.0003	09/04/15 17:18	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	09/04/15 22:16	aeb
Boron, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:16	aeb
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/04/15 17:18	msh
Calcium, dissolved	M200.7 ICP	1	157		*	mg/L	0.1	0.5	09/04/15 22:16	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:16	aeb
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:16	aeb
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:16	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	09/04/15 22:16	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/04/15 22:16	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0001	0.0005	09/04/15 17:18	msh
Lithium, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	09/04/15 22:16	aeb
Magnesium, dissolved	M200.7 ICP	1	0.9	B	*	mg/L	0.2	1	09/04/15 22:16	aeb
Manganese, dissolved	M200.7 ICP	1	0.062		*	mg/L	0.005	0.03	09/04/15 22:16	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	09/29/15 13:37	pta
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	09/04/15 22:16	aeb
Nickel, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	09/04/15 22:16	aeb
Potassium, dissolved	M200.7 ICP	1	1.3		*	mg/L	0.2	1	09/04/15 22:16	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	09/04/15 22:16	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0003	09/04/15 17:18	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	09/04/15 22:16	aeb
Sodium, dissolved	M200.7 ICP	1	0.3	B	*	mg/L	0.2	1	09/04/15 22:16	aeb
Strontium, dissolved	M200.7 ICP	1	2.070		*	mg/L	0.005	0.03	09/04/15 22:16	aeb
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/04/15 17:18	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	09/05/15 10:03	aeb
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	09/04/15 22:16	aeb
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	09/04/15 22:16	aeb
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:16	aeb

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK12

ACZ Sample ID: **L24527-14**

Date Sampled: 09/01/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	707		*	umhos/cm	1	10	09/01/15 11:45	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	36			g			08/31/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/31/15 0:00	arc
Leachate Volume Recovered		1	917			g			08/31/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	436		*	mv	1	1	09/01/15 13:03	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.3			units	0.1	0.1	09/01/15 0:00	arc
pH measured at		1	19.9			C	0.1	0.1	09/01/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/08/15 15:39	id
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	3.9	B	*	mg/L	2	20	09/10/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Total Alkalinity		1	3.9	B	*	mg/L	2	20	09/10/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	20	373		*	mg/L	20	100	09/03/15 11:39	bsu

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK13

ACZ Sample ID: **L24527-15**

Date Sampled: 09/08/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0006	B	*	mg/L	0.0002	0.001	09/11/15 12:31	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/11/15 12:31	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/15/15 11:04	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/15/15 11:04	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0001	0.0005	09/11/15 12:31	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/15/15 11:04	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	734		*	umhos/cm	1	10	09/07/15 11:45	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	34			g			09/07/15 0:00	arc
Leachate Volume Added		1	1000			mL			09/07/15 0:00	arc
Leachate Volume Recovered		1	918			g			09/07/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	462		*	mv	1	1	09/07/15 13:03	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.2			units	0.1	0.1	09/07/15 0:00	arc
pH measured at		1	20.8			C	0.1	0.1	09/07/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/16/15 13:10	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	4.1	B	*	mg/L	2	20	09/10/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Total Alkalinity		1	4.1	B	*	mg/L	2	20	09/10/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	20	376			mg/L	20	100	09/10/15 13:55	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK14

ACZ Sample ID: **L24527-16**

Date Sampled: 09/15/15 17:00

Date Received: 05/22/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B	*	mg/L	0.0002	0.001	09/17/15 18:19	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/17/15 18:19	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/18/15 21:16	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/18/15 21:16	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0001	0.0005	09/17/15 18:19	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/18/15 21:16	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	695		*	umhos/cm	1	10	09/14/15 11:45	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	36			g			09/14/15 0:00	arc
Leachate Volume Added		1	1000			mL			09/14/15 0:00	arc
Leachate Volume Recovered		1	916			g			09/14/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	308		*	mv	1	1	09/14/15 12:48	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.3			units	0.1	0.1	09/14/15 0:00	arc
pH measured at		1	20.6			C	0.1	0.1	09/14/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/25/15 11:58	sck
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	3.7	B	*	mg/L	2	20	09/23/15 0:00	enb
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/23/15 0:00	enb
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/23/15 0:00	enb
Total Alkalinity		1	3.7	B	*	mg/L	2	20	09/23/15 0:00	enb
Sulfate	D516-02/-07 - Turbidimetric	20	351			mg/L	20	100	09/17/15 11:32	mss2

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK15

ACZ Sample ID: **L24527-17**

Date Sampled: 09/22/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B	*	mg/L	0.0002	0.001	09/23/15 12:40	mfm
Cadmium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/23/15 12:40	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/25/15 16:53	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/25/15 16:53	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0001	0.0005	09/23/15 12:40	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/25/15 16:53	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	624		*	umhos/cm	1	10	09/21/15 11:45	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	39			g			09/21/15 0:00	arc
Leachate Volume Added		1	1000			mL			09/21/15 0:00	arc
Leachate Volume Recovered		1	911			g			09/21/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	243		*	mv	1	1	09/21/15 12:48	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.3			units	0.1	0.1	09/21/15 0:00	arc
pH measured at		1	20.0			C	0.1	0.1	09/21/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO3	SM2310B - Titration	1		U	*	mg/L	10	20	09/29/15 13:14	enb
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3		1	3.8	B	*	mg/L	2	20	09/24/15 0:00	enb
Carbonate as CaCO3		1		U	*	mg/L	2	20	09/24/15 0:00	enb
Hydroxide as CaCO3		1		U	*	mg/L	2	20	09/24/15 0:00	enb
Total Alkalinity		1	3.8	B	*	mg/L	2	20	09/24/15 0:00	enb
Sulfate	WG391257	20	***320***			mg/L	20	100	09/28/15 11:41	AREV

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-HCT WEEK16

ACZ Sample ID: **L24527-18**

Date Sampled: 09/29/15 17:00

Date Received: 05/22/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved			*****							NEED
Cadmium, dissolved			*****							NEED
Copper, dissolved			*****							NEED
Iron, dissolved			*****							NEED
Lead, dissolved			*****							NEED
Zinc, dissolved			*****							NEED

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	WG391407	1	***602***		*	umhos/cm	1	10	09/28/15 11:45	AREV
End of leach volumes and mass	D5744-12									
Interstitial Weight			*****							NEED
Leachate Volume Added			*****							NEED
Leachate Volume Recovered			*****							NEED
Oxidation Reduction Potential (Eh)	WG391443	1	***457***		*	mv	1	1	09/28/15 12:48	AREV
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	***6.3***			units	0.1	0.1	09/28/15 0:00	AREV
pH measured at		1	***19.3***			C	0.1	0.1	09/28/15 0:00	AREV

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO3	WG391508		*****							WIP
Alkalinity as CaCO3	SM2320B - Titration									
Bicarbonate as CaCO3			*****							NEED
Carbonate as CaCO3			*****							NEED
Hydroxide as CaCO3			*****							NEED
Total Alkalinity			*****							NEED
Sulfate			*****							NEED



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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: L24527

Date Received: 05/22/2015 09:57

Received By: ddp

Date Printed: 5/26/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?			X
2) Is the Chain of Custody 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 complete and accurate? The sample matrix was entered per the requested quotation.		X	
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples? A change was made in the Sample Identification: Line 5. section prior to ACZ custody.	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 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		

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)	Rad (µR/Hr)	Custody Seal Intact?
NA21846	22	14	N/A

Was ice present in the shipment container(s)?

No - Wet or gel ice was not present in the shipment container(s).

Adrian Brown Consultants, Inc.

ACZ Project ID: L24527

Date Received: 05/22/2015 09:57

Received By: ddp

Date Printed: 5/26/2015

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

¹ The preservation of the following bottle types is not checked at sample receipt: Orange (oil and grease), Purple (total cyanide), Pink (dissolved cyanide), Brown (arsenic speciation), Sterile (fecal coliform), EDTA (sulfite), HCl preserved vial (organics), Na₂S₂O₃ preserved vial (organics), and HG-1631 (total/dissolved mercury by method 1631).

Preliminary

June 25, 2015

Report to:

Jeffrey Winick
Schlumberger Water Services
1875 Lawrence Street
Suite 500
Denver, CO 80202

Bill to:

Accounts Payable
Adrian Brown Consultants, Inc.
130 W 4th Avenue
Denver, CO 80223

cc: Adrian Brown

Project ID:

ACZ Project ID: L24879

Jeffrey Winick:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 12, 2015. This project has been assigned to ACZ's project number, L24879. 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 L24879. 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 July 25, 2015. 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.



Scott Habermehl has reviewed
and approved this report.



Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2000/ST-NAG

ACZ Sample ID: **L24879-01**

Date Sampled: 05/21/15 00:00

Date Received: 06/12/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	10.40		*	mg/L	0.03	0.2	06/18/15 16:50	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	06/20/15 2:25	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0020		*	mg/L	0.0002	0.001	06/20/15 2:25	msh
Barium, dissolved	M200.7 ICP	1	0.130		*	mg/L	0.003	0.02	06/18/15 16:50	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00465		*	mg/L	0.00005	0.0003	06/20/15 2:25	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 16:50	jjc
Boron, dissolved	M200.7 ICP	1	0.06		*	mg/L	0.01	0.05	06/18/15 16:50	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0050		*	mg/L	0.0001	0.0005	06/20/15 2:25	msh
Calcium, dissolved	M200.7 ICP	1	9.5		*	mg/L	0.1	0.5	06/18/15 16:50	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 16:50	jjc
Cobalt, dissolved	M200.7 ICP	1	0.11		*	mg/L	0.01	0.05	06/18/15 16:50	jjc
Copper, dissolved	M200.7 ICP	1	0.32		*	mg/L	0.01	0.05	06/18/15 16:50	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 16:50	jjc
Iron, dissolved	M200.7 ICP	1	94.80		*	mg/L	0.02	0.05	06/19/15 20:02	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.3236		*	mg/L	0.0001	0.0005	06/20/15 2:25	msh
Lithium, dissolved	M200.7 ICP	1	0.032	B	*	mg/L	0.008	0.04	06/18/15 16:50	jjc
Magnesium, dissolved	M200.7 ICP	1	6.8		*	mg/L	0.2	1	06/18/15 16:50	jjc
Manganese, dissolved	M200.7 ICP	1	15.200		*	mg/L	0.005	0.03	06/18/15 16:50	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/16/15 16:36	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/18/15 16:50	jjc
Nickel, dissolved	M200.7 ICP	1	0.052		*	mg/L	0.008	0.04	06/18/15 16:50	jjc
Potassium, dissolved	M200.7 ICP	1	10		*	mg/L	0.2	1	06/18/15 16:50	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 16:50	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0106		*	mg/L	0.0001	0.0003	06/23/15 21:52	msh
Silver, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.03	06/18/15 16:50	jjc
Sodium, dissolved	M200.7 ICP	1	4.7		*	mg/L	0.2	1	06/18/15 16:50	jjc
Strontium, dissolved	M200.7 ICP	1	3.470		*	mg/L	0.005	0.03	06/18/15 16:50	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	06/20/15 2:25	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 16:50	jjc
Titanium, dissolved	M200.7 ICP	1	0.007	B	*	mg/L	0.005	0.03	06/18/15 16:50	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/18/15 16:50	jjc
Zinc, dissolved	M200.7 ICP	1	0.85		*	mg/L	0.01	0.05	06/18/15 16:50	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24518-01.

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2000-2200/-NAG

ACZ Sample ID: **L24879-02**

Date Sampled: 05/21/15 00:00

Date Received: 06/12/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	12.80		*	mg/L	0.03	0.2	06/18/15 16:59	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	06/20/15 2:29	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0009	B	*	mg/L	0.0002	0.001	06/20/15 2:29	msh
Barium, dissolved	M200.7 ICP	1	0.197		*	mg/L	0.003	0.02	06/18/15 16:59	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00514		*	mg/L	0.00005	0.0003	06/20/15 2:29	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 16:59	jjc
Boron, dissolved	M200.7 ICP	1	0.07		*	mg/L	0.01	0.05	06/18/15 16:59	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0013		*	mg/L	0.0001	0.0005	06/20/15 2:29	msh
Calcium, dissolved	M200.7 ICP	1	34.7		*	mg/L	0.1	0.5	06/18/15 16:59	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 16:59	jjc
Cobalt, dissolved	M200.7 ICP	1	0.13		*	mg/L	0.01	0.05	06/18/15 16:59	jjc
Copper, dissolved	M200.7 ICP	1	0.33		*	mg/L	0.01	0.05	06/18/15 16:59	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 16:59	jjc
Iron, dissolved	M200.7 ICP	1	79.90		*	mg/L	0.02	0.05	06/19/15 20:06	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.1197		*	mg/L	0.0001	0.0005	06/20/15 2:29	msh
Lithium, dissolved	M200.7 ICP	1	0.074		*	mg/L	0.008	0.04	06/18/15 16:59	jjc
Magnesium, dissolved	M200.7 ICP	1	30.4		*	mg/L	0.2	1	06/18/15 16:59	jjc
Manganese, dissolved	M200.7 ICP	1	14.800		*	mg/L	0.005	0.03	06/18/15 16:59	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/16/15 16:38	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/18/15 16:59	jjc
Nickel, dissolved	M200.7 ICP	1	0.058		*	mg/L	0.008	0.04	06/18/15 16:59	jjc
Potassium, dissolved	M200.7 ICP	1	17.5		*	mg/L	0.2	1	06/18/15 16:59	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 16:59	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0111		*	mg/L	0.0001	0.0003	06/20/15 2:29	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/18/15 16:59	jjc
Sodium, dissolved	M200.7 ICP	1	5.4		*	mg/L	0.2	1	06/18/15 16:59	jjc
Strontium, dissolved	M200.7 ICP	1	6.280		*	mg/L	0.005	0.03	06/18/15 16:59	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0010		*	mg/L	0.0001	0.0005	06/20/15 2:29	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 16:59	jjc
Titanium, dissolved	M200.7 ICP	1	0.011	B	*	mg/L	0.005	0.03	06/18/15 16:59	jjc
Vanadium, dissolved	M200.7 ICP	1	0.005	B	*	mg/L	0.005	0.03	06/18/15 16:59	jjc
Zinc, dissolved	M200.7 ICP	1	0.32		*	mg/L	0.01	0.05	06/18/15 16:59	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24518-02**Arizona license number: AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2200-2400/STATIC CO-NAG

ACZ Sample ID: **L24879-03**

Date Sampled: 05/21/15 00:00

Date Received: 06/12/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	11.30		*	mg/L	0.03	0.2	06/18/15 17:02	jjc
Antimony, dissolved	M200.8 ICP-MS	1	0.0010	B	*	mg/L	0.0004	0.002	06/20/15 2:32	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0011		*	mg/L	0.0002	0.001	06/20/15 2:32	msh
Barium, dissolved	M200.7 ICP	1	0.149		*	mg/L	0.003	0.02	06/18/15 17:02	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00481		*	mg/L	0.00005	0.0003	06/20/15 2:32	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 17:02	jjc
Boron, dissolved	M200.7 ICP	1	0.06		*	mg/L	0.01	0.05	06/18/15 17:02	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0060		*	mg/L	0.0001	0.0005	06/20/15 2:32	msh
Calcium, dissolved	M200.7 ICP	1	102		*	mg/L	0.1	0.5	06/18/15 17:02	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 17:02	jjc
Cobalt, dissolved	M200.7 ICP	1	0.12		*	mg/L	0.01	0.05	06/18/15 17:02	jjc
Copper, dissolved	M200.7 ICP	1	0.40		*	mg/L	0.01	0.05	06/18/15 17:02	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 17:02	jjc
Iron, dissolved	M200.7 ICP	1	95.30		*	mg/L	0.02	0.05	06/19/15 20:09	jjc
Lead, dissolved	M200.8 ICP-MS	5	0.6585		*	mg/L	0.0005	0.003	06/22/15 16:50	mfm
Lithium, dissolved	M200.7 ICP	1	0.066		*	mg/L	0.008	0.04	06/18/15 17:02	jjc
Magnesium, dissolved	M200.7 ICP	1	21		*	mg/L	0.2	1	06/18/15 17:02	jjc
Manganese, dissolved	M200.7 ICP	1	15.00		*	mg/L	0.005	0.03	06/18/15 17:02	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/16/15 16:40	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/18/15 17:02	jjc
Nickel, dissolved	M200.7 ICP	1	0.051		*	mg/L	0.008	0.04	06/18/15 17:02	jjc
Potassium, dissolved	M200.7 ICP	1	16.4		*	mg/L	0.2	1	06/18/15 17:02	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 17:02	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0102		*	mg/L	0.0001	0.0003	06/20/15 2:32	msh
Silver, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.03	06/18/15 17:02	jjc
Sodium, dissolved	M200.7 ICP	1	4.9		*	mg/L	0.2	1	06/18/15 17:02	jjc
Strontium, dissolved	M200.7 ICP	1	5.860		*	mg/L	0.005	0.03	06/18/15 17:02	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0009		*	mg/L	0.0001	0.0005	06/20/15 2:32	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 17:02	jjc
Titanium, dissolved	M200.7 ICP	1	0.014	B	*	mg/L	0.005	0.03	06/18/15 17:02	jjc
Vanadium, dissolved	M200.7 ICP	1	0.008	B	*	mg/L	0.005	0.03	06/18/15 17:02	jjc
Zinc, dissolved	M200.7 ICP	1	1.0		*	mg/L	0.01	0.05	06/18/15 17:02	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24518-03**Arizona license number: AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2400-2600/STAT COM-NAG

ACZ Sample ID: **L24879-04**

Date Sampled: 05/21/15 00:00

Date Received: 06/12/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	8.60		*	mg/L	0.03	0.2	06/18/15 17:06	jjc
Antimony, dissolved	M200.8 ICP-MS	1	0.0006	B	*	mg/L	0.0004	0.002	06/20/15 2:35	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0009	B	*	mg/L	0.0002	0.001	06/20/15 2:35	msh
Barium, dissolved	M200.7 ICP	1	0.081		*	mg/L	0.003	0.02	06/18/15 17:06	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00515		*	mg/L	0.00005	0.0003	06/20/15 2:35	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 17:06	jjc
Boron, dissolved	M200.7 ICP	1	0.11		*	mg/L	0.01	0.05	06/18/15 17:06	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0036		*	mg/L	0.0001	0.0005	06/20/15 2:35	msh
Calcium, dissolved	M200.7 ICP	1	364		*	mg/L	0.1	0.5	06/18/15 17:06	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 17:06	jjc
Cobalt, dissolved	M200.7 ICP	1	0.07		*	mg/L	0.01	0.05	06/18/15 17:06	jjc
Copper, dissolved	M200.7 ICP	1	0.20		*	mg/L	0.01	0.05	06/18/15 17:06	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 17:06	jjc
Iron, dissolved	M200.7 ICP	1	44.70		*	mg/L	0.02	0.05	06/19/15 20:18	jjc
Lead, dissolved	M200.8 ICP-MS	5	0.5425		*	mg/L	0.0005	0.003	06/22/15 16:56	mfm
Lithium, dissolved	M200.7 ICP	1	0.041		*	mg/L	0.008	0.04	06/18/15 17:06	jjc
Magnesium, dissolved	M200.7 ICP	1	10.9		*	mg/L	0.2	1	06/18/15 17:06	jjc
Manganese, dissolved	M200.7 ICP	1	12.800		*	mg/L	0.005	0.03	06/18/15 17:06	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/16/15 16:42	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/18/15 17:06	jjc
Nickel, dissolved	M200.7 ICP	1	0.029	B	*	mg/L	0.008	0.04	06/18/15 17:06	jjc
Potassium, dissolved	M200.7 ICP	1	8.3		*	mg/L	0.2	1	06/18/15 17:06	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 17:06	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0103		*	mg/L	0.0001	0.0003	06/20/15 2:35	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/18/15 17:06	jjc
Sodium, dissolved	M200.7 ICP	1	4.1		*	mg/L	0.2	1	06/18/15 17:06	jjc
Strontium, dissolved	M200.7 ICP	1	8.720		*	mg/L	0.005	0.03	06/18/15 17:06	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0001	0.0005	06/20/15 2:35	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 17:06	jjc
Titanium, dissolved	M200.7 ICP	1	0.010	B	*	mg/L	0.005	0.03	06/18/15 17:06	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/18/15 17:06	jjc
Zinc, dissolved	M200.7 ICP	1	0.56		*	mg/L	0.01	0.05	06/18/15 17:06	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24518-04**Arizona license number: AZ0102**


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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24879**

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.998	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.09	0.09			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1.0015		1.092	mg/L	109	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1.0015	U	1.091	mg/L	109	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1.0015	U	1.107	mg/L	111	85	115	1	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.02		.02093	mg/L	105	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0012	0.0012			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.01001		.00977	mg/L	98	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.01001	.0004	.01093	mg/L	105	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.01001	.0004	.01076	mg/L	103	70	130	2	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.0534	mg/L	107	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0006	0.0006			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.0501		.04856	mg/L	97	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.0501	U	.05145	mg/L	103	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.0501	U	.05091	mg/L	102	70	130	1	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9872	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				.0034	mg/L		-0.009	0.009			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5		.5229	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5	.045	.557	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5	.045	.5666	mg/L	104	85	115	2	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.04764	mg/L	95	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.00015	0.00015			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.05005		.04614	mg/L	92	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.05005	.00459	.05338	mg/L	97	70	130			E6
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.05005	.00459	.05235	mg/L	95	70	130	2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24879**

Bismuth, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.043	mg/L	102	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.12	0.12			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1		1.046	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1	U	1.053	mg/L	105	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1	U	1.074	mg/L	107	85	115	2	20	

Boron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.001	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				.017	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.537	mg/L	107	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	.04	.554	mg/L	103	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	.04	.566	mg/L	105	85	115	2	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.0502	mg/L	100	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0003	0.0003			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.05005		.04765	mg/L	95	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.05005	.005	.05162	mg/L	93	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.05005	.005	.05145	mg/L	93	70	130	0	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	100		100.55	mg/L	101	95	105			
WG385454ICB	ICB	06/18/15 15:32				.1	mg/L		-0.3	0.3			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	68.01261		71.13	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	68.01261	196	257.2	mg/L	90	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	68.01261	196	258.8	mg/L	92	85	115	1	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.95	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.519	mg/L	104	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	U	.501	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	U	.57	mg/L	114	85	115	13	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24879**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2.002		2.008	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.515	mg/L	103	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	U	.509	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	U	.522	mg/L	104	85	115	3	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.985	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.499		.528	mg/L	106	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.499	U	.529	mg/L	106	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.499	U	.536	mg/L	107	85	115	1	20	

Gallium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.07	mg/L	104	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.3	0.3			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1		1.05	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1	U	1.07	mg/L	107	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1	U	1.07	mg/L	107	85	115	0	20	

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385549													
WG385549ICV	ICV	06/19/15 19:21	II150616-3	2		1.966	mg/L	98	95	105			
WG385549ICB	ICB	06/19/15 19:27				U	mg/L		-0.06	0.06			
WG385549LFB	LFB	06/19/15 19:40	II150617-2	1.0001		1.058	mg/L	106	85	115			
L24525-03AS	AS	06/19/15 19:53	II150617-2	1.0001	U	1.058	mg/L	106	85	115			
L24525-03ASD	ASD	06/19/15 19:56	II150617-2	1.0001	U	1.035	mg/L	103	85	115	2	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.05253	mg/L	105	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0003	0.0003			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.05005		.04917	mg/L	98	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.05005	.9271	1	mg/L	146	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.05005	.9271	.9908	mg/L	127	70	130	1	20	
WG385642													
WG385642ICV	ICV	06/22/15 16:12	MS150601-9	.05		.05017	mg/L	100	90	110			
WG385642ICB	ICB	06/22/15 16:14				U	mg/L		-0.0003	0.0003			
WG385642LFB	LFB	06/22/15 16:16	MS150601-2	.05005		.05037	mg/L	101	85	115			
L24879-03AS	AS	06/22/15 16:52	MS150601-2	.25025	.6585	.889	mg/L	92	70	130			
L24879-03ASD	ASD	06/22/15 16:54	MS150601-2	.25025	.6585	.9025	mg/L	98	70	130	2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24879**

Lithium, dissolved M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.0302	mg/L	102	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.024	0.024			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1.001		1.005	mg/L	100	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1.001	.02	1.039	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1.001	.02	1.045	mg/L	102	85	115	1	20	
Magnesium, dissolved M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	100		97.96	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				.28	mg/L		-0.6	0.6			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	50.00416		49.01	mg/L	98	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	50.00416	4.1	52.82	mg/L	97	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	50.00416	4.1	52.87	mg/L	98	85	115	0	20	
Manganese, dissolved M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9598	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.499		.523	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.499	1.55	1.971	mg/L	84	85	115			M3
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.499	1.55	1.991	mg/L	88	85	115	1	20	
Mercury, dissolved M245.1 CVAA													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385232													
WG385232ICV	ICV	06/16/15 11:50	II150602-3	.005		.00514	mg/L	103	95	105			
WG385232ICB	ICB	06/16/15 11:52				U	mg/L		-0.0002	0.0002			
WG385290													
WG385290LRB	LRB	06/16/15 16:02				.00168	mg/L		-0.00044	0.00044			BF
WG385290LFB	LFB	06/16/15 16:04	II150615-3	.002004		.00188	mg/L	94	85	115			
L24881-03LFM	LFM	06/16/15 16:57	II150615-3	.002004	U	.00185	mg/L	92	85	115			
L24881-03LFMD	LFMD	06/16/15 17:00	II150615-3	.002004	U	.00191	mg/L	95	85	115	3	20	
Molybdenum, dissolved M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.035	mg/L	102	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.06	0.06			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.4995		.521	mg/L	104	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.4995	U	.511	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.4995	U	.511	mg/L	102	85	115	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24879**

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9975	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.024	0.024			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.501		.5302	mg/L	106	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.501	.008	.5222	mg/L	103	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.501	.008	.5303	mg/L	104	85	115	2	20	

Potassium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	20		19.55	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				.2	mg/L		-0.6	0.6			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	100.0125		97.64	mg/L	98	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	100.0125	3.7	103.3	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	100.0125	3.7	103.4	mg/L	100	85	115	0	20	

Scandium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.3	0.3			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.999		1.01	mg/L	101	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.999	U	1	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.999	U	1.01	mg/L	101	85	115	1	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.05131	mg/L	103	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0003	0.0003			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.05015		.04785	mg/L	95	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.05015	.0062	.0587	mg/L	105	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.05015	.0062	.05742	mg/L	102	70	130	2	20	

WG385713

WG385713ICV	ICV	06/23/15 21:42	MS150601-9	.05		.05092	mg/L	102	90	110			
WG385713ICB	ICB	06/23/15 21:45				U	mg/L		-0.0003	0.0003			
WG385713LFB	LFB	06/23/15 21:49	MS150601-2	.05015		.05098	mg/L	102	85	115			
L25035-02AS	AS	06/23/15 22:15	MS150601-2	.05015	U	.05324	mg/L	106	70	130			
L25035-02ASD	ASD	06/23/15 22:24	MS150601-2	.05015	U	.05537	mg/L	110	70	130	4	20	

Silver, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	1.001		.979	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.501		.495	mg/L	99	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.501	U	.358	mg/L	71	85	115			M2 ZA
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.501	U	.359	mg/L	72	85	115	0	20	M2 ZA

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24879**

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	100		97.7	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.6	0.6			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	100.0581		97.43	mg/L	97	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	100.0581	9.3	108.3	mg/L	99	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	100.0581	9.3	109	mg/L	100	85	115	1	20	

Strontium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9798	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.5096	mg/L	102	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	5.23	5.46	mg/L	46	85	115			M3
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	5.23	5.52	mg/L	58	85	115	1	20	M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.05343	mg/L	107	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0003	0.0003			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.0501		.04953	mg/L	99	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.0501	.0023	.05524	mg/L	106	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.0501	.0023	.05493	mg/L	105	70	130	1	20	

Tin, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.934	mg/L	97	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.12	0.12			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1.001		.955	mg/L	95	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1.001	U	.961	mg/L	96	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1.001	U	.941	mg/L	94	85	115	2	20	

Titanium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9827	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.999		1.01	mg/L	101	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.999	.006	1.006	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.999	.006	1.015	mg/L	101	85	115	1	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24879**

Vanadium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.013	mg/L	101	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5		.5169	mg/L	103	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5	U	.5114	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5	U	.5114	mg/L	102	85	115	0	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.988	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.4995		.534	mg/L	107	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.4995	.01	.521	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.4995	.01	.528	mg/L	104	85	115	1	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24879**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24879-01	WG385454	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG385290	Mercury, dissolved	M245.1 CVAA	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [$<$ MDL].
	WG385454	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L24879-02	WG385454	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG385290	Mercury, dissolved	M245.1 CVAA	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [$<$ MDL].
	WG385454	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L24879-03	WG385454	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG385290	Mercury, dissolved	M245.1 CVAA	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [$<$ MDL].
	WG385454	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L24879-04	WG385454	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG385290	Mercury, dissolved	M245.1 CVAA	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [$<$ MDL].
	WG385454	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24879**

Metals Analysis

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP
Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

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

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24879**

Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: L24879

Date Received: 06/12/2015 14:47

Received By: ear

Date Printed: 6/12/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody 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 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?	☒	☐	☐

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
UNKNOWN			

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.

Adrian Brown Consultants, Inc.

ACZ Project ID: L24879

Date Received: 06/12/2015 14:47

Received By: ear

Date Printed: 6/12/2015

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).

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June 24, 2015

Report to:

Jeffrey Winick
Schlumberger Water Services
1875 Lawrence Street
Suite 500
Denver, CO 80202

Bill to:

Accounts Payable
Adrian Brown Consultants, Inc.
130 W 4th Avenue
Denver, CO 80223

cc: Adrian Brown

Project ID:

ACZ Project ID: L24880

Jeffrey Winick:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 12, 2015. This project has been assigned to ACZ's project number, L24880. 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 L24880. 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 July 24, 2015. 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.



Scott Habermehl has reviewed
and approved this report.



Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/1800-2600/KINETIC C-NAG

ACZ Sample ID: **L24880-01**

Date Sampled: 05/21/15 00:00

Date Received: 06/12/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	7.34		*	mg/L	0.03	0.2	06/18/15 17:09	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	06/20/15 0:51	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0009	B	*	mg/L	0.0002	0.001	06/20/15 0:51	msh
Barium, dissolved	M200.7 ICP	1	0.200		*	mg/L	0.003	0.02	06/18/15 17:09	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00381		*	mg/L	0.00005	0.0003	06/20/15 0:51	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 17:09	jjc
Boron, dissolved	M200.7 ICP	1	0.13		*	mg/L	0.01	0.05	06/18/15 17:09	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0026		*	mg/L	0.0001	0.0005	06/20/15 0:51	msh
Calcium, dissolved	M200.7 ICP	1	79.1		*	mg/L	0.1	0.5	06/18/15 17:09	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 17:09	jjc
Cobalt, dissolved	M200.7 ICP	1	0.14		*	mg/L	0.01	0.05	06/18/15 17:09	jjc
Copper, dissolved	M200.7 ICP	1	0.24		*	mg/L	0.01	0.05	06/18/15 17:09	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 17:09	jjc
Iron, dissolved	M200.7 ICP	1	51.80		*	mg/L	0.02	0.05	06/19/15 20:22	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.2684		*	mg/L	0.0001	0.0005	06/20/15 0:51	msh
Lithium, dissolved	M200.7 ICP	1	0.044		*	mg/L	0.008	0.04	06/18/15 17:09	jjc
Magnesium, dissolved	M200.7 ICP	1	16.1		*	mg/L	0.2	1	06/18/15 17:09	jjc
Manganese, dissolved	M200.7 ICP	1	13.300		*	mg/L	0.005	0.03	06/18/15 17:09	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/16/15 16:45	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/18/15 17:09	jjc
Nickel, dissolved	M200.7 ICP	1	0.043		*	mg/L	0.008	0.04	06/18/15 17:09	jjc
Potassium, dissolved	M200.7 ICP	1	10.1		*	mg/L	0.2	1	06/18/15 17:09	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 17:09	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0088		*	mg/L	0.0001	0.0003	06/20/15 0:51	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/18/15 17:09	jjc
Sodium, dissolved	M200.7 ICP	1	3.3		*	mg/L	0.2	1	06/18/15 17:09	jjc
Strontium, dissolved	M200.7 ICP	1	4.550		*	mg/L	0.005	0.03	06/18/15 17:09	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	06/20/15 0:51	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 17:09	jjc
Titanium, dissolved	M200.7 ICP	1	0.008	B	*	mg/L	0.005	0.03	06/18/15 17:09	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/18/15 17:09	jjc
Zinc, dissolved	M200.7 ICP	1	0.51		*	mg/L	0.01	0.05	06/18/15 17:09	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24525-01.**Arizona license number: AZ0102**



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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24880**

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.998	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.09	0.09			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1.0015		1.092	mg/L	109	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1.0015	U	1.091	mg/L	109	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1.0015	U	1.107	mg/L	111	85	115	1	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385561													
WG385561ICV	ICV	06/19/15 23:14	MS150601-9	.02		.02071	mg/L	104	90	110			
WG385561ICB	ICB	06/19/15 23:17				U	mg/L		-0.0012	0.0012			
WG385561LFB	LFB	06/19/15 23:20	MS150601-2	.01001		.01052	mg/L	105	85	115			
L24787-01AS	AS	06/20/15 0:19	MS150601-2	.01001	U	.01072	mg/L	107	70	130			
L24787-01ASD	ASD	06/20/15 0:22	MS150601-2	.01001	U	.01074	mg/L	107	70	130	0	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385561													
WG385561ICV	ICV	06/19/15 23:14	MS150601-9	.05		.05293	mg/L	106	90	110			
WG385561ICB	ICB	06/19/15 23:17				U	mg/L		-0.0006	0.0006			
WG385561LFB	LFB	06/19/15 23:20	MS150601-2	.0501		.05102	mg/L	102	85	115			
L24787-01AS	AS	06/20/15 0:19	MS150601-2	.0501	.001	.05291	mg/L	104	70	130			
L24787-01ASD	ASD	06/20/15 0:22	MS150601-2	.0501	.001	.05542	mg/L	109	70	130	5	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9872	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				.0034	mg/L		-0.009	0.009			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5		.5229	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5	.045	.557	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5	.045	.5666	mg/L	104	85	115	2	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385561													
WG385561ICV	ICV	06/19/15 23:14	MS150601-9	.05		.04762	mg/L	95	90	110			
WG385561ICB	ICB	06/19/15 23:17				U	mg/L		-0.00015	0.00015			
WG385561LFB	LFB	06/19/15 23:20	MS150601-2	.05005		.04716	mg/L	94	85	115			
L24787-01AS	AS	06/20/15 0:19	MS150601-2	.05005	U	.04753	mg/L	95	70	130			
L24787-01ASD	ASD	06/20/15 0:22	MS150601-2	.05005	U	.04812	mg/L	96	70	130	1	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24880**

Bismuth, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.043	mg/L	102	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.12	0.12			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1		1.046	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1	U	1.053	mg/L	105	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1	U	1.074	mg/L	107	85	115	2	20	

Boron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.001	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				.017	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.537	mg/L	107	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	.04	.554	mg/L	103	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	.04	.566	mg/L	105	85	115	2	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385561													
WG385561ICV	ICV	06/19/15 23:14	MS150601-9	.05		.04922	mg/L	98	90	110			
WG385561ICB	ICB	06/19/15 23:17				U	mg/L		-0.0003	0.0003			
WG385561LFB	LFB	06/19/15 23:20	MS150601-2	.05005		.04852	mg/L	97	85	115			
L24787-01AS	AS	06/20/15 0:19	MS150601-2	.05005	U	.04793	mg/L	96	70	130			
L24787-01ASD	ASD	06/20/15 0:22	MS150601-2	.05005	U	.04883	mg/L	98	70	130	2	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	100		100.55	mg/L	101	95	105			
WG385454ICB	ICB	06/18/15 15:32				.1	mg/L		-0.3	0.3			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	68.01261		71.13	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	68.01261	196	257.2	mg/L	90	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	68.01261	196	258.8	mg/L	92	85	115	1	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.95	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.519	mg/L	104	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	U	.501	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	U	.57	mg/L	114	85	115	13	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24880**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2.002		2.008	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.515	mg/L	103	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	U	.509	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	U	.522	mg/L	104	85	115	3	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.985	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.499		.528	mg/L	106	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.499	U	.529	mg/L	106	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.499	U	.536	mg/L	107	85	115	1	20	

Gallium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.07	mg/L	104	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.3	0.3			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1		1.05	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1	U	1.07	mg/L	107	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1	U	1.07	mg/L	107	85	115	0	20	

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385549													
WG385549ICV	ICV	06/19/15 19:21	II150616-3	2		1.966	mg/L	98	95	105			
WG385549ICB	ICB	06/19/15 19:27				U	mg/L		-0.06	0.06			
WG385549LFB	LFB	06/19/15 19:40	II150617-2	1.0001		1.058	mg/L	106	85	115			
L24525-03AS	AS	06/19/15 19:53	II150617-2	1.0001	U	1.058	mg/L	106	85	115			
L24525-03ASD	ASD	06/19/15 19:56	II150617-2	1.0001	U	1.035	mg/L	103	85	115	2	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385561													
WG385561ICV	ICV	06/19/15 23:14	MS150601-9	.05		.05166	mg/L	103	90	110			
WG385561ICB	ICB	06/19/15 23:17				U	mg/L		-0.0003	0.0003			
WG385561LFB	LFB	06/19/15 23:20	MS150601-2	.05005		.05193	mg/L	104	85	115			
L24787-01AS	AS	06/20/15 0:19	MS150601-2	.05005	U	.05088	mg/L	102	70	130			
L24787-01ASD	ASD	06/20/15 0:22	MS150601-2	.05005	U	.05084	mg/L	102	70	130	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24880**

Lithium, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.0302	mg/L	102	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.024	0.024			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1.001		1.005	mg/L	100	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1.001	.02	1.039	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1.001	.02	1.045	mg/L	102	85	115	1	20	
Magnesium, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	100		97.96	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				.28	mg/L		-0.6	0.6			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	50.00416		49.01	mg/L	98	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	50.00416	4.1	52.82	mg/L	97	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	50.00416	4.1	52.87	mg/L	98	85	115	0	20	
Manganese, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9598	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.499		.523	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.499	1.55	1.971	mg/L	84	85	115			M3
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.499	1.55	1.991	mg/L	88	85	115	1	20	
Mercury, dissolved													
M245.1 CVAA													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385232													
WG385232ICV	ICV	06/16/15 11:50	II150602-3	.005		.00514	mg/L	103	95	105			
WG385232ICB	ICB	06/16/15 11:52				U	mg/L		-0.0002	0.0002			
WG385290													
WG385290LRB	LRB	06/16/15 16:02				.00168	mg/L		-0.00044	0.00044			BF
WG385290LFB	LFB	06/16/15 16:04	II150615-3	.002004		.00188	mg/L	94	85	115			
L24881-03LFM	LFM	06/16/15 16:57	II150615-3	.002004	U	.00185	mg/L	92	85	115			
L24881-03LFMD	LFMD	06/16/15 17:00	II150615-3	.002004	U	.00191	mg/L	95	85	115	3	20	
Molybdenum, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.035	mg/L	102	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.06	0.06			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.4995		.521	mg/L	104	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.4995	U	.511	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.4995	U	.511	mg/L	102	85	115	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24880**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9975	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.024	0.024			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.501		.5302	mg/L	106	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.501	.008	.5222	mg/L	103	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.501	.008	.5303	mg/L	104	85	115	2	20	

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	20		19.55	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				.2	mg/L		-0.6	0.6			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	100.0125		97.64	mg/L	98	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	100.0125	3.7	103.3	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	100.0125	3.7	103.4	mg/L	100	85	115	0	20	

Scandium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.3	0.3			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.999		1.01	mg/L	101	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.999	U	1	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.999	U	1.01	mg/L	101	85	115	1	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385561													
WG385561ICV	ICV	06/19/15 23:14	MS150601-9	.05		.05084	mg/L	102	90	110			
WG385561ICB	ICB	06/19/15 23:17				U	mg/L		-0.0003	0.0003			
WG385561LFB	LFB	06/19/15 23:20	MS150601-2	.05015		.04979	mg/L	99	85	115			
L24787-01AS	AS	06/20/15 0:19	MS150601-2	.05015	U	.05077	mg/L	101	70	130			
L24787-01ASD	ASD	06/20/15 0:22	MS150601-2	.05015	U	.05251	mg/L	105	70	130	3	20	

Silver, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	1.001		.979	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.501		.495	mg/L	99	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.501	U	.358	mg/L	71	85	115			M2 ZA
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.501	U	.359	mg/L	72	85	115	0	20	M2 ZA

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24880**

Sodium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	100		97.7	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.6	0.6			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	100.0581		97.43	mg/L	97	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	100.0581	9.3	108.3	mg/L	99	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	100.0581	9.3	109	mg/L	100	85	115	1	20	

Strontium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9798	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.5096	mg/L	102	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	5.23	5.46	mg/L	46	85	115			M3
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	5.23	5.52	mg/L	58	85	115	1	20	M3

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385561													
WG385561ICV	ICV	06/19/15 23:14	MS150601-9	.05		.05177	mg/L	104	90	110			
WG385561ICB	ICB	06/19/15 23:17				U	mg/L		-0.0003	0.0003			
WG385561LFB	LFB	06/19/15 23:20	MS150601-2	.0501		.05134	mg/L	102	85	115			
L24787-01AS	AS	06/20/15 0:19	MS150601-2	.0501	U	.05131	mg/L	102	70	130			
L24787-01ASD	ASD	06/20/15 0:22	MS150601-2	.0501	U	.05072	mg/L	101	70	130	1	20	

Tin, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.934	mg/L	97	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.12	0.12			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1.001		.955	mg/L	95	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1.001	U	.961	mg/L	96	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1.001	U	.941	mg/L	94	85	115	2	20	

Titanium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9827	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.999		1.01	mg/L	101	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.999	.006	1.006	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.999	.006	1.015	mg/L	101	85	115	1	20	

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ACZ Project ID: **L24880**

Vanadium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.013	mg/L	101	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5		.5169	mg/L	103	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5	U	.5114	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5	U	.5114	mg/L	102	85	115	0	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.988	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.4995		.534	mg/L	107	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.4995	.01	.521	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.4995	.01	.528	mg/L	104	85	115	1	20	

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ACZ Project ID: **L24880**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24880-01	WG385454	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG385290	Mercury, dissolved	M245.1 CVAA	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [< MDL].
	WG385454	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24880**

Metals Analysis

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP
Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

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

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24880**

Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: L24880

Date Received: 06/12/2015 14:51

Received By: ear

Date Printed: 6/12/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody 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 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?	☒	☐	☐

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
UNKNOWN			

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.

Adrian Brown Consultants, Inc.

ACZ Project ID: L24880

Date Received: 06/12/2015 14:51

Received By: ear

Date Printed: 6/12/2015

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).

~~124525~~

196-1015

CHAIN of CUSTODY

Address:	1875 LAWRENCE STREET, SUITE 500
	DENVER, CO 80215
Telephone:	+1.303.244.8224

E-mail:	abrown@abch2o.com
Telephone:	(303) 698-9080

Address: 130 W 4th Ave
Denver CO USA 80223
Telephone: (303) 698-9080

YES	
NO	

YES	
NO	X

of Containers
D. Hydro Geo
HCT--PRE

Matrix

CPC14-3/1800-2600/Kinetic C-21-May-15	Rock	8 (kg)	7 X
---------------------------------------	------	--------	-----

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

Please contact Jeff Winick at 303.244.8224 for further instructions

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

DATE:TIME

SH	9.26.15	COF	9/26/15	1000

White - Return with sample. Yellow - Retain for your records.

Page 16 of 16

24880 Chain of Custody

1. **Introduction:** This document serves as a Chain of Custody (CoC) form, used to track the handling, storage, and distribution of evidence from the point of collection to the final destination. It ensures the integrity and chain of custody of the evidence throughout the process.

2. **Collection:** The evidence was collected on [Date] at [Location] by [Collector Name]. The evidence was identified as [Evidence Description].

3. **Storage:** The evidence was stored in [Storage Location] from [Date] to [Date]. The storage was maintained in accordance with [Storage Conditions].

4. **Transfer:** The evidence was transferred from [Collector Name] to [Transfer Recipient Name] on [Date]. The transfer was documented by [Transfer Documentation].

5. **Final Destination:** The evidence was delivered to the final destination, [Final Destination Name], on [Date]. The evidence was received by [Final Destination Name].

6. **Signatures:** The following individuals have signed this Chain of Custody form, indicating their involvement in the handling of the evidence:

[Signature Line 1] [Signature Line 2] [Signature Line 3] [Signature Line 4]

7. **Comments:** [Comments]

8. **Attachments:** [Attachments]

9. **Notes:** [Notes]

10. **Conclusion:** This Chain of Custody form provides a clear and concise record of the handling of the evidence, ensuring its integrity and chain of custody throughout the process.

June 25, 2015

Report to:

Jeffrey Winick
Schlumberger Water Services
1875 Lawrence Street
Suite 500
Denver, CO 80202

Bill to:

Accounts Payable
Adrian Brown Consultants, Inc.
130 W 4th Avenue
Denver, CO 80223

cc: Adrian Brown

Project ID:

ACZ Project ID: L24881

Jeffrey Winick:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 12, 2015. This project has been assigned to ACZ's project number, L24881. 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 L24881. 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 July 25, 2015. 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.



Scott Habermehl has reviewed
and approved this report.



Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-3600/STATIC CO-NAG

ACZ Sample ID: **L24881-01**

Date Sampled: 05/20/15 00:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	11.60		*	mg/L	0.03	0.2	06/20/15 16:00	aeb
Antimony, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0004	0.002	06/20/15 2:45	msh
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	06/20/15 2:45	msh
Barium, dissolved	M200.7 ICP	1	0.056		*	mg/L	0.003	0.02	06/20/15 16:00	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00459		*	mg/L	0.00005	0.0003	06/20/15 2:45	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/20/15 16:00	aeb
Boron, dissolved	M200.7 ICP	1	0.05		*	mg/L	0.01	0.05	06/20/15 16:00	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0050		*	mg/L	0.0001	0.0005	06/20/15 2:45	msh
Calcium, dissolved	M200.7 ICP	1	176		*	mg/L	0.1	0.5	06/20/15 16:00	aeb
Chromium, dissolved	M200.7 ICP	1	0.03	B	*	mg/L	0.01	0.05	06/20/15 16:00	aeb
Cobalt, dissolved	M200.7 ICP	1	0.09		*	mg/L	0.01	0.05	06/20/15 16:00	aeb
Copper, dissolved	M200.7 ICP	1	0.23		*	mg/L	0.01	0.05	06/20/15 16:00	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/20/15 16:00	aeb
Iron, dissolved	M200.7 ICP	1	19.70		*	mg/L	0.02	0.05	06/20/15 16:00	aeb
Lead, dissolved	M200.8 ICP-MS	5	0.8810		*	mg/L	0.0005	0.003	06/22/15 16:58	mfm
Lithium, dissolved	M200.7 ICP	1	0.033	B	*	mg/L	0.008	0.04	06/20/15 16:00	aeb
Magnesium, dissolved	M200.7 ICP	1	37.6		*	mg/L	0.2	1	06/20/15 16:00	aeb
Manganese, dissolved	M200.7 ICP	1	12.600		*	mg/L	0.005	0.03	06/20/15 16:00	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/16/15 16:47	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/20/15 16:00	aeb
Nickel, dissolved	M200.7 ICP	1	0.167		*	mg/L	0.008	0.04	06/20/15 16:00	aeb
Potassium, dissolved	M200.7 ICP	1	26.7		*	mg/L	0.2	1	06/20/15 16:00	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/20/15 16:00	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0062		*	mg/L	0.0001	0.0003	06/20/15 2:45	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/20/15 16:00	aeb
Sodium, dissolved	M200.7 ICP	1	5.4		*	mg/L	0.2	1	06/20/15 16:00	aeb
Strontium, dissolved	M200.7 ICP	1	3.690		*	mg/L	0.005	0.03	06/20/15 16:00	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0023		*	mg/L	0.0001	0.0005	06/20/15 2:45	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/20/15 16:00	aeb
Titanium, dissolved	M200.7 ICP	1	0.014	B	*	mg/L	0.005	0.03	06/20/15 16:00	aeb
Vanadium, dissolved	M200.7 ICP	1	0.009	B	*	mg/L	0.005	0.03	06/20/15 16:00	aeb
Zinc, dissolved	M200.7 ICP	1	1.12		*	mg/L	0.01	0.05	06/20/15 16:00	aeb

Note: This report is for additional analysis of the sample previously reported as ACZ project L24526-01**Arizona license number: AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3600-3800/STATIC CO-NAG

ACZ Sample ID: **L24881-02**

Date Sampled: 05/20/15 00:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	8.63		*	mg/L	0.03	0.2	06/20/15 16:16	aeb
Antimony, dissolved	M200.8 ICP-MS	1	0.0006	B	*	mg/L	0.0004	0.002	06/20/15 2:54	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0002	0.001	06/20/15 2:54	msh
Barium, dissolved	M200.7 ICP	1	0.066		*	mg/L	0.003	0.02	06/20/15 16:16	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00250		*	mg/L	0.00005	0.0003	06/22/15 17:04	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/20/15 16:16	aeb
Boron, dissolved	M200.7 ICP	1	0.06		*	mg/L	0.01	0.05	06/20/15 16:16	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0038		*	mg/L	0.0001	0.0005	06/20/15 2:54	msh
Calcium, dissolved	M200.7 ICP	1	193		*	mg/L	0.1	0.5	06/20/15 16:16	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/20/15 16:16	aeb
Cobalt, dissolved	M200.7 ICP	1	0.05		*	mg/L	0.01	0.05	06/20/15 16:16	aeb
Copper, dissolved	M200.7 ICP	1	0.99		*	mg/L	0.01	0.05	06/20/15 16:16	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/20/15 16:16	aeb
Iron, dissolved	M200.7 ICP	1	24.20		*	mg/L	0.02	0.05	06/20/15 16:16	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.4862		*	mg/L	0.0001	0.0005	06/20/15 2:54	msh
Lithium, dissolved	M200.7 ICP	1	0.010	B	*	mg/L	0.008	0.04	06/20/15 16:16	aeb
Magnesium, dissolved	M200.7 ICP	1	33		*	mg/L	0.2	1	06/20/15 16:16	aeb
Manganese, dissolved	M200.7 ICP	1	20.400		*	mg/L	0.005	0.03	06/20/15 16:16	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/16/15 16:53	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/20/15 16:16	aeb
Nickel, dissolved	M200.7 ICP	1	0.035	B	*	mg/L	0.008	0.04	06/20/15 16:16	aeb
Potassium, dissolved	M200.7 ICP	1	7.5		*	mg/L	0.2	1	06/20/15 16:16	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/20/15 16:16	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0028		*	mg/L	0.0001	0.0003	06/20/15 2:54	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/20/15 16:16	aeb
Sodium, dissolved	M200.7 ICP	1	4.7		*	mg/L	0.2	1	06/20/15 16:16	aeb
Strontium, dissolved	M200.7 ICP	1	4.350		*	mg/L	0.005	0.03	06/20/15 16:16	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	06/20/15 2:54	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/20/15 16:16	aeb
Titanium, dissolved	M200.7 ICP	1	0.012	B	*	mg/L	0.005	0.03	06/20/15 16:16	aeb
Vanadium, dissolved	M200.7 ICP	1	0.008	B	*	mg/L	0.005	0.03	06/20/15 16:16	aeb
Zinc, dissolved	M200.7 ICP	1	1.23		*	mg/L	0.01	0.05	06/20/15 16:16	aeb

Note: This report is for additional analysis of the sample previously reported as ACZ project L24526-02**Arizona license number: AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3800-4000/STATIC CO-NAG

ACZ Sample ID: **L24881-03**

Date Sampled: 05/20/15 00:00

Date Received: 06/12/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	9.40		*	mg/L	0.03	0.2	06/20/15 16:19	aeb
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	06/20/15 2:57	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0002	0.001	06/20/15 2:57	msh
Barium, dissolved	M200.7 ICP	1	0.077		*	mg/L	0.003	0.02	06/20/15 16:19	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00205		*	mg/L	0.00005	0.0003	06/22/15 17:06	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/20/15 16:19	aeb
Boron, dissolved	M200.7 ICP	1	0.06		*	mg/L	0.01	0.05	06/20/15 16:19	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	06/20/15 2:57	msh
Calcium, dissolved	M200.7 ICP	1	196		*	mg/L	0.1	0.5	06/20/15 16:19	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/20/15 16:19	aeb
Cobalt, dissolved	M200.7 ICP	1	0.05		*	mg/L	0.01	0.05	06/20/15 16:19	aeb
Copper, dissolved	M200.7 ICP	1	0.36		*	mg/L	0.01	0.05	06/20/15 16:19	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/20/15 16:19	aeb
Iron, dissolved	M200.7 ICP	1	54.40		*	mg/L	0.02	0.05	06/20/15 16:19	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0841		*	mg/L	0.0001	0.0005	06/20/15 2:57	msh
Lithium, dissolved	M200.7 ICP	1	0.009	B	*	mg/L	0.008	0.04	06/20/15 16:19	aeb
Magnesium, dissolved	M200.7 ICP	1	15.2		*	mg/L	0.2	1	06/20/15 16:19	aeb
Manganese, dissolved	M200.7 ICP	1	1.520		*	mg/L	0.005	0.03	06/20/15 16:19	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/16/15 16:55	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/20/15 16:19	aeb
Nickel, dissolved	M200.7 ICP	1	0.028	B	*	mg/L	0.008	0.04	06/20/15 16:19	aeb
Potassium, dissolved	M200.7 ICP	1	7		*	mg/L	0.2	1	06/20/15 16:19	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/20/15 16:19	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0045		*	mg/L	0.0001	0.0003	06/20/15 2:57	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/20/15 16:19	aeb
Sodium, dissolved	M200.7 ICP	1	5.5		*	mg/L	0.2	1	06/20/15 16:19	aeb
Strontium, dissolved	M200.7 ICP	1	4.430		*	mg/L	0.005	0.03	06/20/15 16:19	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0001	0.0005	06/20/15 2:57	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/20/15 16:19	aeb
Titanium, dissolved	M200.7 ICP	1	0.016	B	*	mg/L	0.005	0.03	06/20/15 16:19	aeb
Vanadium, dissolved	M200.7 ICP	1	0.016	B	*	mg/L	0.005	0.03	06/20/15 16:19	aeb
Zinc, dissolved	M200.7 ICP	1	0.12		*	mg/L	0.01	0.05	06/20/15 16:19	aeb

Note: This report is for additional analysis of the sample previously reported as ACZ project L24526-03**Arizona license number: AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/4000-4200/STATIC COM-NAG

ACZ Sample ID: **L24881-04**

Date Sampled: 05/20/15 00:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	8.84		*	mg/L	0.03	0.2	06/20/15 16:22	aeb
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	06/20/15 3:00	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0002	0.001	06/20/15 3:00	msh
Barium, dissolved	M200.7 ICP	1	0.102		*	mg/L	0.003	0.02	06/20/15 16:22	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00270		*	mg/L	0.00005	0.0003	06/22/15 17:08	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/20/15 16:22	aeb
Boron, dissolved	M200.7 ICP	1	0.05		*	mg/L	0.01	0.05	06/20/15 16:22	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0001	0.0005	06/20/15 3:00	msh
Calcium, dissolved	M200.7 ICP	1	196		*	mg/L	0.1	0.5	06/20/15 16:22	aeb
Chromium, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	06/20/15 16:22	aeb
Cobalt, dissolved	M200.7 ICP	1	0.06		*	mg/L	0.01	0.05	06/20/15 16:22	aeb
Copper, dissolved	M200.7 ICP	1	0.34		*	mg/L	0.01	0.05	06/20/15 16:22	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/20/15 16:22	aeb
Iron, dissolved	M200.7 ICP	1	41.60		*	mg/L	0.02	0.05	06/20/15 16:22	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0558		*	mg/L	0.0001	0.0005	06/20/15 3:00	msh
Lithium, dissolved	M200.7 ICP	1	0.017	B	*	mg/L	0.008	0.04	06/20/15 16:22	aeb
Magnesium, dissolved	M200.7 ICP	1	12.4		*	mg/L	0.2	1	06/20/15 16:22	aeb
Manganese, dissolved	M200.7 ICP	1	1.110		*	mg/L	0.005	0.03	06/20/15 16:22	aeb
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/16/15 17:02	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/20/15 16:22	aeb
Nickel, dissolved	M200.7 ICP	1	0.100		*	mg/L	0.008	0.04	06/20/15 16:22	aeb
Potassium, dissolved	M200.7 ICP	1	11.7		*	mg/L	0.2	1	06/20/15 16:22	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/20/15 16:22	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0056		*	mg/L	0.0001	0.0003	06/20/15 3:00	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/20/15 16:22	aeb
Sodium, dissolved	M200.7 ICP	1	4.3		*	mg/L	0.2	1	06/20/15 16:22	aeb
Strontium, dissolved	M200.7 ICP	1	3.370		*	mg/L	0.005	0.03	06/20/15 16:22	aeb
Thallium, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	06/20/15 3:00	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/20/15 16:22	aeb
Titanium, dissolved	M200.7 ICP	1	0.023	B	*	mg/L	0.005	0.03	06/20/15 16:22	aeb
Vanadium, dissolved	M200.7 ICP	1	0.007	B	*	mg/L	0.005	0.03	06/20/15 16:22	aeb
Zinc, dissolved	M200.7 ICP	1	0.08		*	mg/L	0.01	0.05	06/20/15 16:22	aeb

Note: This report is for additional analysis of the sample previously reported as ACZ project L24526-04**Arizona license number: AZ0102**


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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24881**

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.959	mg/L	98	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.09	0.09			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	1.0015		1.064	mg/L	106	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	1.0015	11.6	12.26	mg/L	66	85	115			M3
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	1.0015	11.6	12.3	mg/L	70	85	115	0	20	M3

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.02		.02093	mg/L	105	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0012	0.0012			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.01001		.00977	mg/L	98	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.01001	.0004	.01093	mg/L	105	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.01001	.0004	.01076	mg/L	103	70	130	2	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.0534	mg/L	107	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0006	0.0006			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.0501		.04856	mg/L	97	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.0501	U	.05145	mg/L	103	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.0501	U	.05091	mg/L	102	70	130	1	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.9608	mg/L	98	95	105			
WG385550ICB	ICB	06/20/15 15:24				.0035	mg/L		-0.009	0.009			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.5		.5193	mg/L	104	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.5	.056	.5652	mg/L	102	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.5	.056	.5714	mg/L	103	85	115	1	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.04764	mg/L	95	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.00015	0.00015			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.05005		.04614	mg/L	92	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.05005	.00459	.05338	mg/L	97	70	130			E6
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.05005	.00459	.05235	mg/L	95	70	130	2	20	

WG385642

WG385642ICV	ICV	06/22/15 16:12	MS150601-9	.05		.04889	mg/L	98	90	110			
WG385642ICB	ICB	06/22/15 16:14				U	mg/L		-0.00015	0.00015			
WG385642LFB	LFB	06/22/15 16:16	MS150601-2	.05005		.05114	mg/L	102	85	115			
L24879-03AS	AS	06/22/15 16:52	MS150601-2	.25025	.0044	.235	mg/L	92	70	130			
L24879-03ASD	ASD	06/22/15 16:54	MS150601-2	.25025	.0044	.24175	mg/L	95	70	130	3	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24881**

Bismuth, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.979	mg/L	99	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.12	0.12			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	1		1.056	mg/L	106	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	1	U	.994	mg/L	99	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	1	U	.994	mg/L	99	85	115	0	20	

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.964	mg/L	98	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.03	0.03			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.5005		.529	mg/L	106	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.5005	.05	.561	mg/L	102	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.5005	.05	.564	mg/L	103	85	115	1	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.0502	mg/L	100	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0003	0.0003			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.05005		.04765	mg/L	95	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.05005	.005	.05162	mg/L	93	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.05005	.005	.05145	mg/L	93	70	130	0	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	100		99.32	mg/L	99	95	105			
WG385550ICB	ICB	06/20/15 15:24				.11	mg/L		-0.3	0.3			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	68.01261		70.72	mg/L	104	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	68.01261	176	237.2	mg/L	90	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	68.01261	176	238.4	mg/L	92	85	115	1	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.922	mg/L	96	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.03	0.03			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.5005		.511	mg/L	102	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.5005	.03	.521	mg/L	98	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.5005	.03	.523	mg/L	99	85	115	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24881**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2.002		1.985	mg/L	99	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.03	0.03			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.5005		.515	mg/L	103	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.5005	.09	.581	mg/L	98	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.5005	.09	.582	mg/L	98	85	115	0	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.943	mg/L	97	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.03	0.03			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.499		.519	mg/L	104	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.499	.23	.731	mg/L	100	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.499	.23	.733	mg/L	101	85	115	0	20	

Gallium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.99	mg/L	100	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.3	0.3			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	1		.99	mg/L	99	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	1	U	1.01	mg/L	101	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	1	U	.99	mg/L	99	85	115	2	20	

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.951	mg/L	98	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.06	0.06			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	1.0001		1.06	mg/L	106	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	1.0001	19.7	19.84	mg/L	14	85	115			M3
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	1.0001	19.7	19.94	mg/L	24	85	115	1	20	M3

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.05253	mg/L	105	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0003	0.0003			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.05005		.04917	mg/L	98	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.05005	.9271	1	mg/L	146	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.05005	.9271	.9908	mg/L	127	70	130	1	20	
WG385642													
WG385642ICV	ICV	06/22/15 16:12	MS150601-9	.05		.05017	mg/L	100	90	110			
WG385642ICB	ICB	06/22/15 16:14				U	mg/L		-0.0003	0.0003			
WG385642LFB	LFB	06/22/15 16:16	MS150601-2	.05005		.05037	mg/L	101	85	115			
L24879-03AS	AS	06/22/15 16:52	MS150601-2	.25025	.6585	.889	mg/L	92	70	130			
L24879-03ASD	ASD	06/22/15 16:54	MS150601-2	.25025	.6585	.9025	mg/L	98	70	130	2	20	

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ACZ Project ID: **L24881**

Lithium, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.973	mg/L	99	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.024	0.024			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	1.001		.9895	mg/L	99	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	1.001	.033	1.043	mg/L	101	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	1.001	.033	1.045	mg/L	101	85	115	0	20	
Magnesium, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	100		96.11	mg/L	96	95	105			
WG385550ICB	ICB	06/20/15 15:24				.25	mg/L		-0.6	0.6			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	50.00416		48.93	mg/L	98	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	50.00416	37.6	84.62	mg/L	94	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	50.00416	37.6	85.14	mg/L	95	85	115	1	20	
Manganese, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.935	mg/L	97	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.015	0.015			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.499		.5111	mg/L	102	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.499	12.6	12.54	mg/L	-12	85	115			M3
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.499	12.6	12.6	mg/L	0	85	115	0	20	M3
Mercury, dissolved													
M245.1 CVAA													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385232													
WG385232ICV	ICV	06/16/15 11:50	II150602-3	.005		.00514	mg/L	103	95	105			
WG385232ICB	ICB	06/16/15 11:52				U	mg/L		-0.0002	0.0002			
WG385290													
WG385290LRB	LRB	06/16/15 16:02				.00168	mg/L		-0.00044	0.00044			BF
WG385290LFB	LFB	06/16/15 16:04	II150615-3	.002004		.00188	mg/L	94	85	115			
L24881-03LFM	LFM	06/16/15 16:57	II150615-3	.002004	U	.00185	mg/L	92	85	115			
L24881-03LFMD	LFMD	06/16/15 17:00	II150615-3	.002004	U	.00191	mg/L	95	85	115	3	20	
Molybdenum, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.988	mg/L	99	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.06	0.06			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.4995		.513	mg/L	103	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.4995	U	.495	mg/L	99	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.4995	U	.495	mg/L	99	85	115	0	20	

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ACZ Project ID: **L24881**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.9895	mg/L	99	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.024	0.024			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.501		.5265	mg/L	105	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.501	.167	.6667	mg/L	100	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.501	.167	.6695	mg/L	100	85	115	0	20	

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	20		19.29	mg/L	96	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.6	0.6			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	100.0125		97.23	mg/L	97	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	100.0125	26.7	124.5	mg/L	98	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	100.0125	26.7	125.1	mg/L	98	85	115	0	20	

Scandium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.98	mg/L	99	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.3	0.3			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.999		1	mg/L	100	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.999	U	1.01	mg/L	101	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.999	U	1.02	mg/L	102	85	115	1	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.05131	mg/L	103	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0003	0.0003			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.05015		.04785	mg/L	95	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.05015	.0062	.0587	mg/L	105	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.05015	.0062	.05742	mg/L	102	70	130	2	20	

Silver, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	1.001		.962	mg/L	96	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.03	0.03			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.501		.487	mg/L	97	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.501	U	.418	mg/L	83	85	115			M2 ZA
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.501	U	.412	mg/L	82	85	115	1	20	M2 ZA

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ACZ Project ID: **L24881**

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	100		96.17	mg/L	96	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.6	0.6			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	100.0581		96.89	mg/L	97	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	100.0581	5.4	103.4	mg/L	98	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	100.0581	5.4	104.6	mg/L	99	85	115	1	20	

Strontium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.9385	mg/L	97	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.015	0.015			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.5005		.5028	mg/L	100	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.5005	3.69	4.033	mg/L	69	85	115			M3
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.5005	3.69	4.004	mg/L	63	85	115	1	20	M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385562													
WG385562ICV	ICV	06/20/15 1:23	MS150601-9	.05		.05343	mg/L	107	90	110			
WG385562ICB	ICB	06/20/15 1:26				U	mg/L		-0.0003	0.0003			
WG385562LFB	LFB	06/20/15 1:30	MS150601-2	.0501		.04953	mg/L	99	85	115			
L24881-01AS	AS	06/20/15 2:48	MS150601-2	.0501	.0023	.05524	mg/L	106	70	130			
L24881-01ASD	ASD	06/20/15 2:51	MS150601-2	.0501	.0023	.05493	mg/L	105	70	130	1	20	

Tin, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.921	mg/L	96	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.12	0.12			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	1.001		.967	mg/L	97	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	1.001	U	.926	mg/L	93	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	1.001	U	.916	mg/L	92	85	115	1	20	

Titanium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.9545	mg/L	98	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.015	0.015			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.999		.9979	mg/L	100	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.999	.014	.9866	mg/L	97	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.999	.014	.9885	mg/L	98	85	115	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24881**

Vanadium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.98	mg/L	99	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.015	0.015			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.5		.5087	mg/L	102	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.5	.009	.5027	mg/L	99	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.5	.009	.5064	mg/L	99	85	115	1	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385550													
WG385550ICV	ICV	06/20/15 15:18	II150616-3	2		1.956	mg/L	98	95	105			
WG385550ICB	ICB	06/20/15 15:24				U	mg/L		-0.03	0.03			
WG385550LFB	LFB	06/20/15 15:37	II150617-2	.4995		.543	mg/L	109	85	115			
L24881-01AS	AS	06/20/15 16:03	II150617-2	.4995	1.12	1.577	mg/L	91	85	115			
L24881-01ASD	ASD	06/20/15 16:06	II150617-2	.4995	1.12	1.557	mg/L	87	85	115	1	20	

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ACZ Project ID: **L24881**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24881-01	WG385550	Aluminum, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Iron, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG385290	Mercury, dissolved	M245.1 CVAA	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [< MDL].
	WG385550	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L24881-02	WG385550	Aluminum, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Iron, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG385290	Mercury, dissolved	M245.1 CVAA	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [< MDL].
	WG385550	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24881**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24881-03	WG385550	Aluminum, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Iron, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG385290	Mercury, dissolved	M245.1 CVAA	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [$<$ MDL].
	WG385550	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L24881-04	WG385550	Aluminum, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Iron, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
		Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG385290	Mercury, dissolved	M245.1 CVAA	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [$<$ MDL].
	WG385550	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24881**

Metals Analysis

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP
Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

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

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24881**

Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: L24881

Date Received: 06/12/2015 14:54

Received By: ear

Date Printed: 6/12/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody 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 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?	☒	☐	☐

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)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
UNKNOWN			

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.

Adrian Brown Consultants, Inc.

ACZ Project ID: L24881

Date Received: 06/12/2015 14:54

Received By: ear

Date Printed: 6/12/2015

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).

Relog 624881

24526
6/6-15

ACZ Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: JEFFREY WINICK

Company: SCHLUMBERGER WATER SERV.

E-mail: JWINICK@SLB.COM

Address: 1875 LAWRENCE STREET, SUITE 500

DENVER, CO 80215

Telephone: +1.303.244.8224

Copy of Report to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: abrown@abch2o.com

Telephone: (303) 698-9080

Invoice to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: lbrown@abch2o.com

Address: 130 W 4th Ave

Denver CO USA 80223

Telephone: (303) 698-9080

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 CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: CO HYDROGEOCHEMICAL STUDY

Project/PO #:

Reporting state for compliance testing:

Sampler's Name: Beverly Furfaro/ALS

Are any samples NRC licensable material? Yes/No

SAMPLE IDENTIFICATION

DATE: TIME

Matrix

of Containers

CO - HYDROLED

CO - HYDROLED

PRE-HCT

CPC14-3/3400-3600/Static Co

20-May-15

rock

1 (kg)

X

CPC14-3/3600-3800/Static Co

20-May-15

rock

1 (kg)

X

CPC14-3/3800-4000/Static Co

20-May-15

rock

1 (kg)

X

CC14-3/4000-4200/Static Co

20-May-15

rock

1 (kg)

X

CPC14-3/3600-4200/Kinetic C

20-May-15

rock

8 (kg)

X

ST 3400

5-26-15

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

MARKS

Please contact Jeff Winick at 303.244.8224 for further instructions

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

RELINQUISHED BY:

DATE: TIME

RECEIVED BY:

DATE: TIME

June 24, 2015

Report to:

Jeffrey Winick
Schlumberger Water Services
1875 Lawrence Street
Suite 500
Denver, CO 80202

Bill to:

Accounts Payable
Adrian Brown Consultants, Inc.
130 W 4th Avenue
Denver, CO 80223

cc: Adrian Brown

Project ID:

ACZ Project ID: L24882

Jeffrey Winick:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 12, 2015. This project has been assigned to ACZ's project number, L24882. 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 L24882. 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 July 24, 2015. 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.



Scott Habermehl has reviewed
and approved this report.



Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3400-4200/KINETIC C-NAG

ACZ Sample ID: **L24882-01**

Date Sampled: 05/20/15 00:00

Date Received: 06/12/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	4.77		*	mg/L	0.03	0.2	06/18/15 17:12	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	06/23/15 6:18	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0002	0.001	06/23/15 6:18	msh
Barium, dissolved	M200.7 ICP	1	0.099		*	mg/L	0.003	0.02	06/18/15 17:12	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00238		*	mg/L	0.00005	0.0003	06/23/15 6:18	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 17:12	jjc
Boron, dissolved	M200.7 ICP	1	0.04	B	*	mg/L	0.01	0.05	06/18/15 17:12	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0016		*	mg/L	0.0001	0.0005	06/23/15 6:18	msh
Calcium, dissolved	M200.7 ICP	1	174		*	mg/L	0.1	0.5	06/18/15 17:12	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/18/15 17:12	jjc
Cobalt, dissolved	M200.7 ICP	1	0.09		*	mg/L	0.01	0.05	06/18/15 17:12	jjc
Copper, dissolved	M200.7 ICP	1	0.48		*	mg/L	0.01	0.05	06/18/15 17:12	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 17:12	jjc
Iron, dissolved	M200.7 ICP	1	12.70		*	mg/L	0.02	0.05	06/19/15 20:25	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.3342		*	mg/L	0.0001	0.0005	06/23/15 6:18	msh
Lithium, dissolved	M200.7 ICP	1	0.016	B	*	mg/L	0.008	0.04	06/18/15 17:12	jjc
Magnesium, dissolved	M200.7 ICP	1	25.2		*	mg/L	0.2	1	06/18/15 17:12	jjc
Manganese, dissolved	M200.7 ICP	1	10.100		*	mg/L	0.005	0.03	06/18/15 17:12	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/16/15 17:04	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/18/15 17:12	jjc
Nickel, dissolved	M200.7 ICP	1	0.053		*	mg/L	0.008	0.04	06/18/15 17:12	jjc
Potassium, dissolved	M200.7 ICP	1	8.3		*	mg/L	0.2	1	06/18/15 17:12	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/18/15 17:12	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0039		*	mg/L	0.0001	0.0003	06/23/15 6:18	msh
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/18/15 17:12	jjc
Sodium, dissolved	M200.7 ICP	1	3		*	mg/L	0.2	1	06/18/15 17:12	jjc
Strontium, dissolved	M200.7 ICP	1	3.280		*	mg/L	0.005	0.03	06/18/15 17:12	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	06/23/15 6:18	msh
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/18/15 17:12	jjc
Titanium, dissolved	M200.7 ICP	1	0.008	B	*	mg/L	0.005	0.03	06/18/15 17:12	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/18/15 17:12	jjc
Zinc, dissolved	M200.7 ICP	1	0.37		*	mg/L	0.01	0.05	06/18/15 17:12	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24527-01.**Arizona license number: AZ0102**

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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24882**

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.998	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.09	0.09			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1.0015		1.092	mg/L	109	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1.0015	U	1.091	mg/L	109	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1.0015	U	1.107	mg/L	111	85	115	1	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385649													
WG385649ICV	ICV	06/23/15 4:45	MS150601-9	.02		.02131	mg/L	107	90	110			
WG385649ICB	ICB	06/23/15 4:48				U	mg/L		-0.0012	0.0012			
WG385649LFB	LFB	06/23/15 4:52	MS150601-2	.01001		.01034	mg/L	103	85	115			
L24867-03AS	AS	06/23/15 5:55	MS150601-2	.01001	U	.01042	mg/L	104	70	130			
L24867-03ASD	ASD	06/23/15 5:58	MS150601-2	.01001	U	.01052	mg/L	105	70	130	1	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385649													
WG385649ICV	ICV	06/23/15 4:45	MS150601-9	.05		.05175	mg/L	104	90	110			
WG385649ICB	ICB	06/23/15 4:48				U	mg/L		-0.0006	0.0006			
WG385649LFB	LFB	06/23/15 4:52	MS150601-2	.0501		.0493	mg/L	98	85	115			
L24867-03AS	AS	06/23/15 5:55	MS150601-2	.0501	U	.05673	mg/L	113	70	130			
L24867-03ASD	ASD	06/23/15 5:58	MS150601-2	.0501	U	.05792	mg/L	116	70	130	2	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9872	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				.0034	mg/L		-0.009	0.009			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5		.5229	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5	.045	.557	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5	.045	.5666	mg/L	104	85	115	2	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385649													
WG385649ICV	ICV	06/23/15 4:45	MS150601-9	.05		.04681	mg/L	94	90	110			
WG385649ICB	ICB	06/23/15 4:48				U	mg/L		-0.00015	0.00015			
WG385649LFB	LFB	06/23/15 4:52	MS150601-2	.05005		.04571	mg/L	91	85	115			
L24867-03AS	AS	06/23/15 5:55	MS150601-2	.05005	U	.04199	mg/L	84	70	130			
L24867-03ASD	ASD	06/23/15 5:58	MS150601-2	.05005	U	.04305	mg/L	86	70	130	2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24882**

Bismuth, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.043	mg/L	102	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.12	0.12			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1		1.046	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1	U	1.053	mg/L	105	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1	U	1.074	mg/L	107	85	115	2	20	

Boron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.001	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				.017	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.537	mg/L	107	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	.04	.554	mg/L	103	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	.04	.566	mg/L	105	85	115	2	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385649													
WG385649ICV	ICV	06/23/15 4:45	MS150601-9	.05		.0494	mg/L	99	90	110			
WG385649ICB	ICB	06/23/15 4:48				U	mg/L		-0.0003	0.0003			
WG385649LFB	LFB	06/23/15 4:52	MS150601-2	.05005		.04743	mg/L	95	85	115			
L24867-03AS	AS	06/23/15 5:55	MS150601-2	.05005	U	.04653	mg/L	93	70	130			
L24867-03ASD	ASD	06/23/15 5:58	MS150601-2	.05005	U	.04724	mg/L	94	70	130	2	20	

Calcium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	100		100.55	mg/L	101	95	105			
WG385454ICB	ICB	06/18/15 15:32				.1	mg/L		-0.3	0.3			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	68.01261		71.13	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	68.01261	196	257.2	mg/L	90	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	68.01261	196	258.8	mg/L	92	85	115	1	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.95	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.519	mg/L	104	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	U	.501	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	U	.57	mg/L	114	85	115	13	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24882**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2.002		2.008	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.515	mg/L	103	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	U	.509	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	U	.522	mg/L	104	85	115	3	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.985	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.499		.528	mg/L	106	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.499	U	.529	mg/L	106	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.499	U	.536	mg/L	107	85	115	1	20	

Gallium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.07	mg/L	104	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.3	0.3			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1		1.05	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1	U	1.07	mg/L	107	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1	U	1.07	mg/L	107	85	115	0	20	

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385549													
WG385549ICV	ICV	06/19/15 19:21	II150616-3	2		1.966	mg/L	98	95	105			
WG385549ICB	ICB	06/19/15 19:27				U	mg/L		-0.06	0.06			
WG385549LFB	LFB	06/19/15 19:40	II150617-2	1.0001		1.058	mg/L	106	85	115			
L24525-03AS	AS	06/19/15 19:53	II150617-2	1.0001	U	1.058	mg/L	106	85	115			
L24525-03ASD	ASD	06/19/15 19:56	II150617-2	1.0001	U	1.035	mg/L	103	85	115	2	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385649													
WG385649ICV	ICV	06/23/15 4:45	MS150601-9	.05		.05066	mg/L	101	90	110			
WG385649ICB	ICB	06/23/15 4:48				U	mg/L		-0.0003	0.0003			
WG385649LFB	LFB	06/23/15 4:52	MS150601-2	.05005		.0498	mg/L	100	85	115			
L24867-03AS	AS	06/23/15 5:55	MS150601-2	.05005	U	.05062	mg/L	101	70	130			
L24867-03ASD	ASD	06/23/15 5:58	MS150601-2	.05005	U	.05293	mg/L	106	70	130	4	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24882**

Lithium, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.0302	mg/L	102	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.024	0.024			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1.001		1.005	mg/L	100	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1.001	.02	1.039	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1.001	.02	1.045	mg/L	102	85	115	1	20	
Magnesium, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	100		97.96	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				.28	mg/L		-0.6	0.6			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	50.00416		49.01	mg/L	98	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	50.00416	4.1	52.82	mg/L	97	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	50.00416	4.1	52.87	mg/L	98	85	115	0	20	
Manganese, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9598	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.499		.523	mg/L	105	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.499	1.55	1.971	mg/L	84	85	115			M3
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.499	1.55	1.991	mg/L	88	85	115	1	20	
Mercury, dissolved													
M245.1 CVAA													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385232													
WG385232ICV	ICV	06/16/15 11:50	II150602-3	.005		.00514	mg/L	103	95	105			
WG385232ICB	ICB	06/16/15 11:52				U	mg/L		-0.0002	0.0002			
WG385290													
WG385290LRB	LRB	06/16/15 16:02				.00168	mg/L		-0.00044	0.00044			BF
WG385290LFB	LFB	06/16/15 16:04	II150615-3	.002004		.00188	mg/L	94	85	115			
L24881-03LFM	LFM	06/16/15 16:57	II150615-3	.002004	U	.00185	mg/L	92	85	115			
L24881-03LFMD	LFMD	06/16/15 17:00	II150615-3	.002004	U	.00191	mg/L	95	85	115	3	20	
Molybdenum, dissolved													
M200.7 ICP													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.035	mg/L	102	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.06	0.06			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.4995		.521	mg/L	104	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.4995	U	.511	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.4995	U	.511	mg/L	102	85	115	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24882**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9975	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.024	0.024			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.501		.5302	mg/L	106	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.501	.008	.5222	mg/L	103	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.501	.008	.5303	mg/L	104	85	115	2	20	

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	20		19.55	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				.2	mg/L		-0.6	0.6			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	100.0125		97.64	mg/L	98	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	100.0125	3.7	103.3	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	100.0125	3.7	103.4	mg/L	100	85	115	0	20	

Scandium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2	mg/L	100	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.3	0.3			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.999		1.01	mg/L	101	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.999	U	1	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.999	U	1.01	mg/L	101	85	115	1	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385649													
WG385649ICV	ICV	06/23/15 4:45	MS150601-9	.05		.05049	mg/L	101	90	110			
WG385649ICB	ICB	06/23/15 4:48				U	mg/L		-0.0003	0.0003			
WG385649LFB	LFB	06/23/15 4:52	MS150601-2	.05015		.0492	mg/L	98	85	115			
L24867-03AS	AS	06/23/15 5:55	MS150601-2	.05015	U	.05657	mg/L	113	70	130			
L24867-03ASD	ASD	06/23/15 5:58	MS150601-2	.05015	U	.05909	mg/L	118	70	130	4	20	

Silver, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	1.001		.979	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.501		.495	mg/L	99	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.501	U	.358	mg/L	71	85	115			M2 ZA
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.501	U	.359	mg/L	72	85	115	0	20	M2 ZA

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24882**

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	100		97.7	mg/L	98	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.6	0.6			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	100.0581		97.43	mg/L	97	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	100.0581	9.3	108.3	mg/L	99	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	100.0581	9.3	109	mg/L	100	85	115	1	20	

Strontium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9798	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5005		.5096	mg/L	102	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5005	5.23	5.46	mg/L	46	85	115			M3
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5005	5.23	5.52	mg/L	58	85	115	1	20	M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385649													
WG385649ICV	ICV	06/23/15 4:45	MS150601-9	.05		.05388	mg/L	108	90	110			
WG385649ICB	ICB	06/23/15 4:48				U	mg/L		-0.0003	0.0003			
WG385649LFB	LFB	06/23/15 4:52	MS150601-2	.0501		.05265	mg/L	105	85	115			
L24867-03AS	AS	06/23/15 5:55	MS150601-2	.0501	U	.05348	mg/L	107	70	130			
L24867-03ASD	ASD	06/23/15 5:58	MS150601-2	.0501	U	.05534	mg/L	110	70	130	3	20	

Tin, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.934	mg/L	97	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.12	0.12			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	1.001		.955	mg/L	95	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	1.001	U	.961	mg/L	96	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	1.001	U	.941	mg/L	94	85	115	2	20	

Titanium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.9827	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.999		1.01	mg/L	101	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.999	.006	1.006	mg/L	100	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.999	.006	1.015	mg/L	101	85	115	1	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24882**

Vanadium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		2.013	mg/L	101	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.015	0.015			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.5		.5169	mg/L	103	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.5	U	.5114	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.5	U	.5114	mg/L	102	85	115	0	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385454													
WG385454ICV	ICV	06/18/15 15:26	II150616-3	2		1.988	mg/L	99	95	105			
WG385454ICB	ICB	06/18/15 15:32				U	mg/L		-0.03	0.03			
WG385454LFB	LFB	06/18/15 15:45	II150617-2	.4995		.534	mg/L	107	85	115			
L24525-03AS	AS	06/18/15 16:41	II150617-2	.4995	.01	.521	mg/L	102	85	115			
L24525-03ASD	ASD	06/18/15 16:44	II150617-2	.4995	.01	.528	mg/L	104	85	115	1	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24882**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24882-01	WG385454	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG385290	Mercury, dissolved	M245.1 CVAA	BF	Target analyte in prep / method blank at or above the acceptance criteria. Target analyte was not detected in the sample [< MDL].
	WG385454	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
		Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24882**

Metals Analysis

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP
Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

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

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24882**

Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: L24882

Date Received: 06/12/2015 15:00

Received By: ear

Date Printed: 6/12/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody 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 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?	☒	☐	☐

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)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
UNKNOWN			

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.

Adrian Brown Consultants, Inc.

ACZ Project ID: L24882

Date Received: 06/12/2015 15:00

Received By: ear

Date Printed: 6/12/2015

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).

~~L-24527~~
LPC 6-15

24882 Chain of Custody

July 02, 2015

Report to:

Jeffrey Winick
Schlumberger Water Services
1875 Lawrence Street
Suite 500
Denver, CO 80202

Bill to:

Accounts Payable
Adrian Brown Consultants, Inc.
130 W 4th Avenue
Denver, CO 80223

cc: Adrian Brown

Project ID:

ACZ Project ID: L24915

Jeffrey Winick:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 12, 2015. This project has been assigned to ACZ's project number, L24915. 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 L24915. 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 August 01, 2015. 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.



Scott Habermehl has reviewed
and approved this report.



Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-2800/STATIC C

ACZ Sample ID: **L24915-01**

Date Sampled: 06/11/15 00:00

Date Received: 06/12/15

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		228			t CaCO3/Kt	0.31	3.1	07/02/15 8:09	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		29.0			t CaCO3/Kt	1	5	07/02/15 8:09	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-199			t CaCO3/Kt			07/02/15 8:09	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.3	B	*	%	0.1	0.5	06/19/15 10:30	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.2	B	*	%	0.1	0.5	06/19/15 10:30	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/19/15 10:30	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	73		*	Kg H2SO4/t	1	1	06/22/15 0:00	cra
pH After Oxidation		1	2.2		*	units	0.1	0.1	06/22/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	2.9		*	%	0.1	0.5	07/01/15 13:32	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	3.26		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur HNO3 Residue		1	0.06	B	*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Organic Residual		1	0.06	B	*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Pyritic Sulfide		1	3.20		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Sulfate		1	4.03		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Total		1	7.29		*	%	0.01	0.1	06/19/15 0:00	cra
Total Sulfur minus Sulfate		1	3.26		*	%	0.01	0.1	06/19/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972				*				06/17/15 9:00	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3				*				06/17/15 9:00	brd

Arizona license number: AZ0102

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2800-3000/STATIC C

ACZ Sample ID: **L24915-02**

Date Sampled: 06/11/15 00:00

Date Received: 06/12/15

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		182			t CaCO3/Kt	0.31	3.1	07/02/15 8:09	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		14.0			t CaCO3/Kt	1	5	07/02/15 8:09	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-168			t CaCO3/Kt			07/02/15 8:09	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.2	B	*	%	0.1	0.5	06/19/15 12:00	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.2	B	*	%	0.1	0.5	06/19/15 12:00	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1		U	*	%	0.1	0.5	06/19/15 12:00	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	64		*	Kg H2SO4/t	1	1	06/22/15 0:00	cra
pH After Oxidation		1	2.2		*	units	0.1	0.1	06/22/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	1.4		*	%	0.1	0.5	07/01/15 13:52	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	1.68		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur HNO3 Residue		1	0.03	B	*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Organic Residual		1	0.03	B	*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Pyritic Sulfide		1	1.65		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Sulfate		1	4.15		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Total		1	5.83		*	%	0.01	0.1	06/19/15 0:00	cra
Total Sulfur minus Sulfate		1	1.68		*	%	0.01	0.1	06/19/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972				*				06/17/15 10:36	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3				*				06/17/15 10:24	brd

Arizona license number: AZ0102

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3000-3200/STATIC C

ACZ Sample ID: **L24915-03**

Date Sampled: 06/11/15 00:00

Date Received: 06/12/15

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		108			t CaCO3/Kt	0.31	3.1	07/02/15 8:09	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		9.0			t CaCO3/Kt	1	5	07/02/15 8:09	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-99.4			t CaCO3/Kt			07/02/15 8:09	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1		U	*	%	0.1	0.5	06/19/15 12:45	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1		U	*	%	0.1	0.5	06/19/15 12:45	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1		U	*	%	0.1	0.5	06/19/15 12:45	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	44		*	Kg H2SO4/t	1	1	06/23/15 0:00	cra
pH After Oxidation		1	2.3		*	units	0.1	0.1	06/23/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	0.9		*	%	0.1	0.5	07/01/15 14:31	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	1.43		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur HNO3 Residue		1	0.02	B	*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Organic Residual		1	0.02	B	*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Pyritic Sulfide		1	1.41		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Sulfate		1	2.04		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Total		1	3.47		*	%	0.01	0.1	06/19/15 0:00	cra
Total Sulfur minus Sulfate		1	1.43		*	%	0.01	0.1	06/19/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972				*				06/17/15 12:12	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3				*				06/17/15 11:48	brd

Arizona license number: AZ0102

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3200-3400/STATIC C

ACZ Sample ID: **L24915-04**

Date Sampled: 06/11/15 00:00

Date Received: 06/12/15

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		110			t CaCO3/Kt	0.31	3.1	07/02/15 8:09	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		14.0			t CaCO3/Kt	1	5	07/02/15 8:09	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-96.0			t CaCO3/Kt			07/02/15 8:09	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/19/15 13:30	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.1	B	*	%	0.1	0.5	06/19/15 13:30	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1		U	*	%	0.1	0.5	06/19/15 13:30	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	38		*	Kg H2SO4/t	1	1	06/23/15 0:00	cra
pH After Oxidation		1	2.4		*	units	0.1	0.1	06/23/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	1.4		*	%	0.1	0.5	07/01/15 14:51	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	1.47		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur HNO3 Residue		1	0.02	B	*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Organic Residual		1	0.02	B	*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Pyritic Sulfide		1	1.45		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Sulfate		1	2.05		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Total		1	3.52		*	%	0.01	0.1	06/19/15 0:00	cra
Total Sulfur minus Sulfate		1	1.47		*	%	0.01	0.1	06/19/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972				*				06/17/15 13:48	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3				*				06/17/15 13:12	brd

Arizona license number: AZ0102

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/4200-4400/STATIC C

ACZ Sample ID: **L24915-05**

Date Sampled: 06/11/15 00:00

Date Received: 06/12/15

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		105			t CaCO3/Kt	0.31	3.1	07/02/15 8:10	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		16.0			t CaCO3/Kt	1	5	07/02/15 8:10	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-89.3			t CaCO3/Kt			07/02/15 8:10	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/19/15 14:15	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.1	B	*	%	0.1	0.5	06/19/15 14:15	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1		U	*	%	0.1	0.5	06/19/15 14:15	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	54		*	Kg H2SO4/t	1	1	06/23/15 0:00	cra
pH After Oxidation		1	2.2		*	units	0.1	0.1	06/23/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	1.6		*	%	0.1	0.5	07/01/15 15:10	pta
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	2.68		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur HNO3 Residue		1	0.03	B	*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Organic Residual		1	0.03	B	*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Pyritic Sulfide		1	2.65		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Sulfate		1	0.69		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Total		1	3.37		*	%	0.01	0.1	06/19/15 0:00	cra
Total Sulfur minus Sulfate		1	2.68		*	%	0.01	0.1	06/19/15 0:00	cra

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972				*				06/17/15 15:24	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3				*				06/17/15 14:36	brd

Arizona license number: AZ0102


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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24915**

Carbon, total (TC)

ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385486													
WG385486PBS	PBS	06/19/15 9:00				U	%		-0.3	0.3			
WG385486LCSS	LCSS	06/19/15 9:45	PCN44492	4.19		4.4	%		80	120			
L24915-01DUP	DUP	06/19/15 11:15			.3	.3	%				0	20	RA

Carbon, total inorganic (TIC)

ASA No. 9 29-2.2.4 (calc TC - TOC)

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385486													
WG385486PBS	PBS	06/19/15 9:00				U	%		-0.3	0.3			
L24915-01DUP	DUP	06/19/15 11:15			.2	.3	%				40	20	RA

Carbon, total organic (TOC)

ASA No.9 29-2.2.4 Combustion/IR

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385486													
WG385486PBS	PBS	06/19/15 9:00				U	%		-0.3	0.3			
L24915-01DUP	DUP	06/19/15 11:15			.1	U	%				200	20	RA

Net Acid Generation

Single NAG - EGI 2002

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG385484													
L24915-01DUP	DUP	06/22/15 15:00			73	71	g H ₂ SO ₄ /				3	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
WG385765													
WG385765PBS	PBS	07/01/15 11:53				U	%		-0.2	0.2			
WG385765LCSS	LCSS	07/01/15 12:13	PCN47543	4.96		5	%	101	80	120			
L24913-02DUP	DUP	07/01/15 13:12			2.7	2.58	%				5	20	
L24915-02MS	MS	07/01/15 14:11	SI141024-1	1	1.4	2.3	%	90	70	130			

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
WG385439													
L24853-01DUP	DUP	06/18/15 19:00			.02	.02	%				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
WG385439													
L24853-01DUP	DUP	06/18/15 19:00			.44	.4	%				10	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
WG385439													
L24853-01DUP	DUP	06/18/15 19:00			.02	.05	%				86	20	RA

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24915**

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
WG385439													
WG385439PBS	PBS	06/18/15 9:00				U	%		-0.03	0.03			
WG385439LCSS	LCSS	06/18/15 11:30	PCN44492	4.07		4.49	%	110	80	120			
L24853-01MS	MS	06/18/15 16:30	PCN47988	1.1	.48	1.53	%	95	80	120			
L24853-01DUP	DUP	06/18/15 19:00			.48	.47	%				2	20	

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
WG385439													
L24853-01DUP	DUP	06/18/15 19:00			.46	.42	%				9	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24915**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24915-01	WG385486	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385439	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration 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 sample concentration is too low for accurate evaluation (< 10x MDL).
L24915-02	WG385486	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385439	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration 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 sample concentration is too low for accurate evaluation (< 10x MDL).

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24915**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24915-03	WG385486	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385439	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration 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 sample concentration is too low for accurate evaluation (< 10x MDL).
L24915-04	WG385486	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
	WG385439	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration 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 sample concentration is too low for accurate evaluation (< 10x MDL).

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24915**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L24915-05	WG385486	Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	Q6	Sample was received above recommended temperature.
			ASA No. 9 29-2.2.4 (calc TC - TOC)	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No. 9 29-2.2.4 (calc TC - TOC)	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	Q6	Sample was received above recommended temperature.
			ASA No.9 29-2.2.4 Combustion/IR	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
			ASA No.9 29-2.2.4 Combustion/IR	ZQ	Analyte was not evaluated in the laboratory control standard. Either the analyte is not included in the scope of the analytical method or a commercial standard containing the analyte is not available.
		WG385439	Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD	RA
	Sulfur Sulfate		M600/2-78-054 3.2.4-MOD	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Adrian Brown Consultants, Inc.

ACZ Project ID: **L24915**

Soil Analysis

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.

Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
NAG	Single NAG - EGI 2002
Neutralization Potential as CaCO ₃	M600/2-78-054 3.2.3
pH After Oxidation	Single NAG - EGI 2002
Sulfur HCl Residue	M600/2-78-054 3.2.4-MOD
Sulfur HNO ₃ Residue	M600/2-78-054 3.2.4-MOD
Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD
Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4-MOD
Sulfur Sulfate	M600/2-78-054 3.2.4-MOD
Sulfur Total	M600/2-78-054 3.2.4-MOD
Total Sulfur minus Sulfate	M600/2-78-054 3.2.4-MOD

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

Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR
NAG	Single NAG - EGI 2002
Neutralization Potential as CaCO ₃	M600/2-78-054 3.2.3
pH After Oxidation	Single NAG - EGI 2002
Sulfur HCl Residue	M600/2-78-054 3.2.4-MOD
Sulfur HNO ₃ Residue	M600/2-78-054 3.2.4-MOD
Sulfur Organic Residual	M600/2-78-054 3.2.4-MOD
Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4-MOD
Sulfur Sulfate	M600/2-78-054 3.2.4-MOD
Sulfur Total	M600/2-78-054 3.2.4-MOD
Total Sulfur minus Sulfate	M600/2-78-054 3.2.4-MOD

Adrian Brown Consultants, Inc.

ACZ Project ID: L24915

Date Received: 06/12/2015 09:50

Received By: ear

Date Printed: 6/16/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody 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 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?	☒	☐	☐

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)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA21960	17.3	22	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.

Adrian Brown Consultants, Inc.

ACZ Project ID: L24915

Date Received: 06/12/2015 09:50

Received By: ear

Date Printed: 6/16/2015

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).

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC

ACZ Sample ID: **L24916-01**

Date Sampled: 06/11/15 00:00

Date Received: 06/12/15

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		168			t CaCO3/Kt	0.31	3.1	10/13/15 0:00	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		10.0			t CaCO3/Kt	1	5	10/13/15 0:00	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		-158			t CaCO3/Kt			10/13/15 0:00	calc
Carbon, total (TC)	ASA No.9 29-2.2.4 Combustion/IR	1	0.1	B	*	%	0.1	0.5	06/19/15 15:00	cra
Carbon, total inorganic (TIC)	ASA No. 9 29-2.2.4 (calc TC - TOC)	1	0.1	B	*	%	0.1	0.5	06/19/15 15:00	cra
Carbon, total organic (TOC)	ASA No.9 29-2.2.4 Combustion/IR	1		U	*	%	0.1	0.5	06/19/15 15:00	cra
Net Acid Generation Procedure	Single NAG - EGI 2002									
NAG		1	51		*	Kg H2SO4/t	1	1	06/23/15 0:00	cra
pH After Oxidation		1	2.3		*	units	0.1	0.1	06/23/15 0:00	cra
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	1	1		*	%	0.1	0.5	07/01/15 15:50	pta
Sieve- 63 um (230 mesh)	ASA No.9, 15-4.2.2	1	2.4		*	% Passing	0.1	0.5	06/17/15 13:00	brd
Sieve- 125 um (120 mesh)	ASA No.9, 15-4.2.2	1	4.1		*	% Passing	0.1	0.5	06/17/15 13:00	brd
Sieve- 250 um (60 mesh)	ASA No.9, 15-4.2.2	1	5.9		*	% Passing	0.1	0.5	06/17/15 13:00	brd
Sieve- 500 um (35 mesh)	ASA No.9, 15-4.2.2	1	9		*	% Passing	0.1	0.5	06/17/15 13:00	brd
Sieve- 850 um (20 mesh)	ASA No.9, 15-4.2.2	1	13.1		*	% Passing	0.1	0.5	06/17/15 13:00	brd
Sieve- 2000 um (2.0 mm)	ASA No.9, 15-4.2.2	1	24.4		*	% Passing	0.1	0.5	06/17/15 13:00	brd
Sieve- 4000 um (4.0mm)	ASA No.9, 15-4.2.2	1	51		*	% Passing	0.1	0.5	06/17/15 13:00	brd
Sulfur Forms	M600/2-78-054 3.2.4-MOD									
Sulfur HCl Residue		1	2.35		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur HNO3 Residue		1	0.10		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Organic Residual		1	0.10		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Pyritic Sulfide		1	2.25		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Sulfate		1	3.02		*	%	0.01	0.1	06/19/15 0:00	cra
Sulfur Total		1	5.37		*	%	0.01	0.1	06/19/15 0:00	cra
Total Sulfur minus Sulfate		1	2.35		*	%	0.01	0.1	06/19/15 0:00	cra

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC

ACZ Sample ID: **L24916-01**

Date Sampled: 06/11/15 00:00

Date Received: 06/12/15

Sample Matrix: Soil

Soil Preparation

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972				*				06/17/15 17:00	brd
Crush and Pulverize (Ring & Puck)	EPA-600/2-78-054 3.1.3				*				06/17/15 16:00	brd
Humidity Cell Test	D5744-12									
Grain Size			*****							WIP
Sample Weight			*****							WIP

Arizona license number: AZ0102

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 0

ACZ Sample ID: **L24916-02**

Date Sampled: 06/24/15 17:00

Date Received: 06/12/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	06/25/15 22:07	jjc
Antimony, dissolved	M200.8 ICP-MS	1	0.0009	B	*	mg/L	0.0004	0.002	06/24/15 19:20	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0010		*	mg/L	0.0002	0.001	06/24/15 19:20	mfm
Barium, dissolved	M200.7 ICP	1	0.053		*	mg/L	0.003	0.02	06/25/15 22:07	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00011	B	*	mg/L	0.00005	0.0003	06/25/15 22:29	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/25/15 22:07	jjc
Boron, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	06/25/15 22:07	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0001	0.0005	06/24/15 19:20	mfm
Calcium, dissolved	M200.7 ICP	1	376		*	mg/L	0.1	0.5	06/25/15 22:07	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/25/15 22:07	jjc
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/25/15 22:07	jjc
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/25/15 22:07	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/25/15 22:07	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	06/25/15 22:07	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	06/24/15 19:20	mfm
Lithium, dissolved	M200.7 ICP	1	0.042		*	mg/L	0.008	0.04	06/25/15 22:07	jjc
Magnesium, dissolved	M200.7 ICP	1	5.4		*	mg/L	0.2	1	06/25/15 22:07	jjc
Manganese, dissolved	M200.7 ICP	1	0.412		*	mg/L	0.005	0.03	06/25/15 22:07	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/26/15 12:57	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/25/15 22:07	jjc
Nickel, dissolved	M200.7 ICP	1	0.008	B	*	mg/L	0.008	0.04	06/25/15 22:07	jjc
Potassium, dissolved	M200.7 ICP	1	7.2		*	mg/L	0.2	1	06/25/15 22:07	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/25/15 22:07	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0003	06/24/15 19:20	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	06/25/15 22:07	jjc
Sodium, dissolved	M200.7 ICP	1	22.6		*	mg/L	0.2	1	06/25/15 22:07	jjc
Strontium, dissolved	M200.7 ICP	1	3.370		*	mg/L	0.005	0.03	06/25/15 22:07	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	06/24/15 19:20	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/25/15 22:07	jjc
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/25/15 22:07	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/25/15 22:07	jjc
Zinc, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.01	0.05	06/25/15 22:07	jjc

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 0

ACZ Sample ID: **L24916-02**

Date Sampled: 06/24/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1520		*	umhos/cm	1	10	06/22/15 16:00	rjv
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	73			g			07/02/15 0:00	pta
Leachate Volume Added		1	1000			mL			07/02/15 0:00	pta
Leachate Volume Recovered		1	926			g			07/02/15 0:00	pta
Oxidation Reduction Potential (Eh)	D1498-08	1	379		*	mv	1	1	06/22/15 15:50	rjv
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.6			units	0.1	0.1	06/22/15 0:00	rjv
pH measured at		1	21.0			C	0.1	0.1	06/22/15 0:00	rjv

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1	10	B	*	mg/L	10	20	06/25/15 11:03	id
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	5.0	B	*	mg/L	2	20	06/25/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	06/25/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	06/25/15 0:00	abd
Total Alkalinity		1	5.0	B	*	mg/L	2	20	06/25/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	25	915		*	mg/L	25	125	06/26/15 12:26	bsu

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 1

ACZ Sample ID: **L24916-03**

Date Sampled: 06/30/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	07/02/15 12:01	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	07/01/15 22:47	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0007	B	*	mg/L	0.0002	0.001	07/01/15 22:47	mfm
Barium, dissolved	M200.7 ICP	1	0.019	B	*	mg/L	0.003	0.02	07/02/15 12:01	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00015	B	*	mg/L	0.00005	0.0003	07/01/15 22:47	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	07/02/15 12:01	jjc
Boron, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	07/07/15 2:18	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	07/01/15 22:47	mfm
Calcium, dissolved	M200.7 ICP	1	302		*	mg/L	0.1	0.5	07/02/15 12:01	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/07/15 2:18	jjc
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/02/15 12:01	jjc
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/02/15 12:01	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	07/02/15 12:01	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/02/15 12:01	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0022		*	mg/L	0.0001	0.0005	07/01/15 22:47	mfm
Lithium, dissolved	M200.7 ICP	1	0.017	B	*	mg/L	0.008	0.04	07/02/15 12:01	jjc
Magnesium, dissolved	M200.7 ICP	1	4.2		*	mg/L	0.2	1	07/02/15 12:01	jjc
Manganese, dissolved	M200.7 ICP	1	0.391		*	mg/L	0.005	0.03	07/02/15 12:01	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	07/02/15 10:00	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	07/02/15 12:01	jjc
Nickel, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	07/02/15 12:01	jjc
Potassium, dissolved	M200.7 ICP	1	2.9		*	mg/L	0.2	1	07/02/15 12:01	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	07/02/15 12:01	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0006		*	mg/L	0.0001	0.0003	07/01/15 22:47	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	07/07/15 2:18	jjc
Sodium, dissolved	M200.7 ICP	1	10.5		*	mg/L	0.2	1	07/02/15 12:01	jjc
Strontium, dissolved	M200.7 ICP	1	3.730		*	mg/L	0.005	0.03	07/02/15 12:01	jjc
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	07/01/15 22:47	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	07/07/15 2:18	jjc
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	07/02/15 12:01	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	07/02/15 12:01	jjc
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/02/15 12:01	jjc

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 1

ACZ Sample ID: **L24916-03**

Date Sampled: 06/30/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1420		*	umhos/cm	1	10	06/29/15 15:51	cra
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	58			g			07/02/15 0:00	pta/cra
Leachate Volume Added		1	1000			mL			07/02/15 0:00	pta/cra
Leachate Volume Recovered		1	916			g			07/02/15 0:00	pta/cra
Oxidation Reduction Potential (Eh)	D1498-08	1	473		*	mv	1	1	06/29/15 15:40	cra
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.8			units	0.1	0.1	06/29/15 0:00	cra
pH measured at		1	22.0			C	0.1	0.1	06/29/15 0:00	cra

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/02/15 10:28	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	2.7	B	*	mg/L	2	20	07/01/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/01/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/01/15 0:00	tms
Total Alkalinity		1	2.7	B	*	mg/L	2	20	07/01/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	50	874		*	mg/L	50	250	07/02/15 13:28	bsu

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 2

ACZ Sample ID: **L24916-04**

Date Sampled: 07/07/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B	*	mg/L	0.0002	0.001	07/08/15 17:40	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	07/08/15 17:40	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/09/15 19:53	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/09/15 19:53	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0027		*	mg/L	0.0001	0.0005	07/08/15 17:40	mfm
Zinc, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	07/09/15 19:53	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1440		*	umhos/cm	1	10	07/06/15 13:48	cra
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	67			g			07/06/15 0:00	pta
Leachate Volume Added		1	1000			mL			07/06/15 0:00	pta
Leachate Volume Recovered		1	918			g			07/06/15 0:00	pta
Oxidation Reduction Potential (Eh)	D1498-08	1	398		*	mv	1	1	07/06/15 11:40	cra
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	07/06/15 0:00	cra
pH measured at		1	22.3			C	0.1	0.1	07/06/15 0:00	cra

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/15/15 11:49	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	2.6	B	*	mg/L	2	20	07/08/15 0:00	enb
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/08/15 0:00	enb
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/08/15 0:00	enb
Total Alkalinity		1	2.6	B	*	mg/L	2	20	07/08/15 0:00	enb
Sulfate	D516-02/-07 - Turbidimetric	50	824		*	mg/L	50	250	07/08/15 15:09	mss2

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 3

ACZ Sample ID: **L24916-05**

Date Sampled: 07/14/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0002	0.001	07/16/15 20:21	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	07/16/15 20:21	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/15/15 15:42	aeb
Iron, dissolved	M200.7 ICP	1	0.02	B	*	mg/L	0.02	0.05	07/15/15 15:42	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0034		*	mg/L	0.0001	0.0005	07/16/15 20:21	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/15/15 15:42	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1380		*	umhos/cm	1	10	07/13/15 13:21	pta
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	61			g			07/14/15 0:00	arc
Leachate Volume Added		1	1000			mL			07/14/15 0:00	arc
Leachate Volume Recovered		1	925			g			07/14/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	354		*	mv	1	1	07/13/15 14:00	pta
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.8			units	0.1	0.1	07/13/15 0:00	pta
pH measured at		1	22.3			C	0.1	0.1	07/13/15 0:00	pta

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/24/15 12:30	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	4.4	B	*	mg/L	2	20	07/15/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/15/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/15/15 0:00	abd
Total Alkalinity		1	4.4	B	*	mg/L	2	20	07/15/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	100	738		*	mg/L	100	500	07/15/15 13:11	bsu

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 4

ACZ Sample ID: **L24916-06**

Date Sampled: 07/21/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0002	0.001	07/22/15 11:39	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	07/22/15 11:39	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 21:00	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/22/15 21:00	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0022		*	mg/L	0.0001	0.0005	07/22/15 11:39	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/22/15 21:00	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1330		*	umhos/cm	1	10	07/20/15 12:54	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	47			g			07/21/15 0:00	arc
Leachate Volume Added		1	1000			mL			07/21/15 0:00	arc
Leachate Volume Recovered		1	1011			g			07/21/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	349		*	mv	1	1	07/20/15 14:00	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.8			units	0.1	0.1	07/20/15 0:00	arc
pH measured at		1	22.4			C	0.1	0.1	07/20/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	07/24/15 12:44	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	3.0	B	*	mg/L	2	20	07/22/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/22/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/22/15 0:00	abd
Total Alkalinity		1	3.0	B	*	mg/L	2	20	07/22/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	20	756		*	mg/L	20	100	07/22/15 12:28	bsu

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 5

ACZ Sample ID: **L24916-07**

Date Sampled: 07/28/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	07/29/15 21:03	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	07/29/15 21:03	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/29/15 12:06	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	07/29/15 12:06	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0030		*	mg/L	0.0001	0.0005	07/29/15 21:03	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	07/29/15 12:06	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1210		*	umhos/cm	1	10	07/27/15 12:05	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	45			g			07/28/15 0:00	arc
Leachate Volume Added		1	1000			mL			07/28/15 0:00	arc
Leachate Volume Recovered		1	934			g			07/28/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	479		*	mv	1	1	07/27/15 13:47	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.7			units	0.1	0.1	07/27/15 0:00	arc
pH measured at		1	20.4			C	0.1	0.1	07/27/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/05/15 11:51	apk
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	07/29/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/29/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/29/15 0:00	abd
Total Alkalinity		1		U	*	mg/L	2	20	07/29/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	50	654		*	mg/L	50	250	07/29/15 13:51	bsu

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 6

ACZ Sample ID: **L24916-08**

Date Sampled: 08/04/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	08/05/15 15:33	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	08/05/15 15:29	mfm
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	08/05/15 15:29	mfm
Barium, dissolved	M200.7 ICP	1	0.018	B	*	mg/L	0.003	0.02	08/05/15 15:33	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00018	B	*	mg/L	0.00005	0.0003	08/05/15 15:29	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	08/05/15 15:33	jjc
Boron, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/05/15 15:33	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	08/05/15 15:29	mfm
Calcium, dissolved	M200.7 ICP	1	229		*	mg/L	0.1	0.5	08/05/15 15:33	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/05/15 15:33	jjc
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/05/15 15:33	jjc
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/05/15 15:33	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	08/05/15 15:33	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/05/15 15:33	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0030		*	mg/L	0.0001	0.0005	08/05/15 15:29	mfm
Lithium, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	08/05/15 15:33	jjc
Magnesium, dissolved	M200.7 ICP	1	1.2		*	mg/L	0.2	1	08/05/15 15:33	jjc
Manganese, dissolved	M200.7 ICP	1	0.400		*	mg/L	0.005	0.03	08/05/15 15:33	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	08/14/15 11:51	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	08/05/15 15:33	jjc
Nickel, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	08/05/15 15:33	jjc
Potassium, dissolved	M200.7 ICP	1	1.3		*	mg/L	0.2	1	08/05/15 15:33	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	08/05/15 15:33	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0004		*	mg/L	0.0001	0.0003	08/05/15 15:29	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	08/05/15 15:33	jjc
Sodium, dissolved	M200.7 ICP	1	0.6	B	*	mg/L	0.2	1	08/05/15 15:33	jjc
Strontium, dissolved	M200.7 ICP	1	3.470		*	mg/L	0.005	0.03	08/05/15 15:33	jjc
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	08/05/15 15:29	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	08/05/15 15:33	jjc
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	08/05/15 15:33	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	08/05/15 15:33	jjc
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/05/15 15:33	jjc

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 6

ACZ Sample ID: **L24916-08**

Date Sampled: 08/04/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1030		*	umhos/cm	1	10	08/03/15 12:54	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	40			g			08/04/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/04/15 0:00	arc
Leachate Volume Recovered		1	944			g			08/04/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	462		*	mv	1	1	08/03/15 14:00	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	5.8			units	0.1	0.1	08/03/15 0:00	arc
pH measured at		1	21.5			C	0.1	0.1	08/03/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/05/15 12:25	apk
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	08/05/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	08/05/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	08/05/15 0:00	abd
Total Alkalinity		1		U	*	mg/L	2	20	08/05/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	50	498		*	mg/L	50	250	08/06/15 13:09	bsu

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 7

ACZ Sample ID: **L24916-09**

Date Sampled: 08/11/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	08/12/15 18:26	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	08/12/15 18:26	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/12/15 20:02	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/13/15 14:56	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0041		*	mg/L	0.0001	0.0005	08/12/15 18:26	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/12/15 20:02	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1060		*	umhos/cm	1	10	08/10/15 12:54	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	67			g			08/11/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/11/15 0:00	arc
Leachate Volume Recovered		1	913			g			08/11/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	441		*	mv	1	1	08/10/15 14:00	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	08/10/15 0:00	arc
pH measured at		1	20.6			C	0.1	0.1	08/10/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/19/15 11:52	tms
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	08/14/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	08/14/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	08/14/15 0:00	abd
Total Alkalinity		1		U	*	mg/L	2	20	08/14/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	50	575		*	mg/L	50	250	08/12/15 12:41	bsu

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 8

ACZ Sample ID: **L24916-10**

Date Sampled: 08/18/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	08/19/15 11:43	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	08/19/15 11:43	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/26/15 16:35	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/26/15 16:35	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0041		*	mg/L	0.0001	0.0005	08/19/15 11:43	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/26/15 16:35	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	1050		*	umhos/cm	1	10	08/17/15 12:54	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	39			g			08/18/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/18/15 0:00	arc
Leachate Volume Recovered		1	940			g			08/18/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	449		*	mv	1	1	08/17/15 14:00	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.1			units	0.1	0.1	08/17/15 0:00	arc
pH measured at		1	21.3			C	0.1	0.1	08/17/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	08/27/15 13:48	tms
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	08/19/15 0:00	abd
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	08/19/15 0:00	abd
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	08/19/15 0:00	abd
Total Alkalinity		1		U	*	mg/L	2	20	08/19/15 0:00	abd
Sulfate	D516-02/-07 - Turbidimetric	50	532		*	mg/L	50	250	08/20/15 12:08	bsu

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK 9

ACZ Sample ID: **L24916-11**

Date Sampled: 08/25/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	08/26/15 17:38	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	08/26/15 17:38	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/26/15 18:52	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	08/26/15 18:52	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0054		*	mg/L	0.0001	0.0005	08/26/15 17:38	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	08/26/15 18:52	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	946		*	umhos/cm	1	10	08/24/15 12:30	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	41			g			08/25/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/25/15 0:00	arc
Leachate Volume Recovered		1	934			g			08/25/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	404		*	mv	1	1	08/24/15 13:37	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	08/24/15 0:00	arc
pH measured at		1	21.2			C	0.1	0.1	08/24/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/08/15 15:55	id
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	09/02/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/02/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/02/15 0:00	tms
Total Alkalinity		1		U	*	mg/L	2	20	09/02/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	20	528			mg/L	20	100	08/27/15 13:48	mss2

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK10

ACZ Sample ID: **L24916-12**

Date Sampled: 09/01/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	09/04/15 17:20	msh
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	09/04/15 17:20	msh
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:25	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/04/15 22:25	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0057		*	mg/L	0.0001	0.0005	09/04/15 17:20	msh
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/04/15 22:25	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	878		*	umhos/cm	1	10	09/01/15 12:30	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	35			g			08/31/15 0:00	arc
Leachate Volume Added		1	1000			mL			08/31/15 0:00	arc
Leachate Volume Recovered		1	942			g			08/31/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	407		*	mv	1	1	09/01/15 13:37	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	09/01/15 0:00	arc
pH measured at		1	19.9			C	0.1	0.1	09/01/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/08/15 16:12	id
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Total Alkalinity		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	20	537		*	mg/L	20	100	09/03/15 11:39	bsu

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK11

ACZ Sample ID: **L24916-13**

Date Sampled: 09/08/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	09/11/15 12:34	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	09/11/15 12:34	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/15/15 11:07	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/15/15 11:07	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0061		*	mg/L	0.0001	0.0005	09/11/15 12:34	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/15/15 11:07	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	908		*	umhos/cm	1	10	09/07/15 12:30	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	39			g			09/08/15 0:00	arc
Leachate Volume Added		1	1000			mL			09/08/15 0:00	arc
Leachate Volume Recovered		1	937			g			09/08/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	506		*	mv	1	1	09/07/15 13:37	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.1			units	0.1	0.1	09/07/15 0:00	arc
pH measured at		1	20.7			C	0.1	0.1	09/07/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/16/15 13:26	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Total Alkalinity		1		U	*	mg/L	2	20	09/10/15 0:00	tms
Sulfate	D516-02/-07 - Turbidimetric	20	514			mg/L	20	100	09/10/15 13:55	mss2

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK12

ACZ Sample ID: **L24916-14**

Date Sampled: 09/15/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1		U	*	mg/L	0.03	0.2	09/18/15 21:19	aeb
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	09/17/15 18:22	mfm
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	09/17/15 18:22	mfm
Barium, dissolved	M200.7 ICP	1	0.018	B	*	mg/L	0.003	0.02	09/18/15 21:19	aeb
Beryllium, dissolved	M200.8 ICP-MS	1	0.00034		*	mg/L	0.00005	0.0003	09/17/15 18:22	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	09/18/15 21:19	aeb
Boron, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	09/18/15 21:19	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	09/17/15 18:22	mfm
Calcium, dissolved	M200.7 ICP	1	207		*	mg/L	0.1	0.5	09/18/15 21:19	aeb
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/18/15 21:19	aeb
Cobalt, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/19/15 14:03	aeb
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/18/15 21:19	aeb
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	09/18/15 21:19	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/18/15 21:19	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0065		*	mg/L	0.0001	0.0005	09/17/15 18:22	mfm
Lithium, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	09/18/15 21:19	aeb
Magnesium, dissolved	M200.7 ICP	1	1.1		*	mg/L	0.2	1	09/18/15 21:19	aeb
Manganese, dissolved	M200.7 ICP	1	0.469		*	mg/L	0.005	0.03	09/18/15 21:19	aeb
Mercury, dissolved	M245.1 CVAA	1	0.0002	B	*	mg/L	0.0002	0.001	09/29/15 13:44	pta
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	09/18/15 21:19	aeb
Nickel, dissolved	M200.7 ICP	1		U	*	mg/L	0.008	0.04	09/18/15 21:19	aeb
Potassium, dissolved	M200.7 ICP	1	1.3		*	mg/L	0.2	1	09/18/15 21:19	aeb
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	09/18/15 21:19	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0003		*	mg/L	0.0001	0.0003	09/17/15 18:22	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	09/19/15 14:03	aeb
Sodium, dissolved	M200.7 ICP	1	0.3	B	*	mg/L	0.2	1	09/18/15 21:19	aeb
Strontium, dissolved	M200.7 ICP	1	3.380		*	mg/L	0.005	0.03	09/18/15 21:19	aeb
Thallium, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0001	0.0005	09/17/15 18:22	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	09/18/15 21:19	aeb
Titanium, dissolved	M200.7 ICP	1	0.009	B	*	mg/L	0.005	0.03	09/18/15 21:19	aeb
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	09/18/15 21:19	aeb
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/18/15 21:19	aeb

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK12

ACZ Sample ID: **L24916-14**

Date Sampled: 09/15/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	912		*	umhos/cm	1	10	09/14/15 12:30	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	34			g			09/15/15 0:00	arc
Leachate Volume Added		1	1000			mL			09/15/15 0:00	arc
Leachate Volume Recovered		1	938			g			09/15/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	304		*	mv	1	1	09/14/15 13:24	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	09/14/15 0:00	arc
pH measured at		1	20.3			C	0.1	0.1	09/14/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/25/15 12:12	sck
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	09/23/15 0:00	enb
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/23/15 0:00	enb
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/23/15 0:00	enb
Total Alkalinity		1		U	*	mg/L	2	20	09/23/15 0:00	enb
Sulfate	D516-02/-07 - Turbidimetric	20	515			mg/L	20	100	09/17/15 11:32	mss2

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK13

ACZ Sample ID: **L24916-15**

Date Sampled: 09/22/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	09/23/15 12:43	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	09/23/15 12:43	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/25/15 16:56	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	09/25/15 16:56	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0064		*	mg/L	0.0001	0.0005	09/23/15 12:43	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	09/25/15 16:56	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	852		*	umhos/cm	1	10	09/21/15 12:30	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	34			g			09/21/15 0:00	arc
Leachate Volume Added		1	1000			mL			09/21/15 0:00	arc
Leachate Volume Recovered		1	940			g			09/21/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	241		*	mv	1	1	09/21/15 13:24	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	09/21/15 0:00	arc
pH measured at		1	19.9			C	0.1	0.1	09/21/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/29/15 13:28	enb
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	09/28/15 0:00	enb
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	09/28/15 0:00	enb
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	09/28/15 0:00	enb
Total Alkalinity		1		U	*	mg/L	2	20	09/28/15 0:00	enb
Sulfate	D516-02/-07 - Turbidimetric	20	475			mg/L	20	100	09/28/15 11:39	mss2

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK14

ACZ Sample ID: **L24916-16**

Date Sampled: 09/29/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	10/01/15 15:10	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	10/01/15 15:10	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	10/02/15 23:27	aeb
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	10/02/15 23:27	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0075		*	mg/L	0.0001	0.0005	10/01/15 15:10	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	10/02/15 23:27	aeb

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	837		*	umhos/cm	1	10	09/28/15 12:30	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	33			g			09/28/15 0:00	arc
Leachate Volume Added		1	1000			mL			09/28/15 0:00	arc
Leachate Volume Recovered		1	940			g			09/28/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	466		*	mv	1	1	09/28/15 13:24	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	09/28/15 0:00	arc
pH measured at		1	19.0			C	0.1	0.1	09/28/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃	SM2310B - Titration	1		U	*	mg/L	10	20	09/30/15 10:25	sck
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	10/05/15 0:00	enb
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	10/05/15 0:00	enb
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	10/05/15 0:00	enb
Total Alkalinity		1		U	*	mg/L	2	20	10/05/15 0:00	enb
Sulfate	D516-02/-07 - Turbidimetric	20	483		*	mg/L	20	100	10/02/15 10:05	mss2

Arizona license number: **AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-WEEK15

ACZ Sample ID: **L24916-17**

Date Sampled: 10/06/15 17:00

Date Received: 06/12/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Arsenic, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0002	0.001	10/07/15 21:09	mfm
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	10/07/15 21:09	mfm
Copper, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	10/09/15 21:01	jjc
Iron, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.05	10/09/15 21:01	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0079		*	mg/L	0.0001	0.0005	10/07/15 21:09	mfm
Zinc, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	10/09/15 21:01	jjc

Soil Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Conductivity--Humidity Cell Test	SM2510B	1	847		*	umhos/cm	1	10	10/05/15 12:30	arc
End of leach volumes and mass	D5744-12									
Interstitial Weight		1	32			g			10/06/15 0:00	arc
Leachate Volume Added		1	1000			mL			10/06/15 0:00	arc
Leachate Volume Recovered		1	941			g			10/06/15 0:00	arc
Oxidation Reduction Potential (Eh)	D1498-08	1	393		*	mv	1	1	10/05/15 13:24	arc
pH, Humidity Cell Test	M9045D/M9040C									
pH		1	6.0			units	0.1	0.1	10/05/15 0:00	arc
pH measured at		1	20.1			C	0.1	0.1	10/05/15 0:00	arc

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidity as CaCO ₃			*****							NEED
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1		U	*	mg/L	2	20	10/07/15 0:00	enb
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	10/07/15 0:00	enb
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	10/07/15 0:00	enb
Total Alkalinity		1		U	*	mg/L	2	20	10/07/15 0:00	enb
Sulfate	WG391926	20	***478***			mg/L	20	100	10/07/15 15:10	AREV

Arizona license number: **AZ0102**

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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: L24916

Date Received: 06/12/2015 09:50

Received By: ear

Date Printed: 6/16/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody 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 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?	☒	☐	☐

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)	Rad (µR/Hr)	Custody Seal Intact?
NA21960	17.3	22	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.

Adrian Brown Consultants, Inc.

ACZ Project ID: L24916

Date Received: 06/12/2015 09:50

Received By: ear

Date Printed: 6/16/2015

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).

Preliminary



Laboratories, Inc.

6/24/96

CHAIN of CUSTODY

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

Report to:

Name: JEFFREY WINICK

Company: SCHLUMBERGER WATER SERV.

E-mail: JWINICK@SLB.COM

Address: 1875 LAWRENCE STREET, SUITE 500

DENVER, CO 80215

Telephone: +1.303.244.8224

Copy of Report to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: abrown@abch2o.com

Telephone: (303) 698-9080

Invoice to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: lbrown@abch2o.com

Address: 130 W 4th Ave

Denver CO USA 80223

Telephone: (303) 698-9080

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 CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: CO HYDROGEOCHEMICAL STUDY

Project/PO #:

Reporting state for compliance testing:

Sampler's Name: Beverly Furfaro/ALS

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE:TIME

Matrix

of Containers

Co-HydroGeo Chem

Co-HydroGeo - PEE-HCT

CPC14-3/2600-2800/Static G 11-June-15:

rock

1(kg)

X

CPC14-3/2800-3000/Static G 11-June-15

rock

1 (kg)

X

CPC14-3/3000-3200/Static G 11-June-15

rock

1(kg)

X

CC14-3/3200-3400/Static C 11-June-15

rock

1(kg)

X

CPC14-3/2600-3400/Kinetic G 11-June-15

rock

8 (kg)

X

CPC14-3/4200-4400/Static G 11-June-15

rock

1(kg)

X

COPY

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

REMARKS

Please contact Jeff Winick at 303.244.8224 for further instructions

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

July 13, 2015

Report to:

Jeffrey Winick
Schlumberger Water Services
1875 Lawrence Street
Suite 500
Denver, CO 80202

Bill to:

Accounts Payable
Adrian Brown Consultants, Inc.
130 W 4th Avenue
Denver, CO 80223

cc: Adrian Brown

Project ID:

ACZ Project ID: L25074

Jeffrey Winick:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 23, 2015. This project has been assigned to ACZ's project number, L25074. 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 L25074. 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 August 12, 2015. 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.



Scott Habermehl has reviewed
and approved this report.



Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-2800/STATIC C-NAG

ACZ Sample ID: **L25074-01**

Date Sampled: 06/11/15 00:00

Date Received: 06/23/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	8.70		*	mg/L	0.03	0.2	06/30/15 23:17	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	07/06/15 20:01	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0002	0.001	07/06/15 20:01	mfm
Barium, dissolved	M200.7 ICP	1	0.101		*	mg/L	0.003	0.02	06/30/15 23:17	jjc
Beryllium, dissolved	M200.8 ICP-MS	2	0.0049		*	mg/L	0.0001	0.0005	07/07/15 22:49	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:17	jjc
Boron, dissolved	M200.7 ICP	1	0.03	B	*	mg/L	0.01	0.05	06/30/15 23:17	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0045		*	mg/L	0.0001	0.0005	07/06/15 20:01	mfm
Calcium, dissolved	M200.7 ICP	1	345		*	mg/L	0.1	0.5	06/30/15 23:17	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/30/15 23:17	jjc
Cobalt, dissolved	M200.7 ICP	1	0.12		*	mg/L	0.01	0.05	06/30/15 23:17	jjc
Copper, dissolved	M200.7 ICP	1	0.26		*	mg/L	0.01	0.05	06/30/15 23:17	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:17	jjc
Iron, dissolved	M200.7 ICP	1	86.90		*	mg/L	0.02	0.05	06/30/15 23:17	jjc
Lead, dissolved	M200.8 ICP-MS	2	0.7852		*	mg/L	0.0002	0.001	07/07/15 22:49	msh
Lithium, dissolved	M200.7 ICP	1	0.043		*	mg/L	0.008	0.04	06/30/15 23:17	jjc
Magnesium, dissolved	M200.7 ICP	1	26.6		*	mg/L	0.2	1	06/30/15 23:17	jjc
Manganese, dissolved	M200.7 ICP	1	10.400		*	mg/L	0.005	0.03	06/30/15 23:17	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/30/15 12:40	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/30/15 23:17	jjc
Nickel, dissolved	M200.7 ICP	1	0.116		*	mg/L	0.008	0.04	06/30/15 23:17	jjc
Potassium, dissolved	M200.7 ICP	1	13.1		*	mg/L	0.2	1	06/30/15 23:17	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:17	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0104		*	mg/L	0.0001	0.0003	07/06/15 20:01	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	07/01/15 15:53	jjc
Sodium, dissolved	M200.7 ICP	1	4.1		*	mg/L	0.2	1	06/30/15 23:17	jjc
Strontium, dissolved	M200.7 ICP	1	8.120		*	mg/L	0.005	0.03	06/30/15 23:17	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0007		*	mg/L	0.0001	0.0005	07/06/15 20:01	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:17	jjc
Titanium, dissolved	M200.7 ICP	1	0.007	B	*	mg/L	0.005	0.03	06/30/15 23:17	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/30/15 23:17	jjc
Zinc, dissolved	M200.7 ICP	1	0.77		*	mg/L	0.01	0.05	06/30/15 23:17	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24915-01.**Arizona license number: AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2800-3000/STATIC C-NAG

ACZ Sample ID: **L25074-02**

Date Sampled: 06/11/15 00:00

Date Received: 06/23/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	8.01		*	mg/L	0.03	0.2	06/30/15 23:20	jjc
Antimony, dissolved	M200.8 ICP-MS	1	0.0009	B	*	mg/L	0.0004	0.002	07/06/15 20:04	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0010		*	mg/L	0.0002	0.001	07/06/15 20:04	mfm
Barium, dissolved	M200.7 ICP	1	0.071		*	mg/L	0.003	0.02	06/30/15 23:20	jjc
Beryllium, dissolved	M200.8 ICP-MS	10	0.0026	B	*	mg/L	0.0005	0.003	07/07/15 22:52	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:20	jjc
Boron, dissolved	M200.7 ICP	1	0.04	B	*	mg/L	0.01	0.05	06/30/15 23:20	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0061		*	mg/L	0.0001	0.0005	07/06/15 20:04	mfm
Calcium, dissolved	M200.7 ICP	1	289		*	mg/L	0.1	0.5	06/30/15 23:20	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/30/15 23:20	jjc
Cobalt, dissolved	M200.7 ICP	1	0.08		*	mg/L	0.01	0.05	06/30/15 23:20	jjc
Copper, dissolved	M200.7 ICP	1	0.42		*	mg/L	0.01	0.05	06/30/15 23:20	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:20	jjc
Iron, dissolved	M200.7 ICP	1	67.0		*	mg/L	0.02	0.05	06/30/15 23:20	jjc
Lead, dissolved	M200.8 ICP-MS	10	1.780		*	mg/L	0.001	0.005	07/07/15 22:52	msh
Lithium, dissolved	M200.7 ICP	1	0.026	B	*	mg/L	0.008	0.04	06/30/15 23:20	jjc
Magnesium, dissolved	M200.7 ICP	1	7.6		*	mg/L	0.2	1	06/30/15 23:20	jjc
Manganese, dissolved	M200.7 ICP	1	19.00		*	mg/L	0.005	0.03	06/30/15 23:20	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/30/15 12:46	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/30/15 23:20	jjc
Nickel, dissolved	M200.7 ICP	1	0.070		*	mg/L	0.008	0.04	06/30/15 23:20	jjc
Potassium, dissolved	M200.7 ICP	1	7.3		*	mg/L	0.2	1	06/30/15 23:20	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:20	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0108		*	mg/L	0.0001	0.0003	07/06/15 20:04	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	07/01/15 15:56	jjc
Sodium, dissolved	M200.7 ICP	1	5		*	mg/L	0.2	1	06/30/15 23:20	jjc
Strontium, dissolved	M200.7 ICP	1	6.850		*	mg/L	0.005	0.03	06/30/15 23:20	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0001	0.0005	07/06/15 20:04	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:20	jjc
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/30/15 23:20	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/30/15 23:20	jjc
Zinc, dissolved	M200.7 ICP	1	1.20		*	mg/L	0.01	0.05	06/30/15 23:20	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24915-02.**Arizona license number: AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3000-3200/STATIC C-NAG

ACZ Sample ID: **L25074-03**

Date Sampled: 06/11/15 00:00

Date Received: 06/23/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	6.51		*	mg/L	0.03	0.2	06/30/15 23:23	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	07/06/15 20:07	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B	*	mg/L	0.0002	0.001	07/06/15 20:07	mfm
Barium, dissolved	M200.7 ICP	1	0.101		*	mg/L	0.003	0.02	06/30/15 23:23	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00149		*	mg/L	0.00005	0.0003	07/07/15 22:54	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:23	jjc
Boron, dissolved	M200.7 ICP	1	0.04	B	*	mg/L	0.01	0.05	06/30/15 23:23	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0004	B	*	mg/L	0.0001	0.0005	07/06/15 20:07	mfm
Calcium, dissolved	M200.7 ICP	1	189		*	mg/L	0.1	0.5	06/30/15 23:23	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/30/15 23:23	jjc
Cobalt, dissolved	M200.7 ICP	1	0.05		*	mg/L	0.01	0.05	06/30/15 23:23	jjc
Copper, dissolved	M200.7 ICP	1	0.14		*	mg/L	0.01	0.05	06/30/15 23:23	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:23	jjc
Iron, dissolved	M200.7 ICP	1	30.10		*	mg/L	0.02	0.05	06/30/15 23:23	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0910		*	mg/L	0.0001	0.0005	07/06/15 20:07	mfm
Lithium, dissolved	M200.7 ICP	1	0.028	B	*	mg/L	0.008	0.04	06/30/15 23:23	jjc
Magnesium, dissolved	M200.7 ICP	1	5.6		*	mg/L	0.2	1	06/30/15 23:23	jjc
Manganese, dissolved	M200.7 ICP	1	1.770		*	mg/L	0.005	0.03	06/30/15 23:23	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/30/15 12:48	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/30/15 23:23	jjc
Nickel, dissolved	M200.7 ICP	1	0.047		*	mg/L	0.008	0.04	06/30/15 23:23	jjc
Potassium, dissolved	M200.7 ICP	1	8.5		*	mg/L	0.2	1	06/30/15 23:23	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:23	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0069		*	mg/L	0.0001	0.0003	07/06/15 20:07	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	07/01/15 15:59	jjc
Sodium, dissolved	M200.7 ICP	1	4.4		*	mg/L	0.2	1	06/30/15 23:23	jjc
Strontium, dissolved	M200.7 ICP	1	4.270		*	mg/L	0.005	0.03	06/30/15 23:23	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	07/06/15 20:07	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:23	jjc
Titanium, dissolved	M200.7 ICP	1	0.005	B	*	mg/L	0.005	0.03	06/30/15 23:23	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/30/15 23:23	jjc
Zinc, dissolved	M200.7 ICP	1	0.08		*	mg/L	0.01	0.05	06/30/15 23:23	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24915-03.**Arizona license number: AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/3200-3400/STATIC C-NAG

ACZ Sample ID: **L25074-04**

Date Sampled: 06/11/15 00:00

Date Received: 06/23/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	7.16		*	mg/L	0.03	0.2	06/30/15 23:26	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	07/06/15 20:09	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B	*	mg/L	0.0002	0.001	07/06/15 20:09	mfm
Barium, dissolved	M200.7 ICP	1	0.071		*	mg/L	0.003	0.02	06/30/15 23:26	jjc
Beryllium, dissolved	M200.8 ICP-MS	5	0.0031		*	mg/L	0.0003	0.001	07/07/15 23:02	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:26	jjc
Boron, dissolved	M200.7 ICP	1	0.04	B	*	mg/L	0.01	0.05	06/30/15 23:26	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0067		*	mg/L	0.0001	0.0005	07/06/15 20:09	mfm
Calcium, dissolved	M200.7 ICP	1	196		*	mg/L	0.1	0.5	06/30/15 23:26	jjc
Chromium, dissolved	M200.7 ICP	1	0.01	B	*	mg/L	0.01	0.05	06/30/15 23:26	jjc
Cobalt, dissolved	M200.7 ICP	1	0.08		*	mg/L	0.01	0.05	06/30/15 23:26	jjc
Copper, dissolved	M200.7 ICP	1	0.44		*	mg/L	0.01	0.05	06/30/15 23:26	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:26	jjc
Iron, dissolved	M200.7 ICP	1	23.50		*	mg/L	0.02	0.05	06/30/15 23:26	jjc
Lead, dissolved	M200.8 ICP-MS	5	1.2700		*	mg/L	0.0005	0.003	07/07/15 23:02	msh
Lithium, dissolved	M200.7 ICP	1	0.027	B	*	mg/L	0.008	0.04	06/30/15 23:26	jjc
Magnesium, dissolved	M200.7 ICP	1	12.1		*	mg/L	0.2	1	06/30/15 23:26	jjc
Manganese, dissolved	M200.7 ICP	1	4.340		*	mg/L	0.005	0.03	06/30/15 23:26	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/30/15 12:50	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/30/15 23:26	jjc
Nickel, dissolved	M200.7 ICP	1	0.114		*	mg/L	0.008	0.04	06/30/15 23:26	jjc
Potassium, dissolved	M200.7 ICP	1	22.4		*	mg/L	0.2	1	06/30/15 23:26	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:26	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0128		*	mg/L	0.0001	0.0003	07/06/15 20:09	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	07/01/15 16:03	jjc
Sodium, dissolved	M200.7 ICP	1	4.2		*	mg/L	0.2	1	06/30/15 23:26	jjc
Strontium, dissolved	M200.7 ICP	1	3.200		*	mg/L	0.005	0.03	06/30/15 23:26	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0025		*	mg/L	0.0001	0.0005	07/06/15 20:09	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:26	jjc
Titanium, dissolved	M200.7 ICP	1	0.006	B	*	mg/L	0.005	0.03	06/30/15 23:26	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/30/15 23:26	jjc
Zinc, dissolved	M200.7 ICP	1	1.11		*	mg/L	0.01	0.05	06/30/15 23:26	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24915-04.**Arizona license number: AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/4200-4400/STATIC C-NAG

ACZ Sample ID: **L25074-05**

Date Sampled: 06/11/15 00:00

Date Received: 06/23/15

Sample Matrix: Leachate

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	5.77		*	mg/L	0.03	0.2	06/30/15 23:29	jjc
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	07/06/15 20:18	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B	*	mg/L	0.0002	0.001	07/06/15 20:18	mfm
Barium, dissolved	M200.7 ICP	1	0.105		*	mg/L	0.003	0.02	06/30/15 23:29	jjc
Beryllium, dissolved	M200.8 ICP-MS	1	0.00176		*	mg/L	0.00005	0.0003	07/07/15 23:04	msh
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:29	jjc
Boron, dissolved	M200.7 ICP	1	0.05		*	mg/L	0.01	0.05	06/30/15 23:29	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	07/06/15 20:18	mfm
Calcium, dissolved	M200.7 ICP	1	85.8		*	mg/L	0.1	0.5	06/30/15 23:29	jjc
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/30/15 23:29	jjc
Cobalt, dissolved	M200.7 ICP	1	0.06		*	mg/L	0.01	0.05	06/30/15 23:29	jjc
Copper, dissolved	M200.7 ICP	1	0.12		*	mg/L	0.01	0.05	06/30/15 23:29	jjc
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:29	jjc
Iron, dissolved	M200.7 ICP	1	44.90		*	mg/L	0.02	0.05	06/30/15 23:29	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0476		*	mg/L	0.0001	0.0005	07/06/15 20:18	mfm
Lithium, dissolved	M200.7 ICP	1	0.012	B	*	mg/L	0.008	0.04	06/30/15 23:29	jjc
Magnesium, dissolved	M200.7 ICP	1	11.1		*	mg/L	0.2	1	06/30/15 23:29	jjc
Manganese, dissolved	M200.7 ICP	1	1.160		*	mg/L	0.005	0.03	06/30/15 23:29	jjc
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/30/15 12:52	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/30/15 23:29	jjc
Nickel, dissolved	M200.7 ICP	1	0.163		*	mg/L	0.008	0.04	06/30/15 23:29	jjc
Potassium, dissolved	M200.7 ICP	1	6.4		*	mg/L	0.2	1	06/30/15 23:29	jjc
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:29	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0057		*	mg/L	0.0001	0.0003	07/06/15 20:18	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	07/01/15 16:06	jjc
Sodium, dissolved	M200.7 ICP	1	3.5		*	mg/L	0.2	1	06/30/15 23:29	jjc
Strontium, dissolved	M200.7 ICP	1	2.460		*	mg/L	0.005	0.03	06/30/15 23:29	jjc
Thallium, dissolved	M200.8 ICP-MS	1	0.0005		*	mg/L	0.0001	0.0005	07/06/15 20:18	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:29	jjc
Titanium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/30/15 23:29	jjc
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/30/15 23:29	jjc
Zinc, dissolved	M200.7 ICP	1	0.09		*	mg/L	0.01	0.05	06/30/15 23:29	jjc

Note: This report is for additional analysis of the sample previously reported as ACZ project L24915-06.**Arizona license number: AZ0102**

Adrian Brown Consultants, Inc.

Project ID:

Sample ID: CPC14-3/2600-3400/KINETIC-NAG

ACZ Sample ID: **L25074-06**

Date Sampled: 06/11/15 00:00

Date Received: 06/23/15

Sample Matrix: *Leachate*

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.7 ICP	1	3.90		*	mg/L	0.03	0.2	06/30/15 23:39	jic
Antimony, dissolved	M200.8 ICP-MS	1		U	*	mg/L	0.0004	0.002	07/06/15 20:27	mfm
Arsenic, dissolved	M200.8 ICP-MS	1	0.0008	B	*	mg/L	0.0002	0.001	07/06/15 20:27	mfm
Barium, dissolved	M200.7 ICP	1	0.141		*	mg/L	0.003	0.02	06/30/15 23:39	jic
Beryllium, dissolved	M200.8 ICP-MS	1	0.00234		*	mg/L	0.00005	0.0003	07/06/15 20:27	mfm
Bismuth, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:39	jic
Boron, dissolved	M200.7 ICP	1	0.03	B	*	mg/L	0.01	0.05	06/30/15 23:39	jic
Cadmium, dissolved	M200.8 ICP-MS	1	0.0025		*	mg/L	0.0001	0.0005	07/06/15 20:27	mfm
Calcium, dissolved	M200.7 ICP	1	227		*	mg/L	0.1	0.5	06/30/15 23:39	jic
Chromium, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.05	06/30/15 23:39	jic
Cobalt, dissolved	M200.7 ICP	1	0.13		*	mg/L	0.01	0.05	06/30/15 23:39	jic
Copper, dissolved	M200.7 ICP	1	0.21		*	mg/L	0.01	0.05	06/30/15 23:39	jic
Gallium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:39	jic
Iron, dissolved	M200.7 ICP	1	43.60		*	mg/L	0.02	0.05	06/30/15 23:39	jic
Lead, dissolved	M200.8 ICP-MS	2	0.8722		*	mg/L	0.0002	0.001	07/10/15 10:31	mfm
Lithium, dissolved	M200.7 ICP	1	0.016	B	*	mg/L	0.008	0.04	06/30/15 23:39	jic
Magnesium, dissolved	M200.7 ICP	1	7.8		*	mg/L	0.2	1	06/30/15 23:39	jic
Manganese, dissolved	M200.7 ICP	1	5.200		*	mg/L	0.005	0.03	06/30/15 23:39	jic
Mercury, dissolved	M245.1 CVAA	1		U	*	mg/L	0.0002	0.001	06/30/15 12:54	nco
Molybdenum, dissolved	M200.7 ICP	1		U	*	mg/L	0.02	0.1	06/30/15 23:39	jic
Nickel, dissolved	M200.7 ICP	1	0.074		*	mg/L	0.008	0.04	06/30/15 23:39	jic
Potassium, dissolved	M200.7 ICP	1	8		*	mg/L	0.2	1	06/30/15 23:39	jic
Scandium, dissolved	M200.7 ICP	1		U	*	mg/L	0.1	0.5	06/30/15 23:39	jic
Selenium, dissolved	M200.8 ICP-MS	1	0.0090		*	mg/L	0.0001	0.0003	07/06/15 20:27	mfm
Silver, dissolved	M200.7 ICP	1		U	*	mg/L	0.01	0.03	07/01/15 16:15	jic
Sodium, dissolved	M200.7 ICP	1	2.3		*	mg/L	0.2	1	06/30/15 23:39	jic
Strontium, dissolved	M200.7 ICP	1	4.890		*	mg/L	0.005	0.03	06/30/15 23:39	jic
Thallium, dissolved	M200.8 ICP-MS	1	0.0008		*	mg/L	0.0001	0.0005	07/06/15 20:27	mfm
Tin, dissolved	M200.7 ICP	1		U	*	mg/L	0.04	0.2	06/30/15 23:39	jic
Titanium, dissolved	M200.7 ICP	1	0.007	B	*	mg/L	0.005	0.03	06/30/15 23:39	jic
Vanadium, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	06/30/15 23:39	jic
Zinc, dissolved	M200.7 ICP	1	0.40		*	mg/L	0.01	0.05	06/30/15 23:39	jic

Note: This report is for additional analysis of the sample previously reported as ACZ project L24916-05.

Arizona license number: **AZ0102**



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:

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

Adrian Brown Consultants, Inc.

ACZ Project ID: **L25074**

Aluminum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		2.004	mg/L	100	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.09	0.09			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	1.0015		1.066	mg/L	106	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	5.0075	1.3	6.76	mg/L	109	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	5.0075	1.3	6.74	mg/L	109	85	115	0	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	1.0015	5.77	6.646	mg/L	87	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	1.0015	5.77	6.69	mg/L	92	85	115	1	20	

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386347													
WG386347ICV	ICV	07/06/15 19:09	MS150601-9	.02		.01944	mg/L	97	90	110			
WG386347ICB	ICB	07/06/15 19:12				.0005	mg/L		-0.0012	0.0012			
WG386347LFB	LFB	07/06/15 19:15	MS150625-6	.01001		.01003	mg/L	100	85	115			
L25074-04AS	AS	07/06/15 20:12	MS150625-6	.01001	U	.01016	mg/L	101	70	130			
L25074-04ASD	ASD	07/06/15 20:15	MS150625-6	.01001	U	.01004	mg/L	100	70	130	1	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386347													
WG386347ICV	ICV	07/06/15 19:09	MS150601-9	.05		.05254	mg/L	105	90	110			
WG386347ICB	ICB	07/06/15 19:12				U	mg/L		-0.0006	0.0006			
WG386347LFB	LFB	07/06/15 19:15	MS150625-6	.0501		.05024	mg/L	100	85	115			
L25074-04AS	AS	07/06/15 20:12	MS150625-6	.0501	.0005	.05545	mg/L	110	70	130			
L25074-04ASD	ASD	07/06/15 20:15	MS150625-6	.0501	.0005	.05557	mg/L	110	70	130	0	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		1.9992	mg/L	100	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.009	0.009			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.5		.5363	mg/L	107	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.5	U	2.712	mg/L	108	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.5	U	2.695	mg/L	108	85	115	1	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.5	.105	.6335	mg/L	106	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.5	.105	.642	mg/L	107	85	115	1	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L25074**

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386347													
WG386347ICV	ICV	07/06/15 19:09	MS150601-9	.05		.04745	mg/L	95	90	110			
WG386347ICB	ICB	07/06/15 19:12				U	mg/L		-0.00015	0.00015			
WG386347LFB	LFB	07/06/15 19:15	MS150625-6	.05005		.04712	mg/L	94	85	115			
WG386435													
WG386435ICV	ICV	07/07/15 22:08	MS150601-9	.05		.049115	mg/L	98	90	110			
WG386435ICB	ICB	07/07/15 22:11				U	mg/L		-0.00015	0.00015			
WG386435LFB	LFB	07/07/15 22:13	MS150625-6	.05005		.050304	mg/L	101	85	115			
L25074-03AS	AS	07/07/15 22:56	MS150625-6	.05005	.00149	.055496	mg/L	108	70	130			
L25074-03ASD	ASD	07/07/15 22:59	MS150625-6	.05005	.00149	.056253	mg/L	109	70	130	1	20	

Bismuth, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		2.039	mg/L	102	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.12	0.12			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	1		1.027	mg/L	103	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	5	U	5.33	mg/L	107	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	5	U	5.21	mg/L	104	85	115	2	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	1	U	1.024	mg/L	102	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	1	U	1.019	mg/L	102	85	115	0	20	

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		2.005	mg/L	100	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.03	0.03			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.5005		.543	mg/L	108	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.5025	.1	2.812	mg/L	108	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.5025	.1	2.836	mg/L	109	85	115	1	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.5005	.05	.579	mg/L	106	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.5005	.05	.59	mg/L	108	85	115	2	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386347													
WG386347ICV	ICV	07/06/15 19:09	MS150601-9	.05		.05097	mg/L	102	90	110			
WG386347ICB	ICB	07/06/15 19:12				U	mg/L		-0.0003	0.0003			
WG386347LFB	LFB	07/06/15 19:15	MS150625-6	.05005		.04995	mg/L	100	85	115			
L25074-04AS	AS	07/06/15 20:12	MS150625-6	.05005	.0067	.05721	mg/L	101	70	130			
L25074-04ASD	ASD	07/06/15 20:15	MS150625-6	.05005	.0067	.05755	mg/L	102	70	130	1	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L25074**

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	100		100.73	mg/L	101	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.3	0.3			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	68.01261		70.77	mg/L	104	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	340.06305	493	853.5	mg/L	106	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	340.06305	493	850.5	mg/L	105	85	115	0	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	68.01261	85.8	153.3	mg/L	99	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	68.01261	85.8	154	mg/L	100	85	115	0	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		1.965	mg/L	98	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.03	0.03			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.5005		.527	mg/L	105	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.5025	U	2.559	mg/L	102	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.5025	U	2.553	mg/L	102	85	115	0	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.5005	U	.525	mg/L	105	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.5005	U	.529	mg/L	106	85	115	1	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2.002		2.023	mg/L	101	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.03	0.03			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.5005		.529	mg/L	106	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.5025	1.35	3.986	mg/L	105	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.5025	1.35	3.948	mg/L	104	85	115	1	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.5005	.06	.582	mg/L	104	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.5005	.06	.587	mg/L	105	85	115	1	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		1.996	mg/L	100	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.03	0.03			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.499		.539	mg/L	108	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.495	U	2.741	mg/L	110	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.495	U	2.709	mg/L	109	85	115	1	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.499	.12	.65	mg/L	106	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.499	.12	.662	mg/L	109	85	115	2	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L25074**

Gallium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		2.06	mg/L	103	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.3	0.3			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	1		1.04	mg/L	104	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	5	U	5.15	mg/L	103	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	5	U	5.26	mg/L	105	85	115	2	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	1	U	1.04	mg/L	104	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	1	U	1.03	mg/L	103	85	115	1	20	

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		1.988	mg/L	99	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.06	0.06			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	1.0001		1.096	mg/L	110	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	5.0005	112	116.9	mg/L	98	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	5.0005	112	116.4	mg/L	88	85	115	0	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	1.0001	44.9	43.77	mg/L	-113	85	115			M3
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	1.0001	44.9	44.05	mg/L	-85	85	115	1	20	M3

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386347													
WG386347ICV	ICV	07/06/15 19:09	MS150601-9	.05		.05106	mg/L	102	90	110			
WG386347ICB	ICB	07/06/15 19:12				U	mg/L		-0.0003	0.0003			
WG386347LFB	LFB	07/06/15 19:15	MS150625-6	.05005		.04857	mg/L	97	85	115			
L25074-04AS	AS	07/06/15 20:12	MS150625-6	.05005	1.38	1.375	mg/L	-10	70	130			M3
L25074-04ASD	ASD	07/06/15 20:15	MS150625-6	.05005	1.38	1.414	mg/L	68	70	130	3	20	M3
WG386435													
WG386435ICV	ICV	07/07/15 22:08	MS150601-9	.05		.04955	mg/L	99	90	110			
WG386435ICB	ICB	07/07/15 22:11				U	mg/L		-0.0003	0.0003			
WG386435LFB	LFB	07/07/15 22:13	MS150625-6	.05005		.04869	mg/L	97	85	115			
L25074-03AS	AS	07/07/15 22:56	MS150625-6	.05005	.087	.13538	mg/L	97	70	130			
L25074-03ASD	ASD	07/07/15 22:59	MS150625-6	.05005	.087	.13531	mg/L	97	70	130	0	20	
WG386580													
WG386580ICV	ICV	07/10/15 10:22	MS150601-9	.05		.04892	mg/L	98	90	110			
WG386580ICB	ICB	07/10/15 10:25				U	mg/L		-0.0003	0.0003			
WG386580LFB	LFB	07/10/15 10:28	MS150625-6	.05005		.04649	mg/L	93	85	115			
L25083-01AS	AS	07/10/15 10:40	MS150625-6	.05005	.0158	.06639	mg/L	101	70	130			
L25083-01ASD	ASD	07/10/15 10:43	MS150625-6	.05005	.0158	.06655	mg/L	101	70	130	0	20	

Adrian Brown Consultants, Inc.

ACZ Project ID: **L25074**

Lithium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		2.04	mg/L	102	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.024	0.024			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	1.001		1.022	mg/L	102	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	5.005	.32	5.55	mg/L	104	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	5.005	.32	5.5	mg/L	103	85	115	1	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	1.001	.012	1.04	mg/L	103	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	1.001	.012	1.045	mg/L	103	85	115	0	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	100		98.05	mg/L	98	95	105			
WG386128ICB	ICB	06/30/15 22:28				.28	mg/L		-0.6	0.6			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	50.00416		49.02	mg/L	98	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	250.0208	194	447.2	mg/L	101	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	250.0208	194	446	mg/L	101	85	115	0	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	50.00416	11.1	59.84	mg/L	97	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	50.00416	11.1	60.07	mg/L	98	85	115	0	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		1.9782	mg/L	99	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.015	0.015			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.499		.529	mg/L	106	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.495	48.7	50.95	mg/L	90	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.495	48.7	50.7	mg/L	80	85	115	0	20	M3
L25074-05AS	AS	06/30/15 23:33	II150617-2	.499	1.16	1.615	mg/L	91	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.499	1.16	1.631	mg/L	94	85	115	1	20	

Mercury, dissolved

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386059													
WG386059ICV	ICV	06/30/15 12:18	II150602-3	.005		.00526	mg/L	105	95	105			
WG386059ICB	ICB	06/30/15 12:20				U	mg/L		-0.0002	0.0002			
WG386059LRB	LRB	06/30/15 12:22				U	mg/L		-0.00044	0.00044			
WG386059LFB	LFB	06/30/15 12:24	II150615-3	.002004		.00175	mg/L	87	85	115			
L25069-04LFM	LFM	06/30/15 12:34	II150615-3	.002004	U	.00207	mg/L	103	85	115			
L25069-04LFMD	LFMD	06/30/15 12:36	II150615-3	.002004	U	.00191	mg/L	95	85	115	8	20	
L25135-03LFM	LFM	06/30/15 13:17	II150615-3	.002004	U	.00204	mg/L	102	85	115			
L25135-03LFMD	LFMD	06/30/15 13:19	II150615-3	.002004	U	.00198	mg/L	99	85	115	3	20	

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ACZ Project ID: **L25074**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		2.019	mg/L	101	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.06	0.06			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.4995		.517	mg/L	104	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.4975	U	2.59	mg/L	104	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.4975	U	2.56	mg/L	103	85	115	1	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.4995	U	.512	mg/L	103	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.4995	U	.512	mg/L	103	85	115	0	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		2.0122	mg/L	101	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.024	0.024			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.501		.5433	mg/L	108	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.505	3.61	6.23	mg/L	105	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.505	3.61	6.205	mg/L	104	85	115	0	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.501	.163	.6738	mg/L	102	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.501	.163	.6725	mg/L	102	85	115	0	20	

Potassium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	20		19.71	mg/L	99	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.6	0.6			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	100.0125		97.45	mg/L	97	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	500.0625	7	506	mg/L	100	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	500.0625	7	503.5	mg/L	99	85	115	0	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	100.0125	6.4	105	mg/L	99	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	100.0125	6.4	105.6	mg/L	99	85	115	1	20	

Scandium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		2.02	mg/L	101	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.3	0.3			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.999		1.02	mg/L	102	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	4.995	U	5.1	mg/L	102	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	4.995	U	5.06	mg/L	101	85	115	1	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.999	U	1.02	mg/L	102	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.999	U	1.02	mg/L	102	85	115	0	20	

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ACZ Project ID: **L25074**

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386347													
WG386347ICV	ICV	07/06/15 19:09	MS150601-9	.05		.05068	mg/L	101	90	110			
WG386347ICB	ICB	07/06/15 19:12				U	mg/L		-0.0003	0.0003			
WG386347LFB	LFB	07/06/15 19:15	MS150625-6	.05015		.04864	mg/L	97	85	115			
L25074-04AS	AS	07/06/15 20:12	MS150625-6	.05015	.0128	.07357	mg/L	121	70	130			
L25074-04ASD	ASD	07/06/15 20:15	MS150625-6	.05015	.0128	.073	mg/L	120	70	130	1	20	

Silver, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386184													
WG386184ICV	ICV	07/01/15 15:31	II150616-3	1.001		.996	mg/L	100	95	105			
WG386184ICB	ICB	07/01/15 15:37				U	mg/L		-0.03	0.03			
WG386184LFB	LFB	07/01/15 15:50	II150617-2	.501		.507	mg/L	101	85	115			
L25074-05AS	AS	07/01/15 16:09	II150617-2	.501	U	.252	mg/L	50	85	115			M2 ZA
L25074-05ASD	ASD	07/01/15 16:12	II150617-2	.501	U	.252	mg/L	50	85	115	0	20	M2 ZA

Sodium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	100		97.2	mg/L	97	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.6	0.6			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	100.0581		97	mg/L	97	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	500.2905	50	549.5	mg/L	100	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	500.2905	50	546.5	mg/L	99	85	115	1	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	100.0581	3.5	102	mg/L	98	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	100.0581	3.5	102.7	mg/L	99	85	115	1	20	

Strontium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		1.9882	mg/L	99	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.015	0.015			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.5005		.5091	mg/L	102	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.5025	1.61	4.197	mg/L	103	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.5025	1.61	4.168	mg/L	102	85	115	1	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.5005	2.46	2.827	mg/L	73	85	115			M3
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.5005	2.46	2.868	mg/L	82	85	115	1	20	M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386347													
WG386347ICV	ICV	07/06/15 19:09	MS150601-9	.05		.05353	mg/L	107	90	110			
WG386347ICB	ICB	07/06/15 19:12				U	mg/L		-0.0003	0.0003			
WG386347LFB	LFB	07/06/15 19:15	MS150625-6	.0501		.05122	mg/L	102	85	115			
L25074-04AS	AS	07/06/15 20:12	MS150625-6	.0501	.0025	.05479	mg/L	104	70	130			
L25074-04ASD	ASD	07/06/15 20:15	MS150625-6	.0501	.0025	.05669	mg/L	108	70	130	3	20	

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ACZ Project ID: **L25074**

Tin, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		1.958	mg/L	98	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.12	0.12			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	1.001		.952	mg/L	95	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	5.005	U	4.98	mg/L	100	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	5.005	U	4.83	mg/L	97	85	115	3	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	1.001	U	.949	mg/L	95	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	1.001	U	.953	mg/L	95	85	115	0	20	

Titanium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		1.9972	mg/L	100	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.015	0.015			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.999		1.013	mg/L	101	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	4.995	U	5.075	mg/L	102	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	4.995	U	5.06	mg/L	101	85	115	0	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.999	U	1.005	mg/L	101	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.999	U	1.01	mg/L	101	85	115	0	20	

Vanadium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		2.0157	mg/L	101	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.015	0.015			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.5		.5149	mg/L	103	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.5	U	2.549	mg/L	102	85	115			
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.5	U	2.537	mg/L	101	85	115	0	20	
L25074-05AS	AS	06/30/15 23:33	II150617-2	.5	U	.5082	mg/L	102	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.5	U	.5084	mg/L	102	85	115	0	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG386128													
WG386128ICV	ICV	06/30/15 22:22	II150616-3	2		1.946	mg/L	97	95	105			
WG386128ICB	ICB	06/30/15 22:28				U	mg/L		-0.03	0.03			
WG386128LFB	LFB	06/30/15 22:40	II150617-2	.4995		.504	mg/L	101	85	115			
L25066-01AS	AS	06/30/15 23:05	II150617-2	2.4975	864	845.5	mg/L	-741	85	115			M3
L25066-01ASD	ASD	06/30/15 23:08	II150617-2	2.4975	864	840.5	mg/L	-941	85	115	1	20	M3
L25074-05AS	AS	06/30/15 23:33	II150617-2	.4995	.09	.572	mg/L	96	85	115			
L25074-05ASD	ASD	06/30/15 23:36	II150617-2	.4995	.09	.573	mg/L	97	85	115	0	20	

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ACZ Project ID: **L25074**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L25074-01	WG386128	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG386184	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
	WG386128	Zinc, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L25074-02	WG386128	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG386184	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
	WG386128	Zinc, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L25074-03	WG386347	Lead, dissolved	M200.8 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.
	WG386128	Manganese, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
				M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG386184	Silver, dissolved	M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
L25074-04	WG386128	Iron, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
				M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG386184	Silver, dissolved	M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
				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.

Adrian Brown Consultants, Inc.

ACZ Project ID: **L25074**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L25074-05	WG386128	Iron, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG386347	Lead, dissolved	M200.8 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.
	WG386184	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
	WG386128	Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L25074-06	WG386128	Iron, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG386184	Silver, dissolved	M200.7 ICP	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.7 ICP	ZA	Poor recovery for Silver quality control is accepted due to low Silver solubility in samples, digestates, or extracts that do not contain sufficient Hydrochloric acid.
	WG386128	Strontium, dissolved	M200.7 ICP	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.

Adrian Brown Consultants, Inc.

ACZ Project ID: **L25074**

Metals Analysis

The following parameters are not offered for certification or are not covered by AZ certificate #AZ0102.

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP
Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

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

Aluminum, dissolved	M200.7 ICP
Antimony, dissolved	M200.8 ICP-MS
Arsenic, dissolved	M200.8 ICP-MS
Barium, dissolved	M200.7 ICP
Beryllium, dissolved	M200.8 ICP-MS
Bismuth, dissolved	M200.7 ICP
Boron, dissolved	M200.7 ICP
Cadmium, dissolved	M200.8 ICP-MS
Calcium, dissolved	M200.7 ICP
Chromium, dissolved	M200.7 ICP
Cobalt, dissolved	M200.7 ICP
Copper, dissolved	M200.7 ICP
Gallium, dissolved	M200.7 ICP
Iron, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: **L25074**

Lead, dissolved	M200.8 ICP-MS
Lithium, dissolved	M200.7 ICP
Magnesium, dissolved	M200.7 ICP
Manganese, dissolved	M200.7 ICP
Mercury, dissolved	M245.1 CVAA
Molybdenum, dissolved	M200.7 ICP
Nickel, dissolved	M200.7 ICP
Potassium, dissolved	M200.7 ICP
Scandium, dissolved	M200.7 ICP
Selenium, dissolved	M200.8 ICP-MS
Silver, dissolved	M200.7 ICP
Sodium, dissolved	M200.7 ICP
Strontium, dissolved	M200.7 ICP
Thallium, dissolved	M200.8 ICP-MS
Tin, dissolved	M200.7 ICP
Titanium, dissolved	M200.7 ICP
Vanadium, dissolved	M200.7 ICP
Zinc, dissolved	M200.7 ICP

Adrian Brown Consultants, Inc.

ACZ Project ID: L25074

Date Received: 06/23/2015 14:25

Received By: ear

Date Printed: 6/23/2015

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	☐	☐	☒
2) Is the Chain of Custody 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 complete and accurate?	☒	☐	☐
7) Were any changes made to the Chain of Custody 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 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?	☒	☐	☐

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)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
UNKNOWN			

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.

Adrian Brown Consultants, Inc.

ACZ Project ID: L25074

Date Received: 06/23/2015 14:25

Received By: ear

Date Printed: 6/23/2015

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).

Relog C25074

ACZ

Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: JEFFREY WINICK

Company: SCHLUMBERGER WATER SERV.

E-mail: JWINICK@SLB.COM

Address: 1875 LAWRENCE STREET, SUITE 500

DENVER, CO 80215

Telephone: +1.303.244.8224

Copy of Report to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: abrown@abch2o.com

Telephone: (303) 698-9080

Invoice to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: lbrown@abch2o.com

Address: 130 W 4th Ave

Denver CO USA 80223

Telephone: (303) 698-9080

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 CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: CO HYDROGEOCHEMICAL STUDY

Project/PO #:

Reporting state for compliance testing:

Sampler's Name: Beverly Furfaro/ALS

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE: TIME

Matrix

of Containers

Lo-Hydrogeo Chem

Lo-Hydrogeo - PEE-HCT

CPC14-3/2600-2800/Static C+

11-June-15

rock

1(kg)

X

CPC14-3/2800-3000/Static C+

11-June-15

rock

1 (kg)

X

CPC14-3/3000-3200/Static C+

11-June-15

rock

1(kg)

X

CC14-3/3200-3400/Static C+

11-June-15

rock

1(kg)

X

CPC14-3/2600-3400/Kinetic C+

11-June-15

rock

8 (kg)

X

CPC14-3/4200-4400/Static C+

11-June-15

rock

1(kg)

X

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

MARKS

ease contact Jeff Winick at 303.244.8224 for further instructions

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

RELINQUISHED BY:

DATE: TIME

RECEIVED BY:

DATE: TIME

FRMAD050.01.15.09

White - Return with sample. Yellow - Retain for your records.

L25074-1507131317

Page 23 of 24

*Relog 25074

ACZ

Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: JEFFREY WINICK

Company: SCHLUMBERGER WATER SERV.

E-mail: JWINICK@SLB.COM

Address: 1875 LAWRENCE STREET, SUITE 500

DENVER, CO 80215

Telephone: +1.303.244.8224

Copy of Report to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: abrown@abch2o.com

Telephone: (303) 698-9080

Invoice to:

Name: ADRIAN BROWN

Company: ADRIAN BROWN CONSULTANTS

E-mail: lbrown@abch2o.com

Address: 130 W 4th Ave

Denver CO USA 80223

Telephone: (303) 698-9080

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 CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: CO HYDROGEOCHEMICAL STUDY

Project/PO #:

Reporting state for compliance testing:

Sampler's Name: Beverly Furfaro/ALS

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE:TIME

Matrix

of Containers

Co-Hydrogeo Chem

Co-Hydrogeo - PEE-HCT

CPC14-3/2600-2800/Static

11-June-15:

rock

1(kg)

X

CPC14-3/2800-3000/Static

11-June-15

rock

1(kg)

X

CPC14-3/3000-3200/Static

11-June-15

rock

1(kg)

X

CC14-3/3200-3400/Static

11-June-15

rock

1(kg)

X

CPC14-3/2600-3400/Kinetic

11-June-15

rock

8(kg)

X

CPC14-3/4200-4400/Static

11-June-15

rock

1(kg)

X

COPY

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

REMARKS

Please contact Jeff Winick at 303.244.8224 for further instructions

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

WRL

6/16/15 0950



Isotope Analyses for:
Adrian Brown Consultant

IT2 FILE #
150057

2015-06-15





Client: Adrian Brown Consultant

130W. 4th Ave.

Denver, CO 80223

USA

Tel: 1 (303) 698-9080

Attn.: Adrian Brown / Jeff Winick

[E-mail: JWinick@slb.com](mailto:JWinick@slb.com)

[E-mail: 1brown@abch2o.com](mailto:1brown@abch2o.com)

$\delta^{18}\text{O}$ Analyses Results :

File Number: 150057

Project Number: 1385L

#	Sample ID	Collection		Sample #	$\delta^{18}\text{O}$	Aver	Stdv
		Date	Time		H_2O		
1	1st produced water - CPC 14-3	February 13, 2015	23:15	29982	X	-9.44	0.03
2	CPC 14-3 Water truck	February 14, 2015	0:15	29983	X	-11.93	0.06
3	Produced water - CPC 14-3	February 14, 2015	0:45	29984	X	-11.38	0.07
4	Produced water - CPC 14-3	February 14, 2015	2:00	29985	X	-11.39	0.02

Instrument Used: Cavity Ring Down Spectroscopy (CRDS)

CRDS (Model L1102-i) (Piccaro, California, USA).

Standard Used:

IT²-13 / IT²-14 / IT²-12 Calibrated with IAEA Standards (V-SMOW, SLAP, and GISP)

Typical Standard deviation:

±0.1‰



Client: Adrian Brown Consultant

130W. 4th Ave.
Denver, CO 80223
USA

Tel: 1 (303) 698-9080

Attn.: Adrian Brown / Jeff Winick

[E-mail: JWinick@slb.com](mailto:JWinick@slb.com)

[E-mail: 1brown@abch2o.com](mailto:1brown@abch2o.com)

$\delta^2\text{H}$ Analyses Results :

File Number: 150057

Project Number: 1385L

#	Sample ID	Collection		Sample #	$\delta^2\text{H}$	Aver	Stdv
		Date	Time		H_2O		
1	1st produced water - CPC 14-3	February 13, 2015	23:15	29982	X	-72.2	0.4
2	CPC 14-3 Water truck	February 14, 2015	0:15	29983	X	-88.8	0.3
3	Produced water - CPC 14-3	February 14, 2015	0:45	29984	X	-85.3	0.2
4	Produced water - CPC 14-3	February 14, 2015	2:00	29985	X	-85.2	0.3

Instrument Used: Cavity Ring Down Spectroscopy (CRDS)

CRDS (Model L1102-i) (Piccaro, California, USA).

Standard Used:

IT²-13 / IT²-14 / IT²-12 Calibrated with IAEA Standards (V-SMOW, SLAP, and GISP)

Typical Standard deviation:

±1‰



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[E-mail: 1brown@abch2o.com](mailto:1brown@abch2o.com)

$\delta^{18}\text{O}(\text{SO}_4)$ Analyses Results :

File Number: 150057

Project Number: 1385L

#	Sample ID	Collection		Sample #	$\delta^{18}\text{O}$	Result	Repeat
		Date	Time		SO_4		
1	1st produced water - CPC 14-3	February 13, 2015	23:15	29982	X	3.8	
2	CPC 14-3 Water truck	February 14, 2015	0:15	29983	X	4.7	
3	Produced water - CPC 14-3	February 14, 2015	0:45	29984	X	7.7	7.4
4	Produced water - CPC 14-3	February 14, 2015	2:00	29985	X	6.3	

Instrument Used:

Isotope Ratio mass spectrometry (IRMS) - Delta^{Plus} XL, Finnigan MAT, Germany
Coupled with TC/EA, Thermo Scientific, Germany.

Standard Used:

USGS-32 / NBS-127 / IAEA-SO-5 / IAEA-SO-6

Typical Standard deviation:

$\pm 0.3\%$



Client: Adrian Brown Consultant

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Denver, CO 80223
USA

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[E-mail: 1brown@abch2o.com](mailto:1brown@abch2o.com)

$\delta^{34}\text{S}(\text{SO}_4)$ Analyses Results :

File Number: 150057

Project Number: 1385L

#	Sample ID	Collection		Sample #	$\delta^{34}\text{S}$	Result	Repeat
		Date	Time		SO_4		
1	1st produced water - CPC 14-3	February 13, 2015	23:15	29982	X	6.1	
2	CPC 14-3 Water truck	February 14, 2015	0:15	29983	X	6.7	
3	Produced water - CPC 14-3	February 14, 2015	0:45	29984	X	8.9	8.6
4	Produced water - CPC 14-3	February 14, 2015	2:00	29985	X	8.6	

Instrument Used:

Isotope Ratio mass spectrometry (IRMS) - MAT 253, Thermo Scientific, Germany
Coupled with Elemental Analyzer (EA), Fisons Instruments, Italy

Standard Used:

IAEA-SO-6 / IT^2 -520 / IAEA-SO-5 / IT^2 -518 / NBS-127

Typical Standard deviation:

$\pm 0.5\%$



Client: Adrian Brown Consultant

130W. 4th Ave.
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[E-mail: 1brown@abch2o.com](mailto:1brown@abch2o.com)

$\delta^{13}\text{C}(\text{DIC})$ Analyses Results :

File Number: 150057

Project Number: 1385L

#	Sample ID	Collection		Sample #	$\delta^{13}\text{C}$	Result
		Date	Time			
1	1st produced water - CPC 14-3	February 13, 2015	23:15	29982	X	-14.99202
2	CPC 14-3 Water truck	February 14, 2015	0:15	29983	X	-10.38417
3	Produced water - CPC 14-3	February 14, 2015	0:45	29984	X	-11.9718
4	Produced water - CPC 14-3	February 14, 2015	2:00	29985	X	-14.30114

Instrument Used:

Isotope Ratio mass spectrometry (IRMS) - Delta^{Plus} XL, Finnigan MAT, Germany

Standard Used:

IT²-27

IT²-34

NBS-18

NBS-19

Typical Standard deviation:

± 0.2 ‰



12421 W. 49th Avenue, Unit #6
Wheat Ridge, CO 80033 (303) 463-8270

Revised Report
Per Client Request
6-17-15

X-Ray Diffraction Analysis
Page 1 of 1

Client:
Adrian Brown Consultants, Inc.
130 W. 4th Avenue
Denver, CO 80223

Analysis Date: 6-4-15
Reporting Date: 6-5-15
Receipt Date: 6-1-15
Client Job No.: 1385L
Project Title: Cripple Creek
DCMSL Project: ABRC5

Client Sample No.:	CPC14-3 440-600	CPC14-3 600-800	CPC14-3 800-1000	CPC14-3 1000-1200
<u>Phase</u>				
Quartz	<2 *	<2 *	6	3
K-Feldspar	58	61	56	31
Plagioclase	4	3	7	32
Pyrite	-	-	-	5
Jarosite	2	3	1	<2 *
Mica	13	7	7	7
Hematite	2	1	4	-
Carbonate	ND	ND	ND	ND
Unaccounted/Amorphous	21	25	19	22

Client Sample No.:	CPC14-3 1200-1400	CPC14-3 1400-1600	CPC14-3 1600-1800
<u>Phase</u>			
Quartz	4	4	2
K-Feldspar	28	38	37
Plagioclase	30	37	43
Pyrite	9	7	6
Jarosite	-	-	-
Mica	5	5	7
Hematite	-	-	-
Carbonate	ND	ND	ND
Unaccounted/Amorphous	24	9	5

* May be present

ND - None Detected

The samples were spiked with corundum, prepared for x-ray diffraction analysis and scanned over a range of 3° to 45° 2 θ Cu K α radiation, 40kV, 25mA. Mineral phases were identified with the aid of computer-assisted programs accessing a cd-rom powder diffraction database. Estimates of mineral concentrations are based on relative peak heights and reference intensity ratios (RIR) measured in-house.

Ron Schott, Analyst



12421 W. 49th Avenue, Unit #6
Wheat Ridge, CO 80033 (303) 463-8270

X-Ray Diffraction Analysis

Page 1 of 3

Client:

Adrian Brown Consultants, Inc.
130 W. 4th Avenue
Denver, CO 80223

Analysis Date:

7-10-15

Reporting Date:

7-10-15

Receipt Date:

7-1-15

Client Job No.:

CO - Hydrogeo Study

Project Title:

CC&V

DCMSL Project:

ABRC6

Client Sample No.:

Phase

Quartz
K-Feldspar
Plagioclase
Pyrite
Gypsum
Anhydrite
Mica
Dolomite
Carbonate/Undifferentiated
Unaccounted/Amorphous

CPC14-3
1800-2600
Kinetic

CPC14-3
2600-3400
Kinetic

CPC14-3
3400-4200
Kinetic

CPC14-3
1800-2000
Static

3	3	8	4
19	22	27	23
48	37	35	46
10	6	9	9
2	5	4	-
<2 *	7	<2 *	-
12	12	10	8
-	-	6	-
**	**	-	**
6	8	1	10

Client Sample No.:

Phase

Quartz
K-Feldspar
Plagioclase
Pyrite
Gypsum
Anhydrite
Mica
Dolomite
Amphibole
Carbonate/Undifferentiated
Unaccounted/Amorphous

CPC14-3
2000-2200
Static

CPC14-3
2200-2400
Static

CPC14-3
2400-2600
Static

CPC14-3
3400-3600
Static

3	3	3	8
19	18	15	29
47	45	40	30
9	8	5	6
-	2	4	3
-	<2 *	9	4
11	9	11	9
-	-	-	7
-	-	-	3
**	**	**	-
11	15	13	1

** Carbonate is present in trace amounts (<1%) using optical microscopy.

* May be present

X-Ray Diffraction Analysis

Page 2 of 3

Client:

 Adrian Brown Consultants, Inc.
 130 W. 4th Avenue
 Denver, CO 80223

 Analysis Date: 7-10-15
 Reporting Date: 7-10-15
 Receipt Date: 7-1-15
 Client Job No.: CO - Hydrogeo Study
 Project Title: CC&V
 DCMSL Project: ABRC6

Client Sample No.:	CPC14-3	CPC14-3	CPC14-3	CPC14-3
	3600-3800	3800-4000	4000-4200	2600-2800
<u>Phase</u>	Static	Static	Static	Static
Quartz	4	3	15	2
K-Feldspar	31	32	27	13
Plagioclase	40	51	32	42
Pyrite	7	6	5	9
Gypsum	4	3	2	3
Anhydrite	-	-	<2 *	9
Mica	2	4	9	13
Dolomite	7	-	-	-
Carbonate/Undifferentiated	-	**	**	**
Unaccounted/Amorphous	5	1	10	9

Client Sample No.:	CPC14-3	CPC14-3	CPC14-3	CPC14-3
	2800-3000	3000-3200	3200-3400	4200-4400
<u>Phase</u>	Static	Static	Static	Static
Quartz	5	23	17	24
K-Feldspar	20	28	21	30
Plagioclase	50	33	31	29
Pyrite	7	5	4	7
Gypsum	2	3	4	3
Anhydrite	8	<2 *	<2 *	<2 *
Mica	6	4	22	6
Carbonate/Undifferentiated	**	**	**	**
Unaccounted/Amorphous	2	4	1	1

** Carbonate is present in trace amounts (<1%) using optical microscopy.

* May be present



12421 W. 49th Avenue, Unit #6
Wheat Ridge, CO 80033 (303) 463-8270

X-Ray Diffraction Analysis
Page 3 of 3

Client:

Adrian Brown Consultants, Inc.
130 W. 4th Avenue
Denver, CO 80223

Analysis Date: 7-10-15
Reporting Date: 7-10-15
Receipt Date: 7-1-15
Client Job No.: CO - Hydrogeo Study
Project Title: CC&V
DCMSL Project: ABRC6

The samples were spiked with corundum, prepared for x-ray diffraction analysis and scanned over a range of 3° to 45° 2θ Cu $K\alpha$ radiation, 40kV, 25mA. Mineral phases were identified with the aid of computer-assisted programs accessing a cd-rom powder diffraction database. Estimates of mineral concentrations are based on relative peak heights and reference intensity ratios (RIR) measured in-house.

A handwritten signature in black ink that reads "Ron Schott". The signature is written in a cursive, flowing style.

Ron Schott, Analyst

(303) 463-8270/(800) 852-7340
(303) 463-8267 - fax

logged in
7-1-15

Date/Time Received _____ DCMSL Group No. 1593 DCMSL Log No. ABRC 6

Field Data Sheet/Chain of Custody

Samples Submitted By: Jeff Winick

Company: Schlumberger Water Serv.

Address: 1875 Lawrence Street

Suite 500

Denver, CO 80202

Contact: Jeff Winick

Phone: 303-297-9005 ex. 224

Fax: _____

Cell/Pager: 303-406-8824

Job/P.O. # CO-Hydrogeo Study

Project Title CC&V

Archive: All samples are archived for
6 months unless other
arrangements are made.

E-Mail JWinick@slb.com

Turnaround Time Requested:

☒ Standard (3 to 5 Business Days)

☐ 24 Hour Rush

☐ 2 Hour Rush (Asbestos Only)

☐ Other _____

Procedure Requested:

ASBESTOS

Bulk ☐ Standard EPA

☐ Progressive

☐ Point Count

☐ Other

XRD

☐ Respirable Silica

☐ Bulk Silica

☒ Scan & Search

☒ Other

Semi-quant of sample spike

OTHER

☐ Optical Microscopy

☐ Gravimetric

☐ SEM

☐ Other

Air ☐ NIOSH 7400

☐ OSHA ID-160

☐ Other

ADDITIONAL INFORMATION Please provide as much info
as possible on carbonate fraction, if present. If not
present, indicate as non-detect

Client Sample No.:

Sample Date

Air Volume

Other Information

1 See Attached List Please

2 _____

3 _____

4 _____

5 _____

6 _____

7 _____

8 _____

9 _____

10 _____

Relinquished By:

Date/Time

Received By:

Date/Time

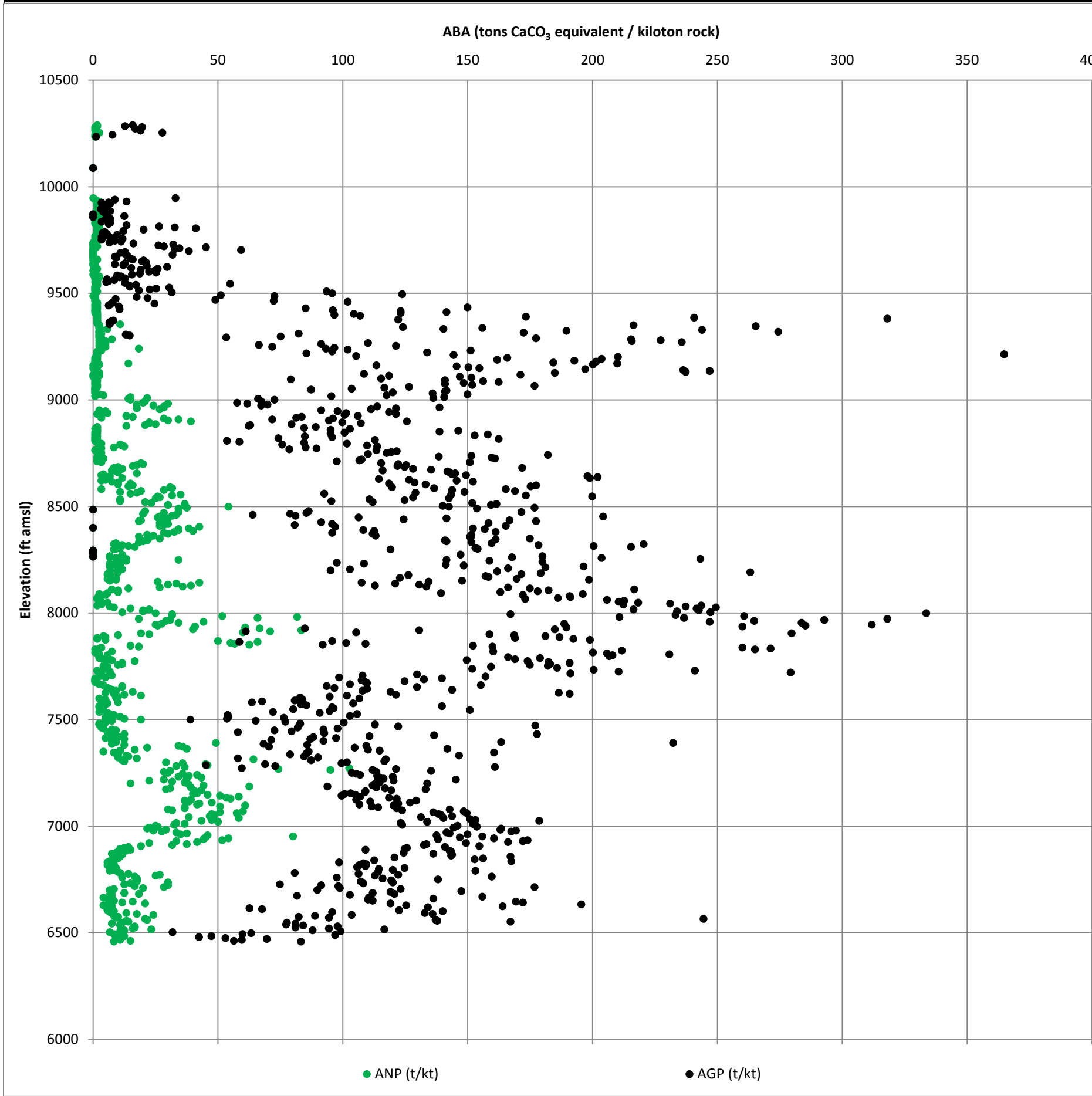
Wendy M. Brice 6:30-15/12/15

L Number	Sample Number	Hole ID	From	To	Interval	Static/Kinetic
L24525-01	CPC14-3/1800-2600/Kinetic ✓	CPC14-3	1800	2600	800	Kinetic
L24916-01	CPC14-3/2600-3400/Kinetic ✓	CPC14-3	2600	3400	800	Kinetic
L24527-01	CPC14-3/3400-4200/Kinetic ✓	CPC14-3	3400	4200	800	Kinetic
L24518-01	CPC14-3/1800-2000/Static ✓	CPC14-3	1800	2000	200	Static
L24518-02	CPC14-3/2000-2200/Static ✓	CPC14-3	2000	2200	200	Static
L24518-03	CPC14-3/2200-2400/Static ✓	CPC14-3	2200	2400	200	Static
L24518-04	CPC14-3/2400-2600/Static ✓	CPC14-3	2400	2600	200	Static
L24526-01	CPC14-3/3400-3600/Static ✓	CPC14-3	3400	3600	200	Static
L24526-02	CPC14-3/3600-3800/Static ✓	CPC14-3	3600	3800	200	Static
L24526-03	CPC14-3/3800-4000/Static ✓	CPC14-3	3800	4000	200	Static
L24526-04	CPC14-3/4000-4200/Static ✓	CPC14-3	4000	4200	200	Static
L24915-01	CPC14-3/2600-2800/Static ✓	CPC14-3	2600	2800	200	Static
L24915-02	CPC14-3/2800-3000/Static ✓	CPC14-3	2800	3000	200	Static
L24915-03	CPC14-3/3000-3200/Static ✓	CPC14-3	3000	3200	200	Static
L24915-04	CPC14-3/3200-3400/Static ✓	CPC14-3	3200	3400	200	Static
L24915-05	CPC14-3/4200-4400/Static	CPC14-3	4200	4400	200	Static

APPENDIX 3.3

CPC14-3 - LECO TESTING RESULTS

G:\Dropbox (ABC)\AB PROJECTS\1395_CC&V\UG15_Projects1_Phase I\CPC14-36_Report\0_Workbook\CPC14-03_25-Final.xls\A3.3_ABA



ACID BASE ACCOUNTING CONVERSIONS

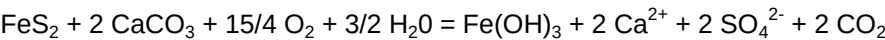
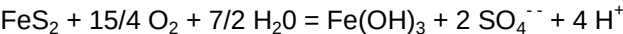
MOLECULAR WEIGHTS

MW(C)	12.0	MW(O)	16.0	MW(CaCO ₃)	100.1
MW(Ca)	40.1	MW(S)	32.1	MW(FeS ₂)	120.0
MW(Fe)	55.8				

ACID GENERATING CAPACITY (AGP)

AGP = tons of CaCO₃ required to neutralize sulfide oxidation from 1000 tons of material

Total Oxidation Of Pyrite To Ferric Hydroxide Solid



Pyrite Oxidation and Neutralization

1	g.mol FeS ₂ requires	2	g.mol CaCO ₃ to neutralize
120.0	g of FeS ₂ requires	200.2	g of CaCO ₃ for neutralization
1.0	g of FeS ₂ requires	1.67	g of CaCO ₃ for neutralization
1%	FeS ₂ requires	1.67%	CaCO ₃ for neutralization
1%	FeS ₂ is equivalent to	16.68	tons/kiloton AGP as CaCO ₃

Sulfur Oxidation and Neutralization

1.0	g of FeS ₂ contains	0.535	g of S
0.535	g of S requires	1.67	g of CaCO ₃ for neutralization
1.0	g of S requires	3.12	g of CaCO ₃ for neutralization
1%	S requires	3.12%	CaCO ₃ for neutralization
1%	S is equivalent to	31.2	tons/kiloton AGP as CaCO ₃

ACID NEUTRALIZING CAPACITY (ANP)

ANP = Tons of CaCO₃ per 1000 tons of material

1	ton of C is equivalent to	8.342	tons of CaCO ₃
1%	of C by weight =	0.083	tons/ton of CaCO ₃
1%	of C by weight =	83.417	tons/kt of CaCO ₃

ACID-BASE ACCOUNTING - CPC13-4

From (ft amsl)	To (ft amsl)	Total C %	ANP (t CaCO ₃ /Kt)	Total S %	AGP (t CaCO ₃ /Kt)
10000	10500	0.015	1.3	0.485	15.1
9500	10000	0.014	1.2	0.539	16.8
9000	9500	0.030	2.5	4.098	127.8
8500	9000	0.145	12.1	3.845	119.9
8000	8500	0.209	17.5	5.166	161.1
7500	8000	0.191	15.9	5.068	158.0
7000	7500	0.375	31.2	3.609	112.5
6500	7000	0.201	16.8	4.040	126.0
6000	6500	0.126	10.5	2.026	63.2
Average		0.167	13.9	3.782	118.0



Notes: Data obtained as Total C and Total S from LECO furnace analysis on samples taken every 5 feet down hole
ANP (ton CaCO₃ per 1000 tons rock) = 81.42 * Total C (%)
AGP (ton CaCO₃ equivalent per 1000 tons rock) = 31.2 * Total S (%)

Scale:	No Scale	CPC14-3 - Deep Carbonate Borehole Report
Drawn:	A.Brown	APPENDIX 3.3
Date:	09-Dec-2015	ACID BASE ACCOUNTING

HOLE NUMBER	SAMPLE NUMBER	Depth from (ft)	Depth to (ft)	Average Depth (ft)	X (ft)	Y (ft)	Z (ft)	LECO Total Carbon (%)	LECO Total Sulfur (%)	Acid Neutralizing Potential (t/kt)	Acid Generating Potential (t/kt)	Net Neutralizing Potential (t/Kt)
CPC14-3	EXPACPC14-3-001	72.5	77	74.75	38138	62694	10286	0.02	0.51	1.67	15.90	-14.24
CPC14-3	EXPACPC14-3-002	77	82	79.5	38139	62695	10282	0.02	0.41	1.67	12.79	-11.12
CPC14-3	EXPACPC14-3-003	82	87	84.5	38140	62696	10277	0.01	0.63	0.83	19.65	-18.81
CPC14-3	EXPACPC14-3-004	87	97	92	38143	62698	10267	0.01	0.54	0.83	16.84	-16.01
CPC14-3	EXPACPC14-3-005	97	107	102	38145	62700	10258	0.01	0.61	0.83	19.02	-18.19
CPC14-3	EXPACPC14-3-006	107	117	112	38148	62702	10248	0.03	0.89	2.50	27.75	-25.25
CPC14-3	EXPACPC14-3-007	117	127	122	38150	62704	10239	0.01	0.25	0.83	7.80	-6.96
CPC14-3	EXPACPC14-3-008	127	137	132	38153	62706	10229	0.01	0.04	0.83	1.25	-0.41
CPC14-3	EXPACPC14-3-009	137	440	288.5	38235	62787	9950					
CPC14-3	EXPACPC14-3-010	440	447	443.5	38237	62789	9943	0.001	1.06	0.08	33.05	-32.97
CPC14-3	EXPACPC14-3-011	447	457	452	38240	62793	9935	0.01	0.28	0.83	8.73	-7.90
CPC14-3	EXPACPC14-3-012	457	466	461.5	38243	62796	9927	0.03	0.43	2.50	13.41	-10.91
CPC14-3	EXPACPC14-3-013	466	467	466.5	38243	62796	9926	0.03	0.2	2.50	6.24	-3.73
CPC14-3	EXPACPC14-3-014	467	469	468	38244	62797	9924	0.02	0.11	1.67	3.43	-1.76
CPC14-3	EXPACPC14-3-015	469	477	473	38246	62800	9917	0.02	0.22	1.67	6.86	-5.19
CPC14-3	EXPACPC14-3-016	477	487	482	38249	62803	9908	0.02	0.17	1.67	5.30	-3.63
CPC14-3	EXPACPC14-3-017	487	497	492	38252	62807	9899	0.03	0.17	2.50	5.30	-2.80
CPC14-3	EXPACPC14-3-018	497	506	501.5	38255	62810	9891	0.02	0.1	1.67	3.12	-1.45
CPC14-3	EXPACPC14-3-019	506	510	508	38256	62811	9888	0.05	0.13	4.17	4.05	0.12
CPC14-3	EXPACPC14-3-020	510	515	512.5	38258	62813	9883	0.02	0.22	1.67	6.86	-5.19
CPC14-3	EXPACPC14-3-021	515	517	516	38259	62814	9881	0.02	0.13	1.67	4.05	-2.39
CPC14-3	EXPACPC14-3-022	517	522	519.5	38260	62815	9877	0.02	0.15	1.67	4.68	-3.01
CPC14-3	EXPACPC14-3-023	522	537	529.5	38265	62821	9864					
CPC14-3	EXPACPC14-3-024	537	542	539.5	38266	62822	9859	0.03	0.4	2.50	12.47	-9.97
CPC14-3	EXPACPC14-3-025	542	547	544.5	38268	62824	9855					
CPC14-3	EXPACPC14-3-026	547	551	549	38269	62825	9851	0.05	0.19	4.17	5.92	-1.75
CPC14-3	EXPACPC14-3-027	551	555	553	38270	62827	9848	0.02	0.22	1.67	6.86	-5.19
CPC14-3	EXPACPC14-3-028	555	559	557	38272	62828	9844	0.03	0.16	2.50	4.99	-2.49
CPC14-3	EXPACPC14-3-029	559	567	563	38274	62831	9837	0.01	0.19	0.83	5.92	-5.09
CPC14-3	EXPACPC14-3-030	567	571	569	38275	62833	9834	0.02	0.11	1.67	3.43	-1.76
CPC14-3	EXPACPC14-3-031	571	577	574	38277	62835	9828	0.01	0.22	0.83	6.86	-6.03
CPC14-3	EXPACPC14-3-032	577	584	580.5	38279	62837	9822	0.01	0.2	0.83	6.24	-5.40
CPC14-3	EXPACPC14-3-033	584	591	587.5	38282	62840	9816	0.02	0.43	1.67	13.41	-11.74
CPC14-3	EXPACPC14-3-034	591	597	594	38284	62842	9811	0.03	0.85	2.50	26.51	-24.00
CPC14-3	EXPACPC14-3-035	597	602	599.5	38285	62843	9806	0.02	1.05	1.67	32.74	-31.07
CPC14-3	EXPACPC14-3-036	602	607	604.5	38287	62845	9802	0.02	1.32	1.67	41.16	-39.49
CPC14-3	EXPACPC14-3-037	607	616	611.5	38289	62848	9794	0.02	0.65	1.67	20.27	-18.60
CPC14-3	EXPACPC14-3-038	616	620	618	38291	62850	9790	0.02	0.39	1.67	12.16	-10.49
CPC14-3	EXPACPC14-3-039	620	627	623.5	38293	62852	9784	0.02	0.15	1.67	4.68	-3.01
CPC14-3	EXPACPC14-3-040	627	632	629.5	38294	62854	9780	0.02	0.12	1.67	3.74	-2.07
CPC14-3	EXPACPC14-3-041	632	636	634	38296	62856	9776	0.03	0.18	2.50	5.61	-3.11
CPC14-3	EXPACPC14-3-042	636	642	639	38297	62858	9771	0.02	0.31	1.67	9.67	-8.00
CPC14-3	EXPACPC14-3-043	642	647	644.5	38299	62859	9767	0.01	0.15	0.83	4.68	-3.84
CPC14-3	EXPACPC14-3-044	647	652	649.5	38300	62861	9762	0.02	0.11	1.67	3.43	-1.76
CPC14-3	EXPACPC14-3-045	652	657	654.5	38302	62863	9758	0.01	0.23	0.83	7.17	-6.34
CPC14-3	EXPACPC14-3-046	657	662	659.5	38303	62865	9753	0.03	0.38	2.50	11.85	-9.35
CPC14-3	EXPACPC14-3-047	662	667	664.5	38305	62867	9749	0.02	0.11	1.67	3.43	-1.76
CPC14-3	EXPACPC14-3-048	667	672	669.5	38307	62868	9745	0.02	0.28	1.67	8.73	-7.06
CPC14-3	EXPACPC14-3-049	672	677	674.5	38308	62870	9740	0.02	0.36	1.67	11.23	-9.56
CPC14-3	EXPACPC14-3-050	677	682	679.5	38310	62872	9736	0.001	0.21	0.08	6.55	-6.47
CPC14-3	EXPACPC14-3-051	682	687	684.5	38311	62874	9731	0.001	0.52	0.08	16.22	-16.13
CPC14-3	EXPACPC14-3-052	687	692	689.5	38313	62875	9727	0.001	1.03	0.08	32.12	-32.04
CPC14-3	EXPACPC14-3-053	692	697	694.5	38314	62877	9722	0.001	0.84	0.08	26.19	-26.11
CPC14-3	EXPACPC14-3-054	697	702	699.5	38316	62879	9718	0.02	0.91	1.67	28.38	-26.71
CPC14-3	EXPACPC14-3-055	702	707	704.5	38317	62881	9714	0.001	1.45	0.08	45.22	-45.13
CPC14-3	EXPACPC14-3-056	707	712	709.5	38319	62882	9709	0.01	1.11	0.83	34.61	-33.78
CPC14-3	EXPACPC14-3-057	712	717	714.5	38320	62884	9705	0.001	1.05	0.08	32.74	-32.66
CPC14-3	EXPACPC14-3-058	717	722	719.5	38322	62886	9700	0.001	1.9	0.08	59.25	-59.17
CPC14-3	EXPACPC14-3-059	722	727	724.5	38323	62888	9696	0.001	1.23	0.08	38.36	-38.27
CPC14-3	EXPACPC14-3-060	727	732	729.5	38325	62890	9692	0.001	0.41	0.08	12.79	-12.70
CPC14-3	EXPACPC14-3-061	732	737	734.5	38326	62891	9687	0.001	0.35	0.08	10.91	-10.83
CPC14-3	EXPACPC14-3-062	737	742	739.5	38328	62893	9683	0.001	0.41	0.08	12.79	-12.70
CPC14-3	EXPACPC14-3-063	742	747	744.5	38329	62895	9678	0.001	1.02	0.08	31.81	-31.72
CPC14-3	EXPACPC14-3-064	747	752	749.5	38331	62897	9674	0.001	0.44	0.08	13.72	-13.64
CPC14-3	EXPACPC14-3-065	752	757	754.5	38333	62899	9669	0.001	0.28	0.08	8.73	-8.65
CPC14-3	EXPACPC14-3-066	757	762	759.5	38334	62900	9665	0.001	0.3	0.08	9.36	-9.27
CPC14-3	EXPACPC14-3-067	762	767	764.5	38336	62902	9661	0.001	0.48	0.08	14.97	-14.88
CPC14-3	EXPACPC14-3-068	767	772	769.5	38337	62904	9656	0.02	0.51	1.67	15.90	-14.24
CPC14-3	EXPACPC14-3-069	772	777	774.5	38339	62906	9652	0.001	0.65	0.08	20.27	-20.19
CPC14-3	EXPACPC14-3-070	777	782	779.5	38340	62908	9647	0.01	0.63	0.83	19.65	-18.81
CPC14-3	EXPACPC14-3-071	782	787	784.5	38342	62910	9643	0.01	0.68	0.83	21.20	-20.37
CPC14-3	EXPACPC14-3-072	787	792	789.5	38343	62911	9639	0.001	0.41	0.08	12.79	-12.70
CPC14-3	EXPACPC14-3-073	792	797	794.5	38345	62913	9634	0.001	0.28	0.08	8.73	-8.65
CPC14-3	EXPACPC14-3-074	797	802	799.5	38346	62915	9630	0.001	0.39	0.08	12.16	-12.08
CPC14-3	EXPACPC14-3-075	802	807	804.5	38348	62917	9625	0.01	0.69	0.83	21.52	-20.68
CPC14-3	EXPACPC14-3-076	807	812	809.5	38349	62919	9621	0.01	0.95	0.83	29.62	-28.79
CPC14-3	EXPACPC14-3-077	812	817	814.5	38351	62920	9617	0.01	0.49	0.83	15.28	-14.45
CPC14-3	EXPACPC14-3-078	817	822	819.5	38352	62922	9612	0.02	0.83	1.67	25.88	-24.21
CPC14-3	EXPACPC14-3-079	822	827	824.5	38354	62924	9608	0.01	0.61	0.83	19.02	-18.19
CPC14-3	EXPACPC14-3-080	827	832	829.5	38355	62926	9603	0.001	0.79	0.08	24.64	-24.55
CPC14-3	EXPACPC14-3-081	832	837	834.5	38357	62928	9599	0.01	0.72	0.83	22.45	-21.62
CPC14-3	EXPACPC14-3-082	837	842	839.5	38358	62929	9595	0.01	0.81	0.83	25.26	-24.42

HOLE NUMBER	SAMPLE NUMBER	Depth from (ft)	Depth to (ft)	Average Depth (ft)	X (ft)	Y (ft)	Z (ft)	LECO Total Carbon (%)	LECO Total Sulfur (%)	Acid Neutralizing Potential (t/kt)	Acid Generating Potential (t/kt)	Net Neutralizing Potential (t/Kt)
CPC14-3	EXPACPC14-3-083	842	847	844.5	38360	62931	9590	0.01	0.6	0.83	18.71	-17.88
CPC14-3	EXPACPC14-3-084	847	852	849.5	38361	62933	9586	0.001	0.5	0.08	15.59	-15.51
CPC14-3	EXPACPC14-3-085	852	857	854.5	38363	62935	9581	0.01	0.31	0.83	9.67	-8.83
CPC14-3	EXPACPC14-3-086	857	862	859.5	38365	62937	9577	0.03	0.36	2.50	11.23	-8.72
CPC14-3	EXPACPC14-3-087	862	867	864.5	38366	62938	9573	0.03	0.34	2.50	10.60	-8.10
CPC14-3	EXPACPC14-3-088	867	872	869.5	38368	62940	9568	0.01	0.41	0.83	12.79	-11.95
CPC14-3	EXPACPC14-3-089	872	877	874.5	38369	62942	9564	0.01	0.18	0.83	5.61	-4.78
CPC14-3	EXPACPC14-3-090	877	882	879.5	38371	62944	9559	0.02	0.27	1.67	8.42	-6.75
CPC14-3	EXPACPC14-3-091	882	887	884.5	38372	62946	9555	0.02	0.2	1.67	6.24	-4.57
CPC14-3	EXPACPC14-3-092	887	892	889.5	38374	62947	9551	0.01	0.17	0.83	5.30	-4.47
CPC14-3	EXPACPC14-3-093	892	897	894.5	38375	62949	9546	0.02	0.41	1.67	12.79	-11.12
CPC14-3	EXPACPC14-3-094	897	902	899.5	38377	62951	9542	0.02	1.76	1.67	54.88	-53.22
CPC14-3	EXPACPC14-3-095	902	907	904.5	38379	62953	9537	0.02	0.55	1.67	17.15	-15.48
CPC14-3	EXPACPC14-3-096	907	912	909.5	38380	62954	9533	0.02	0.47	1.67	14.66	-12.99
CPC14-3	EXPACPC14-3-097	912	917	914.5	38382	62956	9529	0.01	0.47	0.83	14.66	-13.82
CPC14-3	EXPACPC14-3-098	917	922	919.5	38383	62958	9524	0.01	0.98	0.83	30.56	-29.73
CPC14-3	EXPACPC14-3-099	922	927	924.5	38385	62960	9520	0.01	0.81	0.83	25.26	-24.42
CPC14-3	EXPACPC14-3-100	927	932	929.5	38386	62961	9515	0.01	0.73	0.83	22.76	-21.93
CPC14-3	EXPACPC14-3-101	932	937	934.5	38388	62963	9511	0.01	0.59	0.83	18.40	-17.56
CPC14-3	EXPACPC14-3-102	937	942	939.5	38390	62965	9507	0.02	3	1.67	93.55	-91.88
CPC14-3	EXPACPC14-3-103	942	947	944.5	38391	62967	9502	0.01	1.01	0.83	31.50	-30.66
CPC14-3	EXPACPC14-3-104	947	952	949.5	38393	62969	9498	0.01	3.07	0.83	95.73	-94.90
CPC14-3	EXPACPC14-3-105	952	957	954.5	38394	62970	9493	0.01	3.97	0.83	123.80	-122.97
CPC14-3	EXPACPC14-3-106	957	962	959.5	38396	62972	9489	0.01	1.64	0.83	51.14	-50.31
CPC14-3	EXPACPC14-3-107	962	967	964.5	38397	62974	9484	0.001	2.33	0.08	72.66	-72.57
CPC14-3	EXPACPC14-3-108	967	972	969.5	38399	62976	9480	0.01	0.56	0.83	17.46	-16.63
CPC14-3	EXPACPC14-3-109	972	977	974.5	38400	62977	9476	0.01	0.7	0.83	21.83	-20.99
CPC14-3	EXPACPC14-3-110	977	982	979.5	38402	62979	9471	0.01	0.29	0.83	9.04	-8.21
CPC14-3	EXPACPC14-3-111	982	987	984.5	38404	62981	9467	0.01	1.57	0.83	48.96	-48.12
CPC14-3	EXPACPC14-3-112	987	992	989.5	38405	62983	9462	0.01	2.32	0.83	72.35	-71.51
CPC14-3	EXPACPC14-3-113	992	997	994.5	38407	62985	9458	0.01	3.27	0.83	101.97	-101.14
CPC14-3	EXPACPC14-3-114	997	1002	999.5	38408	62986	9454	0.02	0.25	1.67	7.80	-6.13
CPC14-3	EXPACPC14-3-115	1002	1007	1004.5	38410	62988	9449	0.02	0.79	1.67	24.64	-22.97
CPC14-3	EXPACPC14-3-116	1007	1012	1009.5	38412	62990	9445	0.01	0.22	0.83	6.86	-6.03
CPC14-3	EXPACPC14-3-117	1012	1017	1014.5	38413	62992	9440	0.01	0.2	0.83	6.24	-5.40
CPC14-3	EXPACPC14-3-118	1017	1022	1019.5	38415	62993	9436	0.02	0.33	1.67	10.29	-8.62
CPC14-3	EXPACPC14-3-119	1022	1027	1024.5	38416	62995	9432	0.01	4.81	0.83	149.99	-149.16
CPC14-3	EXPACPC14-3-120	1027	1032	1029.5	38418	62997	9427	0.02	2.73	1.67	85.13	-83.46
CPC14-3	EXPACPC14-3-121	1032	1037	1034.5	38419	62999	9423	0.01	0.34	0.83	10.60	-9.77
CPC14-3	EXPACPC14-3-122	1037	1042	1039.5	38421	63000	9418	0.01	3.08	0.83	96.05	-95.21
CPC14-3	EXPACPC14-3-123	1042	1047	1044.5	38423	63002	9414	0.01	3.95	0.83	123.18	-122.34
CPC14-3	EXPACPC14-3-124	1047	1052	1049.5	38424	63004	9410	0.02	4.54	1.67	141.57	-139.91
CPC14-3	EXPACPC14-3-125	1052	1057	1054.5	38426	63006	9405	0.01	3.95	0.83	123.18	-122.34
CPC14-3	EXPACPC14-3-126	1057	1062	1059.5	38427	63008	9401	0.02	3.35	1.67	104.47	-102.80
CPC14-3	EXPACPC14-3-127	1062	1067	1064.5	38429	63009	9396	0.02	3.1	1.67	96.67	-95.00
CPC14-3	EXPACPC14-3-128	1067	1072	1069.5	38430	63011	9392	0.02	3.43	1.67	106.96	-105.29
CPC14-3	EXPACPC14-3-129	1072	1077	1074.5	38432	63013	9388	0.02	5.56	1.67	173.38	-171.71
CPC14-3	EXPACPC14-3-130	1077	1082	1079.5	38434	63015	9383	0.02	7.72	1.67	240.74	-239.07
CPC14-3	EXPACPC14-3-131	1082	1087	1084.5	38435	63016	9379	0.02	10.2	1.67	318.07	-316.41
CPC14-3	EXPACPC14-3-132	1087	1092	1089.5	38437	63018	9374	0.02	3.92	1.67	122.24	-120.57
CPC14-3	EXPACPC14-3-133	1092	1097	1094.5	38438	63020	9370	0.02	0.26	1.67	8.11	-6.44
CPC14-3	EXPACPC14-3-134	1097	1102	1099.5	38440	63022	9366	0.02	0.23	1.67	7.17	-5.50
CPC14-3	EXPACPC14-3-135	1102	1107	1104.5	38441	63023	9361	0.02	0.21	1.67	6.55	-4.88
CPC14-3	EXPACPC14-3-136	1107	1112	1109.5	38443	63025	9357	0.02	0.22	1.67	6.86	-5.19
CPC14-3	EXPACPC14-3-137	1112	1117	1114.5	38445	63027	9352	0.13	0.21	10.84	6.55	4.30
CPC14-3	EXPACPC14-3-138	1117	1122	1119.5	38446	63029	9348	0.03	6.94	2.50	216.42	-213.91
CPC14-3	EXPACPC14-3-139	1122	1127	1124.5	38448	63031	9344	0.03	8.51	2.50	265.37	-262.87
CPC14-3	EXPACPC14-3-140	1127	1132	1129.5	38449	63032	9339	0.03	3.98	2.50	124.11	-121.61
CPC14-3	EXPACPC14-3-141	1132	1137	1134.5	38451	63034	9335	0.03	5	2.50	155.92	-153.42
CPC14-3	EXPACPC14-3-142	1137	1142	1139.5	38453	63036	9330	0.07	4.5	5.84	140.33	-134.49
CPC14-3	EXPACPC14-3-143	1142	1147	1144.5	38454	63038	9326	0.04	7.82	3.34	243.86	-240.52
CPC14-3	EXPACPC14-3-144	1147	1152	1149.5	38456	63039	9322	0.03	6.08	2.50	189.60	-187.10
CPC14-3	EXPACPC14-3-145	1152	1157	1154.5	38457	63041	9317	0.03	8.8	2.50	274.42	-271.91
CPC14-3	EXPACPC14-3-146	1157	1162	1159.5	38459	63043	9313	0.03	5.53	2.50	172.45	-169.94
CPC14-3	EXPACPC14-3-147	1162	1167	1164.5	38460	63045	9308	0.04	2.64	3.34	82.33	-78.99
CPC14-3	EXPACPC14-3-148	1167	1172	1169.5	38462	63047	9304	0.03	0.42	2.50	13.10	-10.59
CPC14-3	EXPACPC14-3-149	1172	1177	1174.5	38464	63048	9300	0.03	0.47	2.50	14.66	-12.15
CPC14-3	EXPACPC14-3-150	1177	1182	1179.5	38465	63050	9295	0.03	2.41	2.50	75.15	-72.65
CPC14-3	EXPACPC14-3-151	1182	1187	1184.5	38467	63052	9291	0.03	1.71	2.50	53.32	-50.82
CPC14-3	EXPACPC14-3-152	1187	1192	1189.5	38468	63054	9286	0.04	5.69	3.34	177.44	-174.10
CPC14-3	EXPACPC14-3-153	1192	1197	1194.5	38470	63055	9282	0.09	6.91	7.51	215.48	-207.97
CPC14-3	EXPACPC14-3-154	1197	1202	1199.5	38471	63057	9278	0.03	7.29	2.50	227.33	-224.83
CPC14-3	EXPACPC14-3-155	1202	1207	1204.5	38473	63059	9273	0.06	6.92	5.01	215.79	-210.79
CPC14-3	EXPACPC14-3-156	1207	1212	1209.5	38475	63061	9269	0.04	7.56	3.34	235.75	-232.41
CPC14-3	EXPACPC14-3-157	1212	1217	1214.5	38476	63063	9264	0.03	3.53	2.50	110.08	-107.58
CPC14-3	EXPACPC14-3-158	1217	1222	1219.5	38478	63064	9260	0.06	2.93	5.01	91.37	-86.36
CPC14-3	EXPACPC14-3-159	1222	1227	1224.5	38479	63066	9256	0.04	2.13	3.34	66.42	-63.08
CPC14-3	EXPACPC14-3-160	1227	1232	1229.5	38481	63068	9251	0.03	3.89	2.50	121.30	-118.80
CPC14-3	EXPACPC14-3-161	1232	1237	1234.5	38482	63070	9247	0.06	2.3	5.01	71.72	-66.72
CPC14-3	EXPACPC14-3-162	1237	1242	1239.5	38484	63072	9242	0.04	3.1	3.34	96.67	-93.33
CPC14-3	EXPACPC14-3-163	1242	1247	1244.5	38486	63073	9238	0.22	2.99	18.35	93.24	-74.89
CPC14-3	EXPACPC14-3-164	1247	1252	1249.5	38487	63075	9234	0.04	3.27	3.34	101.97	-98.63
CPC14-3	EXPACPC14-3-165	1252	1257	1254.5	38489	63077	9229	0.04	4.85	3.34	151.24	-147.90
CPC14-3	EXPACPC14-3-166	1257	1262	1259.5	38490	63079	9225	0.02	3.07	1.67	95.73	-94.07
CPC14-3	EXPACPC14-3-167	1262	1267	1264.5	38492	63080	9221	0.02	4.29	1.67	133.78	-132.11
CPC14-3	EXPACPC14-3-168	1267	1272	1269.5	38494	63082	9216	0.02	2.74	1.67	85.44	-83.78
CPC14-3	EXPACPC14-3-169	1272	1277	1274.5	38495	63084	9212	0.02	11.7	1.67	364.85	-363.18

HOLE NUMBER	SAMPLE NUMBER	Depth from (ft)	Depth to (ft)	Average Depth (ft)	X (ft)	Y (ft)	Z (ft)	LECO Total Carbon (%)	LECO Total Sulfur (%)	Acid Neutralizing Potential (t/kt)	Acid Generating Potential (t/kt)	Net Neutralizing Potential (t/Kt)
CPC14-3	EXPACPC14-3-170	1277	1282	1279.5	38497	63086	9207	0.02	4.63	1.67	144.38	-142.71
CPC14-3	EXPACPC14-3-171	1282	1287	1284.5	38498	63088	9203	0.02	3.38	1.67	105.40	-103.73
CPC14-3	EXPACPC14-3-172	1287	1292	1289.5	38500	63089	9199	0.02	6.74	1.67	210.18	-208.51
CPC14-3	EXPACPC14-3-173	1292	1297	1294.5	38502	63091	9194	0.01	5.32	0.83	165.90	-165.06
CPC14-3	EXPACPC14-3-174	1297	1302	1299.5	38503	63093	9190	0.02	6.53	1.67	203.63	-201.96
CPC14-3	EXPACPC14-3-175	1302	1307	1304.5	38505	63095	9185	0.01	5.19	0.83	161.84	-161.01
CPC14-3	EXPACPC14-3-176	1307	1312	1309.5	38506	63097	9181	0.01	6.18	0.83	192.72	-191.88
CPC14-3	EXPACPC14-3-177	1312	1317	1314.5	38508	63099	9177	0.02	6.46	1.67	201.45	-199.78
CPC14-3	EXPACPC14-3-178	1317	1322	1319.5	38510	63100	9172	0.01	5.91	0.83	184.30	-183.46
CPC14-3	EXPACPC14-3-179	1322	1327	1324.5	38511	63102	9168	0.17	6.73	14.18	209.87	-195.69
CPC14-3	EXPACPC14-3-180	1327	1332	1329.5	38513	63104	9164	0.03	6.42	2.50	200.20	-197.70
CPC14-3	EXPACPC14-3-181	1332	1337	1334.5	38514	63106	9159	0.001	3.64	0.08	113.51	-113.43
CPC14-3	EXPACPC14-3-182	1337	1342	1339.5	38516	63108	9155	0.01	4.67	0.83	145.63	-144.79
CPC14-3	EXPACPC14-3-183	1342	1347	1344.5	38518	63110	9151	0.02	4.82	1.67	150.31	-148.64
CPC14-3	EXPACPC14-3-184	1347	1352	1349.5	38519	63111	9146	0.001	4.96	0.08	154.67	-154.59
CPC14-3	EXPACPC14-3-185	1352	1357	1354.5	38521	63113	9142	0.01	6.32	0.83	197.08	-196.25
CPC14-3	EXPACPC14-3-186	1357	1362	1359.5	38523	63115	9137	0.01	7.58	0.83	236.37	-235.54
CPC14-3	EXPACPC14-3-187	1362	1367	1364.5	38524	63117	9133	0.02	7.92	1.67	246.98	-245.31
CPC14-3	EXPACPC14-3-188	1367	1372	1369.5	38526	63119	9129	0.01	7.61	0.83	237.31	-236.47
CPC14-3	EXPACPC14-3-189	1372	1377	1374.5	38527	63121	9124	0.03	5.93	2.50	184.92	-182.42
CPC14-3	EXPACPC14-3-190	1377	1382	1379.5	38529	63122	9120	0.01	3.48	0.83	108.52	-107.69
CPC14-3	EXPACPC14-3-191	1382	1387	1384.5	38531	63124	9116	0.001	5.49	0.08	171.20	-171.12
CPC14-3	EXPACPC14-3-192	1387	1392	1389.5	38532	63126	9111	0.03	3.8	2.50	118.50	-116.00
CPC14-3	EXPACPC14-3-193	1392	1397	1394.5	38534	63128	9107	0.001	4.71	0.08	146.88	-146.79
CPC14-3	EXPACPC14-3-194	1397	1402	1399.5	38535	63130	9103	0.01	4.86	0.83	151.55	-150.72
CPC14-3	EXPACPC14-3-195	1402	1407	1404.5	38537	63131	9098	0.01	3.7	0.83	115.38	-114.55
CPC14-3	EXPACPC14-3-196	1407	1412	1409.5	38539	63133	9094	0.01	2.54	0.83	79.21	-78.37
CPC14-3	EXPACPC14-3-197	1412	1417	1414.5	38540	63135	9089	0.01	4.52	0.83	140.95	-140.12
CPC14-3	EXPACPC14-3-198	1417	1422	1419.5	38542	63137	9085	0.02	5.01	1.67	156.23	-154.56
CPC14-3	EXPACPC14-3-199	1422	1427	1424.5	38543	63139	9081	0.01	5.21	0.83	162.47	-161.63
CPC14-3	EXPACPC14-3-200	1427	1432	1429.5	38545	63141	9076	0.01	4.76	0.83	148.43	-147.60
CPC14-3	EXPACPC14-3-201	1432	1437	1434.5	38547	63142	9072	0.01	4.52	0.83	140.95	-140.12
CPC14-3	EXPACPC14-3-202	1437	1442	1439.5	38548	63144	9068	0.02	4.87	1.67	151.87	-150.20
CPC14-3	EXPACPC14-3-203	1442	1447	1444.5	38550	63146	9063	0.01	5.67	0.83	176.81	-175.98
CPC14-3	EXPACPC14-3-204	1447	1452	1449.5	38552	63148	9059	0.02	4.06	1.67	126.61	-124.94
CPC14-3	EXPACPC14-3-205	1452	1457	1454.5	38553	63150	9054	0.01	3.74	0.83	116.63	-115.79
CPC14-3	EXPACPC14-3-206	1457	1462	1459.5	38555	63151	9050	0.01	3.32	0.83	103.53	-102.70
CPC14-3	EXPACPC14-3-207	1462	1467	1464.5	38557	63153	9046	0.01	2.8	0.83	87.31	-86.48
CPC14-3	EXPACPC14-3-208	1467	1472	1469.5	38558	63155	9041	0.01	4.54	0.83	141.57	-140.74
CPC14-3	EXPACPC14-3-209	1472	1477	1474.5	38560	63157	9037	0.01	4.52	0.83	140.95	-140.12
CPC14-3	EXPACPC14-3-210	1477	1482	1479.5	38561	63159	9033	0.01	3.85	0.83	120.06	-119.22
CPC14-3	EXPACPC14-3-211	1482	1487	1484.5	38563	63160	9028	0.01	4.36	0.83	135.96	-135.13
CPC14-3	EXPACPC14-3-212	1487	1492	1489.5	38565	63162	9024	0.03	4.81	2.50	149.99	-147.49
CPC14-3	EXPACPC14-3-213	1492	1497	1494.5	38566	63164	9020	0.05	3.77	4.17	117.56	-113.39
CPC14-3	EXPACPC14-3-214	1497	1502	1499.5	38568	63166	9015	0.01	3.06	0.83	95.42	-94.59
CPC14-3	EXPACPC14-3-215	1502	1507	1504.5	38570	63168	9011	0.18	4.51	15.02	140.64	-125.62
CPC14-3	EXPACPC14-3-216	1507	1512	1509.5	38571	63170	9007	0.26	4.37	21.69	136.27	-114.58
CPC14-3	EXPACPC14-3-217	1512	1517	1514.5	38573	63171	9002	0.17	2.12	14.18	66.11	-51.93
CPC14-3	EXPACPC14-3-218	1517	1522	1519.5	38575	63173	8998	0.18	2.33	15.02	72.66	-57.64
CPC14-3	EXPACPC14-3-219	1522	1533	1527.5	38578	63177	8988	0.25	2.16	20.85	67.36	-46.50
CPC14-3	EXPACPC14-3-220	1533	1538	1535.5	38580	63179	8984	0.24	1.85	20.02	57.69	-37.67
CPC14-3	EXPACPC14-3-221	1538	1543	1540.5	38582	63181	8979	0.36	1.98	30.03	61.74	-31.71
CPC14-3	EXPACPC14-3-222	1543	1548	1545.5	38583	63182	8975	0.21	2.24	17.52	69.85	-52.33
CPC14-3	EXPACPC14-3-223	1548	1553	1550.5	38585	63184	8971	0.29	2.16	24.19	67.36	-43.17
CPC14-3	EXPACPC14-3-224	1553	1558	1555.5	38587	63186	8966	0.34	3.65	28.36	113.82	-85.46
CPC14-3	EXPACPC14-3-225	1558	1563	1560.5	38588	63188	8962	0.34	4.45	28.36	138.77	-110.41
CPC14-3	EXPACPC14-3-226	1563	1568	1565.5	38590	63190	8958	0.21	3.89	17.52	121.30	-103.79
CPC14-3	EXPACPC14-3-227	1568	1573	1570.5	38592	63191	8953	0.32	3.57	26.69	111.33	-84.63
CPC14-3	EXPACPC14-3-228	1573	1578	1575.5	38593	63193	8949	0.03	2.93	2.50	91.37	-88.87
CPC14-3	EXPACPC14-3-229	1578	1583	1580.5	38595	63195	8945	0.06	3.14	5.01	97.92	-92.91
CPC14-3	EXPACPC14-3-230	1583	1588	1585.5	38597	63197	8940	0.03	3.8	2.50	118.50	-116.00
CPC14-3	EXPACPC14-3-231	1588	1593	1590.5	38598	63199	8936	0.07	3.25	5.84	101.35	-95.51
CPC14-3	EXPACPC14-3-232	1593	1598	1595.5	38600	63200	8931	0.02	3.89	1.67	121.30	-119.64
CPC14-3	EXPACPC14-3-233	1598	1603	1600.5	38602	63202	8927	0.04	3.23	3.34	100.72	-97.39
CPC14-3	EXPACPC14-3-234	1603	1608	1605.5	38603	63204	8923	0.16	3.4	13.35	106.02	-92.68
CPC14-3	EXPACPC14-3-235	1608	1613	1610.5	38605	63206	8918	0.19	2.68	15.85	83.57	-67.72
CPC14-3	EXPACPC14-3-236	1613	1618	1615.5	38607	63208	8914	0.04	2.61	3.34	81.39	-78.05
CPC14-3	EXPACPC14-3-237	1618	1623	1620.5	38608	63209	8910	0.34	3.08	28.36	96.05	-67.68
CPC14-3	EXPACPC14-3-238	1623	1628	1625.5	38610	63211	8905	0.41	2.3	34.20	71.72	-37.52
CPC14-3	EXPACPC14-3-239	1628	1633	1630.5	38611	63213	8901	0.36	3.03	30.03	94.49	-64.46
CPC14-3	EXPACPC14-3-240	1633	1638	1635.5	38613	63215	8897	0.47	4.03	39.21	125.67	-86.46
CPC14-3	EXPACPC14-3-241	1638	1643	1640.5	38615	63217	8892	0.27	3.2	22.52	99.79	-77.27
CPC14-3	EXPACPC14-3-242	1643	1648	1645.5	38616	63218	8888	0.27	3.44	22.52	107.27	-84.75
CPC14-3	EXPACPC14-3-243	1648	1653	1650.5	38618	63220	8883	0.3	2.55	25.03	79.52	-54.49
CPC14-3	EXPACPC14-3-244	1653	1658	1655.5	38620	63222	8879	0.25	2.02	20.85	62.99	-42.14
CPC14-3	EXPACPC14-3-245	1658	1663	1660.5	38621	63224	8875	0.16	2	13.35	62.37	-49.02
CPC14-3	EXPACPC14-3-246	1663	1668	1665.5	38623	63225	8870	0.02	2.86	1.67	89.19	-87.52
CPC14-3	EXPACPC14-3-247	1668	1673	1670.5	38625	63227	8866	0.02	2.71	1.67	84.51	-82.84
CPC14-3	EXPACPC14-3-248	1673	1678	1675.5	38626	63229	8862	0.01	3.3	0.83	102.91	-102.07
CPC14-3	EXPACPC14-3-249	1678	1683	1680.5	38628	63231	8857	0.02	3.05	1.67	95.11	-93.44
CPC14-3	EXPACPC14-3-250	1683	1688	1685.5	38630	63233	8853	0.02	4.69	1.67	146.25	-144.58
CPC14-3	EXPACPC14-3-251	1688	1693	1690.5	38632	63234	8849	0.02	4.45	1.67	138.77	-137.10
CPC14-3	EXPACPC14-3-252	1693	1698	1695.5	38633	63236	8844	0.01	3.23	0.83	100.72	-99.89
CPC14-3	EXPACPC14-3-253	1698	1703	1700.5	38635	63238	8840	0.02	3.05	1.67	95.11	-93.44
CPC14-3	EXPACPC14-3-254	1703	1708	1705.5	38637	63240	8835	0.01	5.07	0.83	158.10	-157.27
CPC14-3	EXPACPC14-3-255	1708	1713	1710.5	38638	63241	8831	0.01	4.9	0.83	152.80	-151.97
CPC14-3	EXPACPC14-3-256	1713	1718	1715.5	38640	63243	8827	0.02	2.72	1.67	84.82	-83.15

HOLE NUMBER	SAMPLE NUMBER	Depth from (ft)	Depth to (ft)	Average Depth (ft)	X (ft)	Y (ft)	Z (ft)	LECO Total Carbon (%)	LECO Total Sulfur (%)	Acid Neutralizing Potential (t/kt)	Acid Generating Potential (t/kt)	Net Neutralizing Potential (t/Kt)
CPC14-3	EXPACPC14-3-257	1718	1723	1720.5	38642	63245	8822	0.01	3.07	0.83	95.73	-94.90
CPC14-3	EXPACPC14-3-258	1723	1728	1725.5	38644	63247	8818	0.01	2.38	0.83	74.22	-73.38
CPC14-3	EXPACPC14-3-259	1728	1733	1730.5	38645	63248	8814	0.02	5.21	1.67	162.47	-160.80
CPC14-3	EXPACPC14-3-260	1733	1738	1735.5	38647	63250	8809	0.01	3.62	0.83	112.89	-112.05
CPC14-3	EXPACPC14-3-261	1738	1743	1740.5	38649	63252	8805	0.01	1.72	0.83	53.64	-52.80
CPC14-3	EXPACPC14-3-262	1743	1748	1745.5	38650	63253	8801	0.02	1.88	1.67	58.63	-56.96
CPC14-3	EXPACPC14-3-263	1748	1753	1750.5	38652	63255	8796	0.02	2.71	1.67	84.51	-82.84
CPC14-3	EXPACPC14-3-264	1753	1758	1755.5	38654	63257	8792	0.04	3.26	3.34	101.66	-98.32
CPC14-3	EXPACPC14-3-265	1758	1763	1760.5	38655	63259	8788	0.13	2.43	10.84	75.78	-64.93
CPC14-3	EXPACPC14-3-266	1763	1768	1765.5	38657	63261	8783	0.14	3.52	11.68	109.77	-98.09
CPC14-3	EXPACPC14-3-267	1768	1773	1770.5	38659	63262	8779	0.15	3.65	12.51	113.82	-101.31
CPC14-3	EXPACPC14-3-268	1773	1778	1775.5	38660	63264	8774	0.1	2.73	8.34	85.13	-76.79
CPC14-3	EXPACPC14-3-269	1778	1783	1780.5	38662	63266	8770	0.04	2.87	3.34	89.50	-86.16
CPC14-3	EXPACPC14-3-270	1783	1788	1785.5	38664	63268	8766	0.03	2.52	2.50	78.58	-76.08
CPC14-3	EXPACPC14-3-271	1788	1793	1790.5	38665	63270	8761	0.01	3.64	0.83	113.51	-112.67
CPC14-3	EXPACPC14-3-272	1793	1798	1795.5	38667	63272	8757	0.03	3.9	2.50	121.62	-119.11
CPC14-3	EXPACPC14-3-273	1798	1803	1800.5	38669	63273	8753	0.02	3.83	1.67	119.43	-117.77
CPC14-3	EXPACPC14-3-274	1803	1808	1805.5	38670	63275	8748	0.04	3.77	3.34	117.56	-114.23
CPC14-3	EXPACPC14-3-275	1808	1813	1810.5	38672	63277	8744	0.03	3.53	2.50	110.08	-107.58
CPC14-3	EXPACPC14-3-276	1813	1818	1815.5	38674	63279	8740	0.03	5.84	2.50	182.11	-179.61
CPC14-3	EXPACPC14-3-277	1818	1823	1820.5	38675	63281	8735	0.03	4.86	2.50	151.55	-149.05
CPC14-3	EXPACPC14-3-278	1823	1828	1825.5	38677	63282	8731	0.03	4.44	2.50	138.46	-135.95
CPC14-3	EXPACPC14-3-279	1828	1833	1830.5	38679	63284	8727	0.02	5.12	1.67	159.66	-157.99
CPC14-3	EXPACPC14-3-280	1833	1838	1835.5	38680	63286	8722	0.05	5.16	4.17	160.91	-156.74
CPC14-3	EXPACPC14-3-281	1838	1843	1840.5	38682	63288	8718	0.03	3.45	2.50	107.58	-105.08
CPC14-3	EXPACPC14-3-282	1843	1848	1845.5	38684	63290	8714	0.02	3.42	1.67	106.65	-104.98
CPC14-3	EXPACPC14-3-283	1848	1853	1850.5	38686	63291	8709	0.02	3.13	1.67	97.61	-95.94
CPC14-3	EXPACPC14-3-284	1853	1858	1855.5	38687	63293	8705	0.04	4.84	3.34	150.93	-147.59
CPC14-3	EXPACPC14-3-285	1858	1863	1860.5	38689	63295	8700	0.23	3.7	19.19	115.38	-96.19
CPC14-3	EXPACPC14-3-286	1863	1868	1865.5	38691	63297	8696	0.24	3.92	20.02	122.24	-102.22
CPC14-3	EXPACPC14-3-287	1868	1873	1870.5	38692	63298	8692	0.21	4.02	17.52	125.36	-107.84
CPC14-3	EXPACPC14-3-288	1873	1878	1875.5	38694	63300	8687	0.19	3.91	15.85	121.93	-106.08
CPC14-3	EXPACPC14-3-289	1878	1883	1880.5	38696	63302	8683	0.12	4	10.01	124.74	-114.73
CPC14-3	EXPACPC14-3-290	1883	1888	1885.5	38698	63304	8679	0.1	5.51	8.34	171.82	-163.48
CPC14-3	EXPACPC14-3-291	1888	1893	1890.5	38699	63305	8674	0.14	4.11	11.68	128.17	-116.49
CPC14-3	EXPACPC14-3-292	1893	1898	1895.5	38701	63307	8670	0.13	4.34	10.84	135.34	-124.49
CPC14-3	EXPACPC14-3-293	1898	1903	1900.5	38703	63309	8666	0.09	3.72	7.51	116.00	-108.50
CPC14-3	EXPACPC14-3-294	1903	1908	1905.5	38704	63311	8661	0.11	4.55	9.18	141.89	-132.71
CPC14-3	EXPACPC14-3-295	1908	1913	1910.5	38706	63313	8657	0.12	4.58	10.01	142.82	-132.81
CPC14-3	EXPACPC14-3-296	1913	1918	1915.5	38708	63315	8653	0.21	4.65	17.52	145.00	-127.49
CPC14-3	EXPACPC14-3-297	1918	1923	1920.5	38710	63316	8648	0.05	4.61	4.17	143.76	-139.59
CPC14-3	EXPACPC14-3-298	1923	1928	1925.5	38711	63318	8644	0.04	4.79	3.34	149.37	-146.03
CPC14-3	EXPACPC14-3-299	1928	1933	1930.5	38713	63320	8640	0.08	6.35	6.67	198.02	-191.34
CPC14-3	EXPACPC14-3-300	1933	1938	1935.5	38715	63322	8635	0.05	6.48	4.17	202.07	-197.90
CPC14-3	EXPACPC14-3-301	1938	1943	1940.5	38717	63324	8631	0.14	6.38	11.68	198.95	-187.27
CPC14-3	EXPACPC14-3-302	1943	1948	1945.5	38718	63325	8627	0.07	3.67	5.84	114.44	-108.61
CPC14-3	EXPACPC14-3-303	1948	1953	1950.5	38720	63327	8622	0.06	4.06	5.01	126.61	-121.60
CPC14-3	EXPACPC14-3-304	1953	1958	1955.5	38722	63329	8618	0.04	4.67	3.34	145.63	-142.29
CPC14-3	EXPACPC14-3-305	1958	1963	1960.5	38724	63331	8614	0.09	4.88	7.51	152.18	-144.67
CPC14-3	EXPACPC14-3-306	1963	1968	1965.5	38725	63333	8609	0.12	4.13	10.01	128.79	-118.78
CPC14-3	EXPACPC14-3-307	1968	1973	1970.5	38727	63334	8605	0.18	3.8	15.02	118.50	-103.48
CPC14-3	EXPACPC14-3-308	1973	1978	1975.5	38729	63336	8601	0.12	4.27	10.01	133.15	-123.14
CPC14-3	EXPACPC14-3-309	1978	1983	1980.5	38730	63338	8596	0.19	5.69	15.85	177.44	-161.59
CPC14-3	EXPACPC14-3-310	1983	1988	1985.5	38732	63340	8592	0.17	5.62	14.18	175.25	-161.07
CPC14-3	EXPACPC14-3-311	1988	1993	1990.5	38734	63342	8588	0.37	3.84	30.86	119.75	-88.88
CPC14-3	EXPACPC14-3-312	1993	1998	1995.5	38736	63343	8583	0.38	4.38	31.70	136.59	-104.89
CPC14-3	EXPACPC14-3-313	1998	2003	2000.5	38737	63345	8579	0.04	5.3	3.34	165.27	-161.94
CPC14-3	EXPACPC14-3-314	2003	2008	2005.5	38739	63347	8575	0.34	4.61	28.36	143.76	-115.40
CPC14-3	EXPACPC14-3-315	2008	2013	2010.5	38741	63349	8570	0.23	5.42	19.19	169.02	-149.83
CPC14-3	EXPACPC14-3-316	2013	2018	2015.5	38743	63350	8566	0.13	4.77	10.84	148.75	-137.90
CPC14-3	EXPACPC14-3-317	2018	2023	2020.5	38745	63352	8562	0.21	4.14	17.52	129.10	-111.58
CPC14-3	EXPACPC14-3-318	2023	2028	2025.5	38746	63354	8557	0.18	2.97	15.02	92.62	-77.60
CPC14-3	EXPACPC14-3-319	2028	2033	2030.5	38748	63356	8553	0.42	4.6	35.04	143.45	-108.41
CPC14-3	EXPACPC14-3-320	2033	2038	2035.5	38750	63357	8549	0.38	5.56	31.70	173.38	-141.68
CPC14-3	EXPACPC14-3-321	2038	2043	2040.5	38752	63359	8544	0.31	6.41	25.86	199.89	-174.03
CPC14-3	EXPACPC14-3-322	2043	2048	2045.5	38753	63361	8540	0.32	4.11	26.69	128.17	-101.47
CPC14-3	EXPACPC14-3-323	2048	2053	2050.5	38755	63362	8536	0.3	4.57	25.03	142.51	-117.48
CPC14-3	EXPACPC14-3-324	2053	2058	2055.5	38757	63364	8531	0.13	3.55	10.84	110.70	-99.86
CPC14-3	EXPACPC14-3-325	2058	2063	2060.5	38758	63366	8527	0.13	4	10.84	124.74	-113.89
CPC14-3	EXPACPC14-3-326	2063	2068	2065.5	38760	63368	8523	0.13	3.06	10.84	95.42	-84.58
CPC14-3	EXPACPC14-3-327	2068	2073	2070.5	38762	63369	8518	0.25	3.59	20.85	111.95	-91.10
CPC14-3	EXPACPC14-3-328	2073	2078	2075.5	38763	63371	8514	0.28	4.87	23.36	151.87	-128.51
CPC14-3	EXPACPC14-3-329	2078	2083	2080.5	38765	63373	8509	0.44	5.18	36.70	161.53	-124.83
CPC14-3	EXPACPC14-3-330	2083	2088	2085.5	38767	63375	8505	0.36	5.11	30.03	159.35	-129.32
CPC14-3	EXPACPC14-3-331	2088	2093	2090.5	38768	63377	8501	0.44	4.49	36.70	140.02	-103.31
CPC14-3	EXPACPC14-3-332	2093	2098	2095.5	38770	63378	8496	0.65	4.57	54.22	142.51	-88.29
CPC14-3	EXPACPC14-3-333	2098	2103	2100.5	38772	63380	8492	0.45	5.67	37.54	176.81	-139.27
CPC14-3	EXPACPC14-3-334	2103	2106	2104.5	38773	63381	8489	0.41	4.93	34.20	153.74	-119.54
CPC14-3	EXPACPC14-3-335	2106	2116	2111	38776	63385	8481					
CPC14-3	EXPACPC14-3-336	2116	2121	2118.5	38778	63386	8476	0.25	2.77	20.85	86.38	-65.52
CPC14-3	EXPACPC14-3-337	2121	2126	2123.5	38779	63388	8472	0.41	5.5	34.20	171.51	-137.31
CPC14-3	EXPACPC14-3-338	2126	2131	2128.5	38781	63390	8467	0.34	2.74	28.36	85.44	-57.08
CPC14-3	EXPACPC14-3-339	2131	2136	2133.5	38783	63391	8463	0.24	2.53	20.02	78.90	-58.88
CPC14-3	EXPACPC14-3-340	2136	2141	2138.5	38784	63393	8459	0.4	2.05	33.37	63.93	-30.56
CPC14-3	EXPACPC14-3-341	2141	2146	2143.5	38786	63395	8454	0.38	2.6	31.70	81.08	-49.38
CPC14-3	EXPACPC14-3-342	2146	2151	2148.5	38788	63397	8450	0.32	6.55	26.69	204.25	-177.56
CPC14-3	EXPACPC14-3-343	2151	2156	2153.5	38790	63398	8445	0.31	3.41	25.86	106.34	-80.48

HOLE NUMBER	SAMPLE NUMBER	Depth from (ft)	Depth to (ft)	Average Depth (ft)	X (ft)	Y (ft)	Z (ft)	LECO Total Carbon (%)	LECO Total Sulfur (%)	Acid Neutralizing Potential (t/kt)	Acid Generating Potential (t/kt)	Net Neutralizing Potential (t/Kt)
CPC14-3	EXPACPC14-3-344	2156	2161	2158.5	38791	63400	8441	0.36	4.54	30.03	141.57	-111.54
CPC14-3	EXPACPC14-3-345	2161	2166	2163.5	38793	63402	8437	0.35	3.99	29.20	124.42	-95.23
CPC14-3	EXPACPC14-3-346	2166	2171	2168.5	38795	63403	8432	0.23	5.35	19.19	166.83	-147.65
CPC14-3	EXPACPC14-3-347	2171	2176	2173.5	38796	63405	8428	0.22	5.69	18.35	177.44	-159.08
CPC14-3	EXPACPC14-3-348	2176	2181	2178.5	38798	63407	8424	0.35	2.93	29.20	91.37	-62.17
CPC14-3	EXPACPC14-3-349	2181	2186	2183.5	38800	63409	8419	0.32	5.08	26.69	158.41	-131.72
CPC14-3	EXPACPC14-3-350	2186	2191	2188.5	38802	63410	8415	0.36	3.07	30.03	95.73	-65.70
CPC14-3	EXPACPC14-3-351	2191	2196	2193.5	38803	63412	8410	0.34	2.59	28.36	80.77	-52.40
CPC14-3	EXPACPC14-3-352	2196	2201	2198.5	38805	63414	8406	0.32	5.3	26.69	165.27	-138.58
CPC14-3	EXPACPC14-3-353	2201	2206	2203.5	38807	63415	8402	0.51	3.11	42.54	96.98	-54.44
CPC14-3	EXPACPC14-3-354	2206	2210.5	2208.25	38808	63417	8398					
CPC14-3	EXPACPC14-3-355	2210.5	2213	2211.75	38809	63418	8396	0.46	4.88	38.37	152.18	-113.81
CPC14-3	EXPACPC14-3-356	2213	2218	2215.5	38811	63419	8391	0.41	5.03	34.20	156.85	-122.65
CPC14-3	EXPACPC14-3-357	2218	2223	2220.5	38812	63421	8387	0.41	3.47	34.20	108.21	-74.01
CPC14-3	EXPACPC14-3-358	2223	2228	2225.5	38814	63423	8382	0.48	3.61	40.04	112.57	-72.53
CPC14-3	EXPACPC14-3-359	2228	2233	2230.5	38816	63425	8378	0.39	5.17	32.53	161.22	-128.69
CPC14-3	EXPACPC14-3-360	2233	2238	2235.5	38818	63426	8374	0.34	3.07	28.36	95.73	-67.37
CPC14-3	EXPACPC14-3-361	2238	2243	2240.5	38819	63428	8369	0.36	3.59	30.03	111.95	-81.92
CPC14-3	EXPACPC14-3-362	2243	2248	2245.5	38821	63430	8365	0.26	4.86	21.69	151.55	-129.86
CPC14-3	EXPACPC14-3-363	2248	2253	2250.5	38823	63431	8361	0.29	3.63	24.19	113.20	-89.01
CPC14-3	EXPACPC14-3-364	2253	2258	2255.5	38825	63433	8356	0.22	4.84	18.35	150.93	-132.58
CPC14-3	EXPACPC14-3-365	2258	2263	2260.5	38826	63435	8352	0.27	4.85	22.52	151.24	-128.72
CPC14-3	EXPACPC14-3-366	2263	2268	2265.5	38828	63436	8347	0.32	5.61	26.69	174.94	-148.25
CPC14-3	EXPACPC14-3-367	2268	2273	2270.5	38830	63438	8343	0.26	5.17	21.69	161.22	-139.53
CPC14-3	EXPACPC14-3-368	2273	2278	2275.5	38831	63440	8339	0.26	4.52	21.69	140.95	-119.26
CPC14-3	EXPACPC14-3-369	2278	2283	2280.5	38833	63441	8334	0.24	4.54	20.02	141.57	-121.55
CPC14-3	EXPACPC14-3-370	2283	2288	2285.5	38835	63443	8330	0.22	4.86	18.35	151.55	-133.20
CPC14-3	EXPACPC14-3-371	2288	2293	2290.5	38837	63445	8325	0.11	5.12	9.18	159.66	-150.49
CPC14-3	EXPACPC14-3-372	2293	2298	2295.5	38838	63446	8321	0.1	7.07	8.34	220.47	-212.13
CPC14-3	EXPACPC14-3-373	2298	2303	2300.5	38840	63448	8317	0.14	5.72	11.68	178.37	-166.69
CPC14-3	EXPACPC14-3-374	2303	2308	2305.5	38842	63450	8312	0.17	6.43	14.18	200.51	-186.33
CPC14-3	EXPACPC14-3-375	2308	2313	2310.5	38843	63451	8308	0.2	6.91	16.68	215.48	-198.80
CPC14-3	EXPACPC14-3-376	2313	2318	2315.5	38845	63453	8304	0.13	4.91	10.84	153.11	-142.27
CPC14-3	EXPACPC14-3-377	2318	2323	2320.5	38847	63455	8299	0.11	4.94	9.18	154.05	-144.87
CPC14-3	EXPACPC14-3-378	2323	2325	2324	38847	63456	8297	0.1	3.82	8.34	119.12	-110.78
CPC14-3	EXPACPC14-3-379	2325	2335	2330	38851	63459	8289					
CPC14-3	EXPACPC14-3-380	2335	2345	2340	38854	63462	8280					
CPC14-3	EXPACPC14-3-381	2345	2347	2346	38855	63463	8278					
CPC14-3	EXPACPC14-3-382	2347	2357	2352	38858	63466	8269	0.14	4.72	11.68	147.19	-135.51
CPC14-3	EXPACPC14-3-383	2357	2362	2359.5	38860	63468	8265	0.08	5.77	6.67	179.93	-173.26
CPC14-3	EXPACPC14-3-384	2362	2364	2363	38860	63468	8263					
CPC14-3	EXPACPC14-3-385	2364	2367	2365.5	38861	63469	8260	0.08	5.38	6.67	167.77	-161.10
CPC14-3	EXPACPC14-3-386	2367	2372	2369.5	38863	63471	8256	0.11	6.53	9.18	203.63	-194.45
CPC14-3	EXPACPC14-3-387	2372	2377	2374.5	38865	63473	8251	0.16	7.8	13.35	243.23	-229.89
CPC14-3	EXPACPC14-3-388	2377	2382	2379.5	38866	63474	8247	0.41	4.54	34.20	141.57	-107.37
CPC14-3	EXPACPC14-3-389	2382	2387	2384.5	38868	63476	8242	0.16	5.09	13.35	158.73	-145.38
CPC14-3	EXPACPC14-3-390	2387	2392	2389.5	38869	63478	8238	0.13	5.77	10.84	179.93	-169.09
CPC14-3	EXPACPC14-3-391	2392	2397	2394.5	38871	63479	8234	0.11	3.13	9.18	97.61	-88.43
CPC14-3	EXPACPC14-3-392	2397	2402	2399.5	38873	63481	8229	0.08	3.48	6.67	108.52	-101.85
CPC14-3	EXPACPC14-3-393	2402	2407	2404.5	38874	63482	8225	0.12	4.53	10.01	141.26	-131.25
CPC14-3	EXPACPC14-3-394	2407	2412	2409.5	38876	63484	8220	0.13	4.76	10.84	148.43	-137.59
CPC14-3	EXPACPC14-3-395	2412	2417	2414.5	38877	63486	8216	0.08	6.3	6.67	196.46	-189.78
CPC14-3	EXPACPC14-3-396	2417	2422	2419.5	38879	63487	8211	0.11	5.81	9.18	181.18	-172.00
CPC14-3	EXPACPC14-3-397	2422	2427	2424.5	38881	63489	8207	0.09	5.33	7.51	166.21	-158.70
CPC14-3	EXPACPC14-3-398	2427	2432	2429.5	38882	63490	8202	0.14	3.3	11.68	102.91	-91.23
CPC14-3	EXPACPC14-3-399	2432	2437	2434.5	38884	63492	8198	0.12	3.05	10.01	95.11	-85.10
CPC14-3	EXPACPC14-3-400	2437	2442	2439.5	38885	63493	8193	0.08	5.19	6.67	161.84	-155.17
CPC14-3	EXPACPC14-3-401	2442	2447	2444.5	38887	63495	8189	0.12	8.44	10.01	263.19	-253.18
CPC14-3	EXPACPC14-3-402	2447	2452	2449.5	38889	63497	8185	0.08	5.75	6.67	179.31	-172.63
CPC14-3	EXPACPC14-3-403	2452	2457	2454.5	38890	63498	8180	0.07	5.5	5.84	171.51	-165.67
CPC14-3	EXPACPC14-3-404	2457	2462	2459.5	38892	63500	8176	0.08	4.05	6.67	126.29	-119.62
CPC14-3	EXPACPC14-3-405	2462	2467	2464.5	38893	63501	8171	0.08	5.04	6.67	157.17	-150.49
CPC14-3	EXPACPC14-3-406	2467	2472	2469.5	38895	63503	8167	0.09	5.08	7.51	158.41	-150.91
CPC14-3	EXPACPC14-3-407	2472	2477	2474.5	38897	63505	8162	0.11	3.94	9.18	122.86	-113.69
CPC14-3	EXPACPC14-3-408	2477	2482	2479.5	38898	63506	8158	0.07	5.44	5.84	169.64	-163.80
CPC14-3	EXPACPC14-3-409	2482	2487	2484.5	38900	63508	8153	0.11	6.37	9.18	198.64	-189.46
CPC14-3	EXPACPC14-3-410	2487	2492	2489.5	38901	63509	8149	0.08	4.74	6.67	147.81	-141.14
CPC14-3	EXPACPC14-3-411	2492	2497	2494.5	38903	63511	8144	0.31	4.31	25.86	134.40	-108.54
CPC14-3	EXPACPC14-3-412	2497	2502	2499.5	38904	63513	8140	0.51	3.45	42.54	107.58	-65.04
CPC14-3	EXPACPC14-3-413	2502	2507	2504.5	38906	63514	8135	0.4	3.88	33.37	120.99	-87.63
CPC14-3	EXPACPC14-3-414	2507	2512	2509.5	38908	63516	8131	0.36	4.19	30.03	130.66	-100.63
CPC14-3	EXPACPC14-3-415	2512	2517	2514.5	38909	63517	8126	0.47	3.62	39.21	112.89	-73.68
CPC14-3	EXPACPC14-3-416	2517	2522	2519.5	38911	63519	8122	0.43	4.28	35.87	133.47	-97.60
CPC14-3	EXPACPC14-3-417	2522	2527	2524.5	38912	63520	8117	0.32	5.33	26.69	166.21	-139.52
CPC14-3	EXPACPC14-3-418	2527	2532	2529.5	38914	63522	8113	0.17	5.61	14.18	174.94	-160.76
CPC14-3	EXPACPC14-3-419	2532	2537	2534.5	38916	63523	8109	0.09	6.95	7.51	216.73	-209.22
CPC14-3	EXPACPC14-3-420	2537	2542	2539.5	38917	63525	8104	0.12	5.85	10.01	182.43	-172.42
CPC14-3	EXPACPC14-3-421	2542	2547	2544.5	38919	63527	8100	0.12	5.71	10.01	178.06	-168.05
CPC14-3	EXPACPC14-3-422	2547	2552	2549.5	38921	63528	8095	0.12	5.23	10.01	163.09	-153.08
CPC14-3	EXPACPC14-3-423	2552	2557	2554.5	38922	63530	8091	0.07	4.47	5.84	139.39	-133.55
CPC14-3	EXPACPC14-3-424	2557	2562	2559.5	38924	63531	8086	0.03	6.29	2.50	196.15	-193.64
CPC14-3	EXPACPC14-3-425	2562	2567	2564.5	38925	63533	8082	0.06	5.52	5.01	172.13	-167.13
CPC14-3	EXPACPC14-3-426	2567	2572	2569.5	38927	63534	8077	0.03	6.12	2.50	190.84	-188.34
CPC14-3	EXPACPC14-3-427	2572	2577	2574.5	38929	63536	8073	0.03	6.13	2.50	191.16	-188.65
CPC14-3	EXPACPC14-3-428	2577	2582	2579.5	38930	63537	8068	0.02	5.97	1.67	186.17	-184.50
CPC14-3	EXPACPC14-3-429	2582	2587	2584.5	38932	63539	8064	0.02	5.55	1.67	173.07	-171.40
CPC14-3	EXPACPC14-3-430	2587	2592	2589.5	38933	63540	8059	0.03	6.6	2.50	205.81	-203.31

HOLE NUMBER	SAMPLE NUMBER	Depth from (ft)	Depth to (ft)	Average Depth (ft)	X (ft)	Y (ft)	Z (ft)	LECO Total Carbon (%)	LECO Total Sulfur (%)	Acid Neutralizing Potential (t/kt)	Acid Generating Potential (t/kt)	Net Neutralizing Potential (t/Kt)
CPC14-3	EXPACPC14-3-431	2592	2597	2594.5	38935	63542	8055	0.03	6.82	2.50	212.67	-210.17
CPC14-3	EXPACPC14-3-432	2597	2602	2599.5	38937	63544	8050	0.04	6.75	3.34	210.49	-207.15
CPC14-3	EXPACPC14-3-433	2602	2607	2604.5	38938	63545	8046	0.07	7	5.84	218.29	-212.45
CPC14-3	EXPACPC14-3-434	2607	2612	2609.5	38940	63547	8041	0.04	7.41	3.34	231.07	-227.74
CPC14-3	EXPACPC14-3-435	2612	2617	2614.5	38942	63548	8037	0.04	6.81	3.34	212.36	-209.03
CPC14-3	EXPACPC14-3-436	2617	2622	2619.5	38943	63550	8032	0.02	7.81	1.67	243.55	-241.88
CPC14-3	EXPACPC14-3-437	2622	2627	2624.5	38945	63551	8028	0.08	7.61	6.67	237.31	-230.64
CPC14-3	EXPACPC14-3-438	2627	2632	2629.5	38946	63553	8024	0.1	8	8.34	249.47	-241.13
CPC14-3	EXPACPC14-3-439	2632	2637	2634.5	38948	63554	8019	0.18	7.75	15.02	241.67	-226.66
CPC14-3	EXPACPC14-3-440	2637	2642	2639.5	38950	63556	8015	0.27	6.94	22.52	216.42	-193.89
CPC14-3	EXPACPC14-3-441	2642	2647	2644.5	38951	63557	8010	0.24	7.78	20.02	242.61	-222.59
CPC14-3	EXPACPC14-3-442	2647	2652	2649.5	38953	63559	8006	0.24	7.5	20.02	233.88	-213.86
CPC14-3	EXPACPC14-3-443	2652	2657	2654.5	38954	63560	8001	0.14	7.93	11.68	247.29	-235.61
CPC14-3	EXPACPC14-3-444	2657	2662	2659.5	38956	63562	7997	0.3	10.7	25.03	333.67	-308.64
CPC14-3	EXPACPC14-3-445	2662	2667	2664.5	38958	63563	7992	0.38	5.36	31.70	167.15	-135.45
CPC14-3	EXPACPC14-3-446	2667	2672	2669.5	38959	63565	7988	0.38	7.48	31.70	233.25	-201.56
CPC14-3	EXPACPC14-3-447	2672	2677	2674.5	38961	63566	7983	0.62	8.36	51.72	260.70	-208.98
CPC14-3	EXPACPC14-3-448	2677	2682	2679.5	38963	63568	7979	0.98	6.76	81.75	210.80	-129.05
CPC14-3	EXPACPC14-3-449	2682	2687	2684.5	38964	63569	7974	0.79	7.59	65.90	236.69	-170.79
CPC14-3	EXPACPC14-3-450	2687	2692	2689.5	38966	63571	7970	0.22	10.2	18.35	318.07	-299.72
CPC14-3	EXPACPC14-3-451	2692	2697	2694.5	38968	63572	7965	0.37	9.39	30.86	292.82	-261.95
CPC14-3	EXPACPC14-3-452	2697	2702	2699.5	38969	63574	7961	0.35	8.49	29.20	264.75	-235.55
CPC14-3	EXPACPC14-3-453	2702	2707	2704.5	38971	63576	7956	0.53	7.92	44.21	246.98	-202.76
CPC14-3	EXPACPC14-3-454	2707	2712	2709.5	38972	63577	7952	0.41	9.1	34.20	283.77	-249.57
CPC14-3	EXPACPC14-3-455	2712	2717	2714.5	38974	63579	7947	0.33	6.05	27.53	188.66	-161.13
CPC14-3	EXPACPC14-3-456	2717	2722	2719.5	38976	63580	7943	0.3	10	25.03	311.84	-286.81
CPC14-3	EXPACPC14-3-457	2722	2727	2724.5	38977	63582	7938	0.31	9.15	25.86	285.33	-259.47
CPC14-3	EXPACPC14-3-458	2727	2732	2729.5	38979	63583	7934	0.49	8.34	40.87	260.07	-219.20
CPC14-3	EXPACPC14-3-459	2732	2737	2734.5	38980	63585	7930	0.73	6.08	60.89	189.60	-128.70
CPC14-3	EXPACPC14-3-460	2737	2742	2739.5	38982	63586	7925	0.8	2.72	66.73	84.82	-18.09
CPC14-3	EXPACPC14-3-461	2742	2747	2744.5	38984	63588	7921	0.48	5.93	40.04	184.92	-144.88
CPC14-3	EXPACPC14-3-462	2747	2752	2749.5	38985	63589	7916	1	4.19	83.42	130.66	-47.24
CPC14-3	EXPACPC14-3-463	2752	2757	2754.5	38987	63591	7912	0.85	1.96	70.90	61.12	9.78
CPC14-3	EXPACPC14-3-464	2757	2762	2759.5	38988	63592	7907	0.72	3.38	60.06	105.40	-45.34
CPC14-3	EXPACPC14-3-465	2762	2767	2764.5	38990	63594	7903	0.23	8.97	19.19	279.72	-260.53
CPC14-3	EXPACPC14-3-466	2767	2772	2769.5	38992	63595	7898	0.27	5.09	22.52	158.73	-136.20
CPC14-3	EXPACPC14-3-467	2772	2777	2774.5	38993	63597	7894	0.12	5.41	10.01	168.70	-158.69
CPC14-3	EXPACPC14-3-468	2777	2782	2779.5	38995	63598	7889	0.05	5.81	4.17	181.18	-177.01
CPC14-3	EXPACPC14-3-469	2782	2787	2784.5	38997	63600	7885	0.06	5.99	5.01	186.79	-181.79
CPC14-3	EXPACPC14-3-470	2787	2792	2789.5	38998	63601	7880	0.02	5.42	1.67	169.02	-167.35
CPC14-3	EXPACPC14-3-471	2792	2797	2794.5	39000	63603	7876	0.02	6.17	1.67	192.40	-190.74
CPC14-3	EXPACPC14-3-472	2797	2802	2799.5	39001	63604	7871	0.06	6.38	5.01	198.95	-193.95
CPC14-3	EXPACPC14-3-473	2802	2807	2804.5	39003	63606	7867	0.6	3.07	50.05	95.73	-45.68
CPC14-3	EXPACPC14-3-474	2807	2812	2809.5	39005	63607	7862	0.79	1.88	65.90	58.63	7.27
CPC14-3	EXPACPC14-3-475	2812	2817	2814.5	39006	63609	7858	0.66	3.25	55.06	101.35	-46.29
CPC14-3	EXPACPC14-3-476	2817	2822	2819.5	39008	63610	7853	0.68	3.5	56.72	109.14	-52.42
CPC14-3	EXPACPC14-3-477	2822	2827	2824.5	39009	63612	7849	0.75	2.95	62.56	91.99	-29.43
CPC14-3	EXPACPC14-3-478	2827	2832	2829.5	39011	63613	7844	0.18	4.88	15.02	152.18	-137.16
CPC14-3	EXPACPC14-3-479	2832	2837	2834.5	39012	63615	7840	0.22	5.13	18.35	159.97	-141.62
CPC14-3	EXPACPC14-3-480	2837	2842	2839.5	39014	63616	7835	0.04	8.34	3.34	260.07	-256.74
CPC14-3	EXPACPC14-3-481	2842	2847	2844.5	39016	63618	7831	0.03	8.7	2.50	271.30	-268.80
CPC14-3	EXPACPC14-3-482	2847	2852	2849.5	39017	63619	7826	0.01	8.5	0.83	265.06	-264.23
CPC14-3	EXPACPC14-3-483	2852	2857	2854.5	39019	63621	7822	0.02	6.79	1.67	211.74	-210.07
CPC14-3	EXPACPC14-3-484	2857	2862	2859.5	39020	63622	7817	0.09	5.14	7.51	160.28	-152.78
CPC14-3	EXPACPC14-3-485	2862	2867	2864.5	39022	63624	7813	0.01	6.42	0.83	200.20	-199.37
CPC14-3	EXPACPC14-3-486	2867	2872	2869.5	39024	63625	7808	0.02	6.6	1.67	205.81	-204.14
CPC14-3	EXPACPC14-3-487	2872	2877	2874.5	39025	63627	7804	0.03	7.4	2.50	230.76	-228.26
CPC14-3	EXPACPC14-3-488	2877	2882	2879.5	39027	63628	7799	0.07	6.67	5.84	208.00	-202.16
CPC14-3	EXPACPC14-3-489	2882	2887	2884.5	39028	63630	7795	0.03	6.63	2.50	206.75	-204.25
CPC14-3	EXPACPC14-3-490	2887	2892	2889.5	39030	63631	7790	0.03	5.33	2.50	166.21	-163.71
CPC14-3	EXPACPC14-3-491	2892	2897	2894.5	39032	63633	7786	0.03	5.74	2.50	179.00	-176.49
CPC14-3	EXPACPC14-3-492	2897	2902	2899.5	39033	63634	7781	0.05	5.42	4.17	169.02	-164.85
CPC14-3	EXPACPC14-3-493	2902	2907	2904.5	39035	63636	7777	0.09	4.8	7.51	149.68	-142.17
CPC14-3	EXPACPC14-3-494	2907	2912	2909.5	39036	63637	7772	0.2	5.58	16.68	174.01	-157.32
CPC14-3	EXPACPC14-3-495	2912	2917	2914.5	39038	63639	7768	0.06	5.85	5.01	182.43	-177.42
CPC14-3	EXPACPC14-3-496	2917	2922	2919.5	39040	63640	7763	0.14	6.12	11.68	190.84	-179.17
CPC14-3	EXPACPC14-3-497	2922	2927	2924.5	39041	63641	7759	0.14	5.87	11.68	183.05	-171.37
CPC14-3	EXPACPC14-3-498	2927	2932	2929.5	39043	63643	7754	0.12	5.61	10.01	174.94	-164.93
CPC14-3	EXPACPC14-3-499	2932	2937	2934.5	39044	63644	7750	0.05	5.84	4.17	182.11	-177.94
CPC14-3	EXPACPC14-3-500	2937	2942	2939.5	39046	63646	7745	0.07	5.11	5.84	159.35	-153.51
CPC14-3	EXPACPC14-3-501	2942	2947	2944.5	39048	63647	7741	0.06	5.96	5.01	185.86	-180.85
CPC14-3	EXPACPC14-3-502	2947	2952	2949.5	39049	63649	7736	0.06	4.87	5.01	151.87	-146.86
CPC14-3	EXPACPC14-3-503	2952	2957	2954.5	39051	63650	7732	0.05	6.43	4.17	200.51	-196.34
CPC14-3	EXPACPC14-3-504	2957	2962	2959.5	39052	63652	7727	0.02	7.73	1.67	241.05	-239.38
CPC14-3	EXPACPC14-3-505	2962	2967	2964.5	39054	63653	7723	0.08	6.75	6.67	210.49	-203.82
CPC14-3	EXPACPC14-3-506	2967	2972	2969.5	39056	63654	7718	0.03	8.96	2.50	279.41	-276.90
CPC14-3	EXPACPC14-3-507	2972	2977	2974.5	39057	63656	7714	0.04	6.13	3.34	191.16	-187.82
CPC14-3	EXPACPC14-3-508	2977	2982	2979.5	39059	63657	7709	0.08	4.16	6.67	129.72	-123.05
CPC14-3	EXPACPC14-3-509	2982	2987	2984.5	39061	63659	7705	0.09	3.46	7.51	107.90	-100.39
CPC14-3	EXPACPC14-3-510	2987	2992	2989.5	39062	63660	7700	0.03	5.04	2.50	157.17	-154.66
CPC14-3	EXPACPC14-3-511	2992	2997	2994.5	39064	63662	7696	0.06	3.16	5.01	98.54	-93.54
CPC14-3	EXPACPC14-3-512	2997	3002	2999.5	39066	63663	7691	0.01	4.48	0.83	139.70	-138.87
CPC14-3	EXPACPC14-3-513	3002	3007	3004.5	39067	63664	7687	0.01	4.25	0.83	132.53	-131.70
CPC14-3	EXPACPC14-3-514	3007	3012	3009.5	39069	63666	7682	0.01	3.45	0.83	107.58	-106.75
CPC14-3	EXPACPC14-3-515	3012	3017	3014.5	39070	63667	7678	0.01	4	0.83	124.74	-123.90
CPC14-3	EXPACPC14-3-516	3017	3022	3019.5	39072	63669	7673	0.01	3.5	0.83	109.14	-108.31
CPC14-3	EXPACPC14-3-517	3022	3027	3024.5	39074	63670	7669	0.02	3.52	1.67	109.77	-108.10

HOLE NUMBER	SAMPLE NUMBER	Depth from (ft)	Depth to (ft)	Average Depth (ft)	X (ft)	Y (ft)	Z (ft)	LECO Total Carbon (%)	LECO Total Sulfur (%)	Acid Neutralizing Potential (t/kt)	Acid Generating Potential (t/kt)	Net Neutralizing Potential (t/Kt)
CPC14-3	EXPACPC14-3-518	3027	3032	3029.5	39075	63672	7664	0.03	3.3	2.50	102.91	-100.40
CPC14-3	EXPACPC14-3-519	3032	3037	3034.5	39077	63673	7659	0.05	4.98	4.17	155.30	-151.12
CPC14-3	EXPACPC14-3-520	3037	3042	3039.5	39079	63674	7655	0.14	3	11.68	93.55	-81.87
CPC14-3	EXPACPC14-3-521	3042	3047	3044.5	39080	63676	7650	0.14	4.16	11.68	129.72	-118.05
CPC14-3	EXPACPC14-3-522	3047	3052	3049.5	39082	63677	7646	0.07	3.1	5.84	96.67	-90.83
CPC14-3	EXPACPC14-3-523	3052	3057	3054.5	39083	63679	7641	0.08	3.52	6.67	109.77	-103.09
CPC14-3	EXPACPC14-3-524	3057	3062	3059.5	39085	63680	7637	0.09	4.61	7.51	143.76	-136.25
CPC14-3	EXPACPC14-3-525	3062	3067	3064.5	39087	63681	7632	0.11	3.46	9.18	107.90	-98.72
CPC14-3	EXPACPC14-3-526	3067	3072	3069.5	39088	63683	7628	0.19	3.82	15.85	119.12	-103.27
CPC14-3	EXPACPC14-3-527	3072	3077	3074.5	39090	63684	7623	0.06	5.98	5.01	186.48	-181.47
CPC14-3	EXPACPC14-3-528	3077	3082	3079.5	39092	63686	7619	0.1	6.12	8.34	190.84	-182.50
CPC14-3	EXPACPC14-3-529	3082	3087	3084.5	39093	63687	7614	0.15	3.89	12.51	121.30	-108.79
CPC14-3	EXPACPC14-3-530	3087	3092	3089.5	39095	63689	7610	0.23	3.26	19.19	101.66	-82.47
CPC14-3	EXPACPC14-3-531	3092	3097	3094.5	39096	63690	7605	0.12	3.04	10.01	94.80	-84.79
CPC14-3	EXPACPC14-3-532	3097	3102	3099.5	39098	63691	7601	0.11	2.66	9.18	82.95	-73.77
CPC14-3	EXPACPC14-3-533	3102	3107	3104.5	39100	63693	7596	0.03	3.42	2.50	106.65	-104.15
CPC14-3	EXPACPC14-3-534	3107	3112	3109.5	39101	63694	7592	0.06	2.69	5.01	83.88	-78.88
CPC14-3	EXPACPC14-3-535	3112	3117	3114.5	39103	63696	7587	0.04	2.59	3.34	80.77	-77.43
CPC14-3	EXPACPC14-3-536	3117	3122	3119.5	39104	63697	7583	0.05	2.17	4.17	67.67	-63.50
CPC14-3	EXPACPC14-3-537	3122	3127	3124.5	39106	63698	7578	0.12	2.04	10.01	63.61	-53.60
CPC14-3	EXPACPC14-3-538	3127	3132	3129.5	39108	63700	7574	0.07	3.34	5.84	104.15	-98.31
CPC14-3	EXPACPC14-3-539	3132	3137	3134.5	39109	63701	7569	0.06	2.67	5.01	83.26	-78.26
CPC14-3	EXPACPC14-3-540	3137	3142	3139.5	39111	63703	7565	0.05	2.74	4.17	85.44	-81.27
CPC14-3	EXPACPC14-3-541	3142	3147	3144.5	39113	63704	7560	0.03	4.48	2.50	139.70	-137.20
CPC14-3	EXPACPC14-3-542	3147	3152	3149.5	39114	63705	7556	0.03	3.07	2.50	95.73	-93.23
CPC14-3	EXPACPC14-3-543	3152	3157	3154.5	39116	63707	7551	0.04	3.09	3.34	96.36	-93.02
CPC14-3	EXPACPC14-3-544	3157	3162	3159.5	39117	63708	7547	0.04	2.57	3.34	80.14	-76.81
CPC14-3	EXPACPC14-3-545	3162	3167	3164.5	39119	63709	7542	0.05	4.84	4.17	150.93	-146.76
CPC14-3	EXPACPC14-3-546	3167	3172	3169.5	39121	63711	7538	0.04	3.04	3.34	94.80	-91.46
CPC14-3	EXPACPC14-3-547	3172	3177	3174.5	39122	63712	7533	0.03	2.31	2.50	72.03	-69.53
CPC14-3	EXPACPC14-3-548	3177	3182	3179.5	39124	63714	7528	0.07	2.91	5.84	90.74	-84.91
CPC14-3	EXPACPC14-3-549	3182	3187	3184.5	39126	63715	7524	0.08	3.39	6.67	105.71	-99.04
CPC14-3	EXPACPC14-3-550	3187	3192	3189.5	39127	63716	7519	0.1	1.73	8.34	53.95	-45.61
CPC14-3	EXPACPC14-3-551	3192	3197	3194.5	39129	63718	7515	0.1	3.3	8.34	102.91	-94.56
CPC14-3	EXPACPC14-3-552	3197	3202	3199.5	39130	63719	7510	0.13	1.74	10.84	54.26	-43.42
CPC14-3	EXPACPC14-3-553	3202	3207	3204.5	39132	63720	7506	0.06	2.45	5.01	76.40	-71.40
CPC14-3	EXPACPC14-3-554	3207	3212	3209.5	39134	63722	7501	0.15	1.72	12.51	53.64	-41.12
CPC14-3	EXPACPC14-3-555	3212	3217	3214.5	39135	63723	7497	0.23	1.25	19.19	38.98	-19.79
CPC14-3	EXPACPC14-3-556	3217	3222	3219.5	39137	63724	7492	0.09	2.09	7.51	65.17	-57.67
CPC14-3	EXPACPC14-3-557	3222	3227	3224.5	39139	63726	7488	0.06	2.47	5.01	77.02	-72.02
CPC14-3	EXPACPC14-3-558	3227	3232	3229.5	39140	63727	7483	0.06	3.22	5.01	100.41	-95.41
CPC14-3	EXPACPC14-3-559	3232	3237	3234.5	39142	63728	7479	0.03	2.66	2.50	82.95	-80.45
CPC14-3	EXPACPC14-3-560	3237	3242	3239.5	39144	63730	7474	0.03	3.62	2.50	112.89	-110.38
CPC14-3	EXPACPC14-3-561	3242	3247	3244.5	39145	63731	7470	0.05	5.68	4.17	177.12	-172.95
CPC14-3	EXPACPC14-3-562	3247	3252	3249.5	39147	63733	7465	0.04	3.92	3.34	122.24	-118.90
CPC14-3	EXPACPC14-3-563	3252	3257	3254.5	39149	63734	7461	0.04	2.63	3.34	82.01	-78.68
CPC14-3	EXPACPC14-3-564	3257	3262	3259.5	39150	63735	7456	0.05	3.14	4.17	97.92	-93.75
CPC14-3	EXPACPC14-3-565	3262	3267	3264.5	39152	63737	7452	0.09	2.96	7.51	92.30	-84.80
CPC14-3	EXPACPC14-3-566	3267	3272	3269.5	39153	63738	7447	0.11	2.33	9.18	72.66	-63.48
CPC14-3	EXPACPC14-3-567	3272	3277	3274.5	39155	63739	7443	0.08	2.55	6.67	79.52	-72.85
CPC14-3	EXPACPC14-3-568	3277	3282	3279.5	39157	63741	7438	0.07	1.86	5.84	58.00	-52.16
CPC14-3	EXPACPC14-3-569	3282	3287	3284.5	39158	63742	7433	0.08	2.97	6.67	92.62	-85.94
CPC14-3	EXPACPC14-3-570	3287	3292	3289.5	39160	63743	7429	0.15	5.7	12.51	177.75	-165.24
CPC14-3	EXPACPC14-3-571	3292	3297	3294.5	39162	63745	7424	0.11	4.38	9.18	136.59	-127.41
CPC14-3	EXPACPC14-3-572	3297	3302	3299.5	39163	63746	7420	0.09	3.55	7.51	110.70	-103.19
CPC14-3	EXPACPC14-3-573	3302	3307	3304.5	39165	63747	7415	0.12	2.83	10.01	88.25	-78.24
CPC14-3	EXPACPC14-3-574	3307	3312	3309.5	39167	63749	7411	0.06	3.12	5.01	97.29	-92.29
CPC14-3	EXPACPC14-3-575	3312	3317	3314.5	39168	63750	7406	0.15	2.79	12.51	87.00	-74.49
CPC14-3	EXPACPC14-3-576	3317	3322	3319.5	39170	63751	7402	0.1	2.29	8.34	71.41	-63.07
CPC14-3	EXPACPC14-3-577	3322	3327	3324.5	39172	63753	7397	0.09	2.96	7.51	92.30	-84.80
CPC14-3	EXPACPC14-3-578	3327	3332	3329.5	39173	63754	7393	0.11	5.24	9.18	163.40	-154.23
CPC14-3	EXPACPC14-3-579	3332	3337	3334.5	39175	63755	7388	0.59	7.45	49.22	232.32	-183.10
CPC14-3	EXPACPC14-3-580	3337	3342	3339.5	39177	63757	7384	0.09	2.19	7.51	68.29	-60.79
CPC14-3	EXPACPC14-3-581	3342	3347	3344.5	39178	63758	7379	0.15	2.75	12.51	85.76	-73.24
CPC14-3	EXPACPC14-3-582	3347	3352	3349.5	39180	63759	7375	0.41	3.51	34.20	109.46	-75.25
CPC14-3	EXPACPC14-3-583	3352	3357	3354.5	39182	63761	7370	0.43	2.26	35.87	70.48	-34.61
CPC14-3	EXPACPC14-3-584	3357	3362	3359.5	39183	63762	7366	0.26	3.36	21.69	104.78	-83.09
CPC14-3	EXPACPC14-3-585	3362	3367	3364.5	39185	63763	7361	0.45	4.55	37.54	141.89	-104.35
CPC14-3	EXPACPC14-3-586	3367	3372	3369.5	39187	63765	7357	0.2	3.53	16.68	110.08	-93.40
CPC14-3	EXPACPC14-3-587	3372	3377	3374.5	39188	63766	7352	0.13	3.68	10.84	114.76	-103.91
CPC14-3	EXPACPC14-3-588	3377	3382	3379.5	39190	63767	7347	0.05	2.77	4.17	86.38	-82.21
CPC14-3	EXPACPC14-3-589	3382	3387	3384.5	39192	63768	7343	0.1	5.15	8.34	160.60	-152.25
CPC14-3	EXPACPC14-3-590	3387	3392	3389.5	39193	63770	7338	0.11	2.74	9.18	85.44	-76.27
CPC14-3	EXPACPC14-3-591	3392	3397	3394.5	39195	63771	7334	0.12	2.53	10.01	78.90	-68.89
CPC14-3	EXPACPC14-3-592	3397	3402	3399.5	39197	63772	7329	0.16	4.7	13.35	146.56	-133.22
CPC14-3	EXPACPC14-3-593	3402	3407	3404.5	39198	63774	7325	0.17	2.71	14.18	84.51	-70.33
CPC14-3	EXPACPC14-3-594	3407	3412	3409.5	39200	63775	7320	0.12	2.89	10.01	90.12	-80.11
CPC14-3	EXPACPC14-3-595	3412	3417	3414.5	39202	63776	7316	0.21	1.86	17.52	58.00	-40.48
CPC14-3	EXPACPC14-3-596	3417	3422	3419.5	39203	63777	7311	0.77	3.76	64.23	117.25	-53.02
CPC14-3	EXPACPC14-3-597	3422	3427	3424.5	39205	63779	7307	0.14	2.8	11.68	87.31	-75.64
CPC14-3	EXPACPC14-3-598	3427	3432	3429.5	39207	63780	7302	0.15	3.74	12.51	116.63	-104.11
CPC14-3	EXPACPC14-3-599	3432	3437	3434.5	39208	63781	7298	0.35	3.26	29.20	101.66	-72.46
CPC14-3	EXPACPC14-3-600	3437	3442	3439.5	39210	63783	7293	0.43	3.19	35.87	99.48	-63.61
CPC14-3	EXPACPC14-3-601	3442	3447	3444.5	39212	63784	7288	0.54	2.21	45.05	68.92	-23.87
CPC14-3	EXPACPC14-3-602	3447	3452	3449.5	39213	63785	7284	0.55	1.45	45.88	45.22	0.66
CPC14-3	EXPACPC14-3-603	3452	3457	3454.5	39215	63786	7279	0.4	2.34	33.37	72.97	-39.60
CPC14-3	EXPACPC14-3-604	3457	3462	3459.5	39217	63788	7275	0.44	5.16	36.70	160.91	-124.21

HOLE NUMBER	SAMPLE NUMBER	Depth from (ft)	Depth to (ft)	Average Depth (ft)	X (ft)	Y (ft)	Z (ft)	LECO Total Carbon (%)	LECO Total Sulfur (%)	Acid Neutralizing Potential (t/kt)	Acid Generating Potential (t/kt)	Net Neutralizing Potential (t/Kt)
CPC14-3	EXPACPC14-3-605	3462	3467	3464.5	39218	63789	7270	1.23	1.91	102.60	59.56	43.04
CPC14-3	EXPACPC14-3-606	3467	3472	3469.5	39220	63790	7266	0.89	3.89	74.24	121.30	-47.06
CPC14-3	EXPACPC14-3-607	3472	3477	3474.5	39222	63791	7261	1.14	3.59	95.10	111.95	-16.85
CPC14-3	EXPACPC14-3-608	3477	3482	3479.5	39223	63793	7257	0.37	4.34	30.86	135.34	-104.47
CPC14-3	EXPACPC14-3-609	3482	3487	3484.5	39225	63794	7252	0.34	3.64	28.36	113.51	-85.15
CPC14-3	EXPACPC14-3-610	3487	3492	3489.5	39227	63795	7248	0.36	3.32	30.03	103.53	-73.50
CPC14-3	EXPACPC14-3-611	3492	3497	3494.5	39228	63796	7243	0.43	3.38	35.87	105.40	-69.53
CPC14-3	EXPACPC14-3-612	3497	3502	3499.5	39230	63798	7239	0.5	3.43	41.71	106.96	-65.25
CPC14-3	EXPACPC14-3-613	3502	3507	3504.5	39232	63799	7234	0.46	3.65	38.37	113.82	-75.45
CPC14-3	EXPACPC14-3-614	3507	3512	3509.5	39233	63800	7229	0.41	3.85	34.20	120.06	-85.86
CPC14-3	EXPACPC14-3-615	3512	3517	3514.5	39235	63801	7225	0.52	3.68	43.38	114.76	-71.38
CPC14-3	EXPACPC14-3-616	3517	3522	3519.5	39237	63803	7220	0.45	3.73	37.54	116.32	-78.78
CPC14-3	EXPACPC14-3-617	3522	3527	3524.5	39238	63804	7216	0.34	4.66	28.36	145.32	-116.95
CPC14-3	EXPACPC14-3-618	3527	3532	3529.5	39240	63805	7211	0.27	3.86	22.52	120.37	-97.85
CPC14-3	EXPACPC14-3-619	3532	3537	3534.5	39242	63806	7207	0.38	3.65	31.70	113.82	-82.12
CPC14-3	EXPACPC14-3-620	3537	3542	3539.5	39243	63808	7202	0.44	3.68	36.70	114.76	-78.05
CPC14-3	EXPACPC14-3-621	3542	3547	3544.5	39245	63809	7198	0.18	4.29	15.02	133.78	-118.76
CPC14-3	EXPACPC14-3-622	3547	3552	3549.5	39247	63810	7193	0.46	3.61	38.37	112.57	-74.20
CPC14-3	EXPACPC14-3-623	3552	3557	3554.5	39248	63811	7189	0.53	3.59	44.21	111.95	-67.74
CPC14-3	EXPACPC14-3-624	3557	3562	3559.5	39250	63813	7184	0.75	3.01	62.56	93.86	-31.30
CPC14-3	EXPACPC14-3-625	3562	3567	3564.5	39252	63814	7179	0.47	3.64	39.21	113.51	-74.30
CPC14-3	EXPACPC14-3-626	3567	3572	3569.5	39253	63815	7175	0.37	3.75	30.86	116.94	-86.08
CPC14-3	EXPACPC14-3-627	3572	3577	3574.5	39255	63816	7170	0.35	4.27	29.20	133.15	-103.96
CPC14-3	EXPACPC14-3-628	3577	3582	3579.5	39257	63817	7166	0.52	3.83	43.38	119.43	-76.06
CPC14-3	EXPACPC14-3-629	3582	3587	3584.5	39258	63819	7161	0.49	3.5	40.87	109.14	-68.27
CPC14-3	EXPACPC14-3-630	3587	3592	3589.5	39260	63820	7157	0.5	3.49	41.71	108.83	-67.12
CPC14-3	EXPACPC14-3-631	3592	3597	3594.5	39262	63821	7152	0.5	3.31	41.71	103.22	-61.51
CPC14-3	EXPACPC14-3-632	3597	3600	3598.5	39263	63822	7149	0.48	3.23	40.04	100.72	-60.68
CPC14-3	EXPACPC14-3-633	3600	3605	3602.5	39264	63823	7145	0.55	3.37	45.88	105.09	-59.21
CPC14-3	EXPACPC14-3-634	3605	3610	3607.5	39266	63824	7140	0.61	3.19	50.88	99.48	-48.59
CPC14-3	EXPACPC14-3-635	3610	3615	3612.5	39268	63825	7136	0.7	3.43	58.39	106.96	-48.57
CPC14-3	EXPACPC14-3-636	3615	3620	3617.5	39269	63827	7131	0.64	3.8	53.39	118.50	-65.11
CPC14-3	EXPACPC14-3-637	3620	3625	3622.5	39271	63828	7127	0.66	3.9	55.06	121.62	-66.56
CPC14-3	EXPACPC14-3-638	3625	3630	3627.5	39273	63829	7122	0.47	3.38	39.21	105.40	-66.20
CPC14-3	EXPACPC14-3-639	3630	3635	3632.5	39274	63830	7118	0.44	4.15	36.70	129.41	-92.71
CPC14-3	EXPACPC14-3-640	3635	3640	3637.5	39276	63831	7113	0.46	3.56	38.37	111.01	-72.64
CPC14-3	EXPACPC14-3-641	3640	3645	3642.5	39278	63833	7108	0.57	4.07	47.55	126.92	-79.37
CPC14-3	EXPACPC14-3-642	3645	3650	3647.5	39280	63834	7104	0.51	3.92	42.54	122.24	-79.70
CPC14-3	EXPACPC14-3-643	3650	3655	3652.5	39281	63835	7099	0.5	3.42	41.71	106.65	-64.94
CPC14-3	EXPACPC14-3-644	3655	3660	3657.5	39283	63836	7095	0.73	3.86	60.89	120.37	-59.48
CPC14-3	EXPACPC14-3-645	3660	3665	3662.5	39285	63838	7090	0.61	3.58	50.88	111.64	-60.75
CPC14-3	EXPACPC14-3-646	3665	3670	3667.5	39286	63839	7086	0.44	3.66	36.70	114.13	-77.43
CPC14-3	EXPACPC14-3-647	3670	3675	3672.5	39288	63840	7081	0.44	3.9	36.70	121.62	-84.91
CPC14-3	EXPACPC14-3-648	3675	3680	3677.5	39290	63841	7077	0.36	4.58	30.03	142.82	-112.79
CPC14-3	EXPACPC14-3-649	3680	3685	3682.5	39291	63842	7072	0.38	3.97	31.70	123.80	-92.10
CPC14-3	EXPACPC14-3-650	3685	3690	3687.5	39293	63844	7067	0.72	4.76	60.06	148.43	-88.37
CPC14-3	EXPACPC14-3-651	3690	3695	3692.5	39295	63845	7063	0.61	4.37	50.88	136.27	-85.39
CPC14-3	EXPACPC14-3-652	3695	3700	3697.5	39296	63846	7058	0.69	4.8	57.56	149.68	-92.12
CPC14-3	EXPACPC14-3-653	3700	3705	3702.5	39298	63847	7054	0.57	4.44	47.55	138.46	-90.91
CPC14-3	EXPACPC14-3-654	3705	3710	3707.5	39300	63849	7049	0.58	4.47	48.38	139.39	-91.01
CPC14-3	EXPACPC14-3-655	3710	3715	3712.5	39302	63850	7045	0.56	4.61	46.71	143.76	-97.04
CPC14-3	EXPACPC14-3-656	3715	3720	3717.5	39303	63851	7040	0.46	4.21	38.37	131.28	-92.91
CPC14-3	EXPACPC14-3-657	3720	3725	3722.5	39305	63852	7036	0.7	4.5	58.39	140.33	-81.94
CPC14-3	EXPACPC14-3-658	3725	3730	3727.5	39307	63853	7031	0.58	4.84	48.38	150.93	-102.55
CPC14-3	EXPACPC14-3-659	3730	3735	3732.5	39309	63855	7027	0.57	4.91	47.55	153.11	-105.56
CPC14-3	EXPACPC14-3-660	3735	3740	3737.5	39310	63856	7022	0.52	5.73	43.38	178.68	-135.31
CPC14-3	EXPACPC14-3-661	3740	3745	3742.5	39312	63857	7018	0.6	4.29	50.05	133.78	-83.73
CPC14-3	EXPACPC14-3-662	3745	3750	3747.5	39314	63858	7013	0.4	3.95	33.37	123.18	-89.81
CPC14-3	EXPACPC14-3-663	3750	3755	3752.5	39316	63859	7009	0.44	4.88	36.70	152.18	-115.47
CPC14-3	EXPACPC14-3-664	3755	3760	3757.5	39317	63861	7004	0.39	3.97	32.53	123.80	-91.27
CPC14-3	EXPACPC14-3-665	3760	3765	3762.5	39319	63862	7000	0.3	4.68	25.03	145.94	-120.92
CPC14-3	EXPACPC14-3-666	3765	3770	3767.5	39321	63863	6995	0.31	4.93	25.86	153.74	-127.88
CPC14-3	EXPACPC14-3-667	3770	3775	3772.5	39323	63864	6990	0.27	4.63	22.52	144.38	-121.86
CPC14-3	EXPACPC14-3-668	3775	3780	3777.5	39324	63865	6986	0.26	5.24	21.69	163.40	-141.71
CPC14-3	EXPACPC14-3-669	3780	3785	3782.5	39326	63866	6981	0.35	5.23	29.20	163.09	-133.90
CPC14-3	EXPACPC14-3-670	3785	3790	3787.5	39328	63868	6977	0.29	5.43	24.19	169.33	-145.14
CPC14-3	EXPACPC14-3-671	3790	3795	3792.5	39330	63869	6972	0.33	5.37	27.53	167.46	-139.93
CPC14-3	EXPACPC14-3-672	3795	3800	3797.5	39331	63870	6968	0.4	4.54	33.37	141.57	-108.21
CPC14-3	EXPACPC14-3-673	3800	3805	3802.5	39333	63871	6963	0.45	4.58	37.54	142.82	-105.28
CPC14-3	EXPACPC14-3-674	3805	3810	3807.5	39335	63872	6959	0.42	4.81	35.04	149.99	-114.96
CPC14-3	EXPACPC14-3-675	3810	3815	3812.5	39337	63874	6954	0.55	4.41	45.88	137.52	-91.64
CPC14-3	EXPACPC14-3-676	3815	3820	3817.5	39338	63875	6950	0.96	5	80.08	155.92	-75.84
CPC14-3	EXPACPC14-3-677	3820	3825	3822.5	39340	63876	6945	0.54	4.71	45.05	146.88	-101.83
CPC14-3	EXPACPC14-3-678	3825	3830	3827.5	39342	63877	6941	0.65	5.15	54.22	160.60	-106.38
CPC14-3	EXPACPC14-3-679	3830	3835	3832.5	39344	63878	6936	0.53	4.43	44.21	138.14	-93.93
CPC14-3	EXPACPC14-3-680	3835	3840	3837.5	39346	63880	6932	0.62	5.58	51.72	174.01	-122.29
CPC14-3	EXPACPC14-3-681	3840	3845	3842.5	39347	63881	6927	0.4	5.52	33.37	172.13	-138.77
CPC14-3	EXPACPC14-3-682	3845	3850	3847.5	39349	63882	6923	0.5	5.33	41.71	166.21	-124.50
CPC14-3	EXPACPC14-3-683	3850	3855	3852.5	39351	63883	6918	0.27	4.79	22.52	149.37	-126.85
CPC14-3	EXPACPC14-3-684	3855	3860	3857.5	39353	63884	6914	0.45	4.28	37.54	133.47	-95.93
CPC14-3	EXPACPC14-3-685	3860	3865	3862.5	39355	63886	6909	0.38	4.25	31.70	132.53	-100.83
CPC14-3	EXPACPC14-3-686	3865	3870	3867.5	39356	63887	6905	0.23	4.96	19.19	154.67	-135.49
CPC14-3	EXPACPC14-3-687	3870	3875	3872.5	39358	63888	6900	0.17	4.52	14.18	140.95	-126.77
CPC14-3	EXPACPC14-3-688	3875	3880	3877.5	39360	63889	6896	0.15	4.03	12.51	125.67	-113.16
CPC14-3	EXPACPC14-3-689	3880	3885	3882.5	39362	63890	6891	0.13	4	10.84	124.74	-113.89
CPC14-3	EXPACPC14-3-690	3885	3890	3887.5	39364	63891	6887	0.18	3.5	15.02	109.14	-94.13
CPC14-3	EXPACPC14-3-691	3890	3895	3892.5	39366	63893	6882	0.16	4.58	13.35	142.82	-129.48

HOLE NUMBER	SAMPLE NUMBER	Depth from (ft)	Depth to (ft)	Average Depth (ft)	X (ft)	Y (ft)	Z (ft)	LECO Total Carbon (%)	LECO Total Sulfur (%)	Acid Neutralizing Potential (t/kt)	Acid Generating Potential (t/kt)	Net Neutralizing Potential (t/Kt)
CPC14-3	EXPACPC14-3-692	3895	3900	3897.5	39367	63894	6878	0.12	4.6	10.01	143.45	-133.44
CPC14-3	EXPACPC14-3-693	3900	3905	3902.5	39369	63895	6873	0.11	3.99	9.18	124.42	-115.25
CPC14-3	EXPACPC14-3-694	3905	3910	3907.5	39371	63896	6869	0.09	4.37	7.51	136.27	-128.77
CPC14-3	EXPACPC14-3-695	3910	3915	3912.5	39373	63897	6864	0.14	4.61	11.68	143.76	-132.08
CPC14-3	EXPACPC14-3-696	3915	3920	3917.5	39375	63898	6860	0.12	4.6	10.01	143.45	-133.44
CPC14-3	EXPACPC14-3-697	3920	3925	3922.5	39377	63899	6855	0.13	5.36	10.84	167.15	-156.30
CPC14-3	EXPACPC14-3-698	3925	3930	3927.5	39379	63901	6851	0.11	3.87	9.18	120.68	-111.51
CPC14-3	EXPACPC14-3-699	3930	3935	3932.5	39381	63902	6846	0.12	5.01	10.01	156.23	-146.22
CPC14-3	EXPACPC14-3-700	3935	3940	3937.5	39382	63903	6842	0.1	4.9	8.34	152.80	-144.46
CPC14-3	EXPACPC14-3-701	3940	3945	3942.5	39384	63904	6837	0.09	3.61	7.51	112.57	-105.07
CPC14-3	EXPACPC14-3-702	3945	3950	3947.5	39386	63905	6833	0.08	5.37	6.67	167.46	-160.78
CPC14-3	EXPACPC14-3-703	3950	3955	3952.5	39388	63906	6828	0.07	3.16	5.84	98.54	-92.70
CPC14-3	EXPACPC14-3-704	3955	3960	3957.5	39390	63908	6824	0.08	3.47	6.67	108.21	-101.53
CPC14-3	EXPACPC14-3-705	3960	3965	3962.5	39392	63909	6819	0.1	3.51	8.34	109.46	-101.11
CPC14-3	EXPACPC14-3-706	3965	3970	3967.5	39394	63910	6815	0.07	3.42	5.84	106.65	-100.81
CPC14-3	EXPACPC14-3-707	3970	3975	3972.5	39395	63911	6810	0.09	3.5	7.51	109.14	-101.64
CPC14-3	EXPACPC14-3-708	3975	3980	3977.5	39397	63912	6806	0.1	3.39	8.34	105.71	-97.37
CPC14-3	EXPACPC14-3-709	3980	3985	3982.5	39399	63913	6801	0.11	4	9.18	124.74	-115.56
CPC14-3	EXPACPC14-3-710	3985	3990	3987.5	39401	63914	6797	0.1	3.67	8.34	114.44	-106.10
CPC14-3	EXPACPC14-3-711	3990	3995	3992.5	39403	63916	6792	0.1	3.85	8.34	120.06	-111.72
CPC14-3	EXPACPC14-3-712	3995	4000	3997.5	39405	63917	6788	0.08	4.91	6.67	153.11	-146.44
CPC14-3	EXPACPC14-3-713	4000	4005	4002.5	39407	63918	6783	0.12	3.66	10.01	114.13	-104.12
CPC14-3	EXPACPC14-3-714	4005	4010	4007.5	39409	63919	6779	0.13	2.59	10.84	80.77	-69.92
CPC14-3	EXPACPC14-3-715	4010	4015	4012.5	39410	63920	6774	0.17	3.41	14.18	106.34	-92.16
CPC14-3	EXPACPC14-3-716	4015	4020	4017.5	39412	63921	6770	0.32	3.92	26.69	122.24	-95.55
CPC14-3	EXPACPC14-3-717	4020	4025	4022.5	39414	63922	6765	0.3	3.62	25.03	112.89	-87.86
CPC14-3	EXPACPC14-3-718	4025	4030	4027.5	39416	63924	6761	0.2	5.12	16.68	159.66	-142.98
CPC14-3	EXPACPC14-3-719	4030	4035	4032.5	39418	63925	6756	0.14	3.13	11.68	97.61	-85.93
CPC14-3	EXPACPC14-3-720	4035	4040	4037.5	39420	63926	6752	0.21	3.72	17.52	116.00	-98.49
CPC14-3	EXPACPC14-3-721	4040	4045	4042.5	39422	63927	6747	0.21	4.43	17.52	138.14	-120.63
CPC14-3	EXPACPC14-3-722	4045	4050	4047.5	39424	63928	6743	0.21	3.83	17.52	119.43	-101.92
CPC14-3	EXPACPC14-3-723	4050	4055	4052.5	39425	63929	6738	0.21	3.44	17.52	107.27	-89.75
CPC14-3	EXPACPC14-3-724	4055	4060	4057.5	39427	63930	6734	0.36	3.85	30.03	120.06	-90.03
CPC14-3	EXPACPC14-3-725	4060	4065	4062.5	39429	63931	6729	0.18	3.47	15.02	108.21	-93.19
CPC14-3	EXPACPC14-3-726	4065	4070	4067.5	39431	63933	6725	0.15	2.4	12.51	74.84	-62.33
CPC14-3	EXPACPC14-3-727	4070	4075	4072.5	39433	63934	6720	0.36	2.93	30.03	91.37	-61.34
CPC14-3	EXPACPC14-3-728	4075	4080	4077.5	39435	63935	6716	0.2	3.15	16.68	98.23	-81.55
CPC14-3	EXPACPC14-3-729	4080	4085	4082.5	39437	63936	6711	0.34	5.67	28.36	176.81	-148.45
CPC14-3	EXPACPC14-3-730	4085	4090	4087.5	39439	63937	6707	0.24	3.17	20.02	98.85	-78.83
CPC14-3	EXPACPC14-3-731	4090	4095	4092.5	39441	63938	6702	0.1	3.95	8.34	123.18	-114.83
CPC14-3	EXPACPC14-3-732	4095	4100	4097.5	39442	63939	6698	0.08	2.88	6.67	89.81	-83.14
CPC14-3	EXPACPC14-3-733	4100	4105	4102.5	39444	63940	6693	0.09	4.73	7.51	147.50	-139.99
CPC14-3	EXPACPC14-3-734	4105	4110	4107.5	39446	63941	6689	0.09	3.82	7.51	119.12	-111.61
CPC14-3	EXPACPC14-3-735	4110	4115	4112.5	39448	63943	6684	0.15	3.59	12.51	111.95	-99.44
CPC14-3	EXPACPC14-3-736	4115	4120	4117.5	39450	63944	6680	0.22	3.87	18.35	120.68	-102.33
CPC14-3	EXPACPC14-3-737	4120	4125	4122.5	39452	63945	6675	0.08	3.3	6.67	102.91	-96.23
CPC14-3	EXPACPC14-3-738	4125	4130	4127.5	39454	63946	6671	0.09	2.62	7.51	81.70	-74.19
CPC14-3	EXPACPC14-3-739	4130	4135	4132.5	39456	63947	6666	0.08	5	6.67	155.92	-149.25
CPC14-3	EXPACPC14-3-740	4135	4140	4137.5	39458	63948	6662	0.05	3.54	4.17	110.39	-106.22
CPC14-3	EXPACPC14-3-741	4140	4145	4142.5	39460	63949	6657	0.07	4.37	5.84	136.27	-130.43
CPC14-3	EXPACPC14-3-742	4145	4150	4147.5	39461	63950	6653	0.08	3.53	6.67	110.08	-103.41
CPC14-3	EXPACPC14-3-743	4150	4155	4152.5	39463	63951	6648	0.1	3.59	8.34	111.95	-103.61
CPC14-3	EXPACPC14-3-744	4155	4160	4157.5	39465	63952	6644	0.19	5.43	15.85	169.33	-153.48
CPC14-3	EXPACPC14-3-745	4160	4165	4162.5	39467	63953	6639	0.14	5.52	11.68	172.13	-160.46
CPC14-3	EXPACPC14-3-746	4165	4170	4167.5	39469	63955	6635	0.25	3.82	20.85	119.12	-98.27
CPC14-3	EXPACPC14-3-747	4170	4175	4172.5	39471	63956	6630	0.07	6.27	5.84	195.52	-189.68
CPC14-3	EXPACPC14-3-748	4175	4180	4177.5	39473	63957	6626	0.05	4.02	4.17	125.36	-121.19
CPC14-3	EXPACPC14-3-749	4180	4185	4182.5	39475	63958	6621	0.09	5.26	7.51	164.03	-156.52
CPC14-3	EXPACPC14-3-750	4185	4190	4187.5	39477	63959	6617	0.07	4.3	5.84	134.09	-128.25
CPC14-3	EXPACPC14-3-751	4190	4195	4192.5	39479	63960	6612	0.09	2.01	7.51	62.68	-55.17
CPC14-3	EXPACPC14-3-752	4195	4200	4197.5	39480	63961	6608	0.07	2.17	5.84	67.67	-61.83
CPC14-3	EXPACPC14-3-753	4200	4205	4202.5	39482	63962	6603	0.07	3.93	5.84	122.55	-116.71
CPC14-3	EXPACPC14-3-754	4205	4210	4207.5	39484	63963	6599	0.1	4.49	8.34	140.02	-131.67
CPC14-3	EXPACPC14-3-755	4210	4215	4212.5	39486	63964	6594	0.08	3.07	6.67	95.73	-89.06
CPC14-3	EXPACPC14-3-756	4215	4220	4217.5	39488	63965	6590	0.16	4.26	13.35	132.84	-119.50
CPC14-3	EXPACPC14-3-757	4220	4225	4222.5	39490	63966	6585	0.21	4.36	17.52	135.96	-118.44
CPC14-3	EXPACPC14-3-758	4225	4230	4227.5	39492	63967	6581	0.29	3.32	24.19	103.53	-79.34
CPC14-3	EXPACPC14-3-759	4230	4235	4232.5	39494	63968	6576	0.1	2.85	8.34	88.87	-80.53
CPC14-3	EXPACPC14-3-760	4235	4240	4237.5	39496	63969	6572	0.12	2.64	10.01	82.33	-72.32
CPC14-3	EXPACPC14-3-761	4240	4245	4242.5	39498	63970	6567	0.11	3.03	9.18	94.49	-85.31
CPC14-3	EXPACPC14-3-762	4245	4250	4247.5	39500	63971	6563	0.25	7.84	20.85	244.48	-223.63
CPC14-3	EXPACPC14-3-763	4250	4255	4252.5	39502	63972	6558	0.26	4.4	21.69	137.21	-115.52
CPC14-3	EXPACPC14-3-764	4255	4260	4257.5	39504	63973	6554	0.16	4.42	13.35	137.83	-124.49
CPC14-3	EXPACPC14-3-765	4260	4265	4262.5	39506	63974	6550	0.17	5.36	14.18	167.15	-152.96
CPC14-3	EXPACPC14-3-766	4265	4270	4267.5	39507	63975	6545	0.14	2.49	11.68	77.65	-65.97
CPC14-3	EXPACPC14-3-767	4270	4275	4272.5	39509	63976	6541	0.09	2.6	7.51	81.08	-73.57
CPC14-3	EXPACPC14-3-768	4275	4280	4277.5	39511	63977	6536	0.13	2.48	10.84	77.34	-66.49
CPC14-3	EXPACPC14-3-769	4280	4285	4282.5	39513	63978	6532	0.13	2.7	10.84	84.20	-73.35
CPC14-3	EXPACPC14-3-770	4285	4290	4287.5	39515	63979	6527	0.2	3.14	16.68	97.92	-81.23
CPC14-3	EXPACPC14-3-771	4290	4295	4292.5	39517	63980	6523	0.2	2.6	16.68	81.08	-64.39
CPC14-3	EXPACPC14-3-772	4295	4300	4297.5	39519	63981	6518	0.19	3.03	15.85	94.49	-78.64
CPC14-3	EXPACPC14-3-773	4300	4305	4302.5	39521	63982	6514	0.28	3.74	23.36	116.63	-93.27
CPC14-3	EXPACPC14-3-774	4305	4310	4307.5	39523	63983	6509	0.15	2.82	12.51	87.94	-75.43
CPC14-3	EXPACPC14-3-775	4310	4315	4312.5	39525	63984	6505	0.13	3.18	10.84	99.16	-88.32
CPC14-3	EXPACPC14-3-776	4315	4320	4317.5	39527	63985	6500	0.08	1.02	6.67	31.81	-25.13
CPC14-3	EXPACPC14-3-777	4320	4325	4322.5	39529	63986	6496	0.14	2.03	11.68	63.30	-51.62
CPC14-3	EXPACPC14-3-778	4325	4330	4327.5	39531	63987	6491	0.1	1.92	8.34	59.87	-51.53

HOLE NUMBER	SAMPLE NUMBER	Depth from (ft)	Depth to (ft)	Average Depth (ft)	X (ft)	Y (ft)	Z (ft)	LECO Total Carbon (%)	LECO Total Sulfur (%)	Acid Neutralizing Potential (t/kt)	Acid Generating Potential (t/kt)	Net Neutralizing Potential (t/Kt)
CPC14-3	EXPACPC14-3-779	4330	4335	4332.5	39533	63988	6487	0.12	3.11	10.01	96.98	-86.97
CPC14-3	EXPACPC14-3-780	4335	4340	4337.5	39535	63989	6482	0.15	1.52	12.51	47.40	-34.89
CPC14-3	EXPACPC14-3-781	4340	4345	4342.5	39537	63990	6478	0.12	1.36	10.01	42.41	-32.40
CPC14-3	EXPACPC14-3-782	4345	4350	4347.5	39538	63991	6473	0.11	1.7	9.18	53.01	-43.84
CPC14-3	EXPACPC14-3-783	4350	4355	4352.5	39540	63992	6469	0.11	2.23	9.18	69.54	-60.36
CPC14-3	EXPACPC14-3-784	4355	4360	4357.5	39542	63993	6464	0.13	1.91	10.84	59.56	-48.72
CPC14-3	EXPACPC14-3-785	4360	4365	4362.5	39544	63994	6460	0.18	1.81	15.02	56.44	-41.43
CPC14-3	EXPACPC14-3-786	4365	4368	4366.5	39545	63995	6457	0.1	2.67	8.34	83.26	-74.92