

March 28, 2014

Russ Means, Senior Environmental Protection Specialist
Division of Reclamation, Mining and Safety
Grand Junction Field Office
101 South 3rd St., Suite 301
Grand Junction, CO 81501

RE: Camp Bird Mine, Permit M-1982-090, Data Submittal

Dear Mr. Means,

On behalf of Camp Bird Colorado, Inc. (CBCI), Reardon Steel LLC (RSL) is providing the Division of Reclamation, Mining and Safety (Division) with the following information:

- A summary spreadsheet of sampling events during 2012-2014 including a key to correlate sample identification in the analytical reports with sample locations.
- A site map identifying water and solids sampling locations.
- Water quality results from quarterly and bi-monthly sampling as required under TR-04, dating from 2012 to the present.
- Solids and leachate results of tailings and waste rock per the Divisions request of the same on December 18, 2013.

Please contact CBCI if you have any questions.

Sincerely;



Mike Thompson
Principal/Reardon Steel LLC

Enclosures: Summary of Sampling Events at the Camp Bird Mine (1 page)
 Map of Sampling Locations at Camp Bird Mine (1 page)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L95717 (22 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L97071 (22 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L97415 (18 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L98049 (40 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L10356 (26 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L11281 (18 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L11295 (18 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L12162 (37 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L13488 (44 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L14633 (26 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L15777 (39 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L16679 (33 pages)
 ACZ Laboratories, Inc. Analytical Report, Project ID: L16884 (55 pages)

Mr. Means/M-1982-090/Data Submittal

March 28, 2014

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ACZ Laboratories, Inc. Analytical Report, Project ID: L16885 (37 pages)

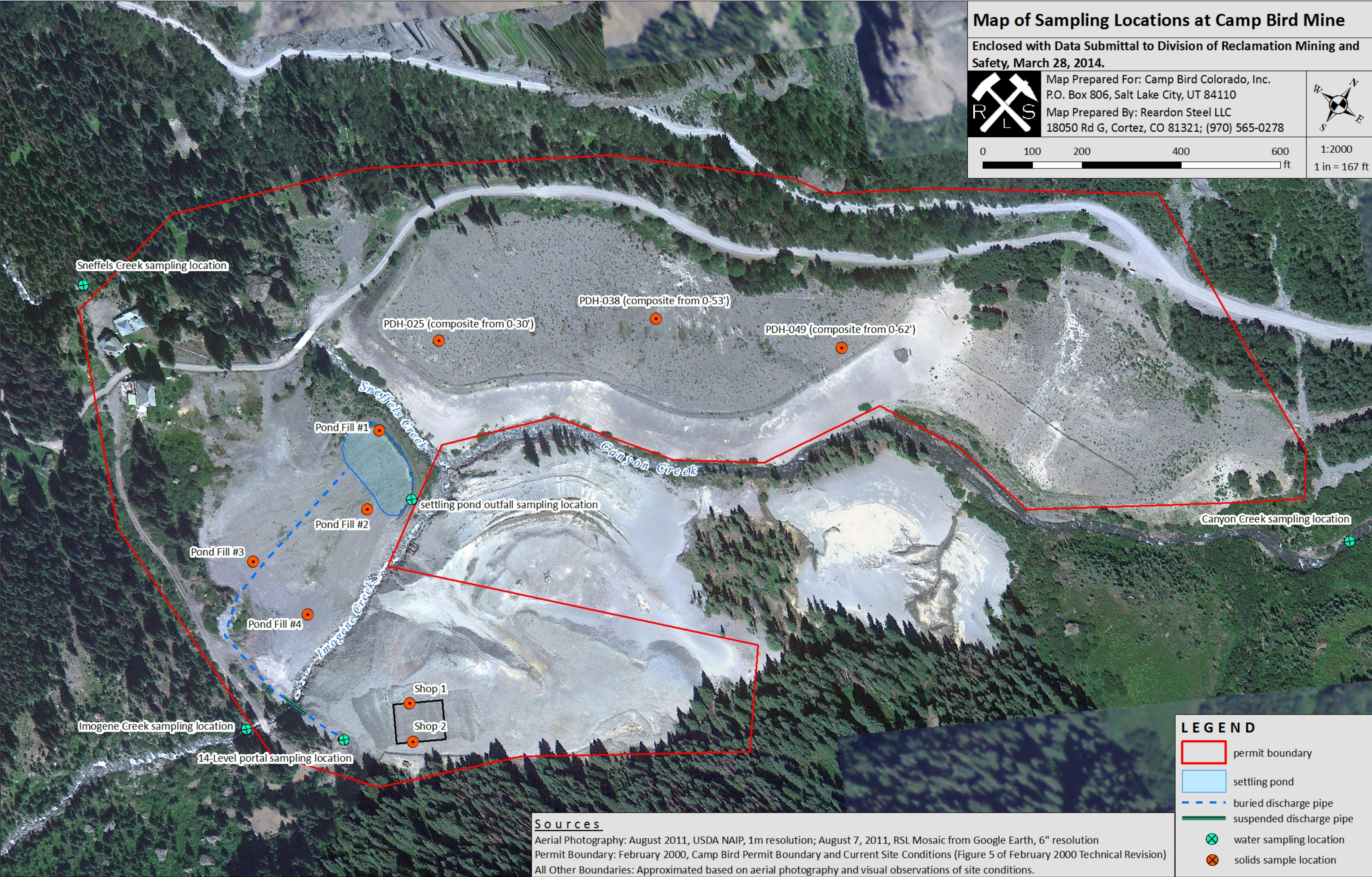
Ec: Scott Butters, President, Camp Bird Colorado, Inc.
Tony Waldron, DRMS Minerals Supervisor, Denver
Wally Erickson, DRMS Environmental Protection Specialist, Durango



Summary of Sampling Events at the Camp Bird Mine (M-1982-090)

Sampling Event	Date	Sample Name/Identifier	Description	Data Package
Quarterly & Bi-monthly WQ	7/17/2012	CB Level 3* CB Level 14	3-Level portal* 14-Level portal	L95717
Bi-monthly WQ	9/30/2012	CB-CDPS001-093012	14-Level portal	L97071
Quarterly WQ	10/15/2012	CB-Level-3-10152012*	3-Level portal*	L97415
Quarterly & Bi-monthly WQ	11/27/2012	CB-01 CB-02 CB-03 CB-04 CB-05	Canyon Creek Sneffels Creek 14-Level portal settling pond outflow Imogene Creek	L98049
Quarterly & Bi-monthly WQ	1/23/2013	CB-01 CB-03 CB-04	Canyon Creek 14-Level portal settling pond outflow	L10356
Bi-monthly WQ	3/25/2013	CB-03-032513	14-Level portal	L11281
	3/26/2013	CB-04-032613	settling pond outflow	L11295
Quarterly & Bi-monthly WQ	5/20/2013	A-052013 B-052013 C-052013 D-052013 E-052013	Canyon Creek Sneffels Creek Imogene Creek settling pond outflow 14-level portal	L12162
Quarterly & Bi-monthly WQ	7/24/2012	CB-A CB-B CB-C CB-D CB-E CB-F*	Canyon Creek Sneffels Creek Imogene Creek settling pond outflow 14-Level portal 3-Level portal*	L13488
Bi-monthly WQ	9/24/2013	CB-D CB-E	settling pond outflow 14-Level portal	L14633
Quarterly & Bi-monthly WQ	11/26/2013	CB-A CB-B CB-C CB-D CB-E	settling pond outflow 14-Level portal Sneffels Creek Canyon Creek Imogene Creek	L15777
Quarterly & Bi-monthly WQ	1/31/2014	CB-A CB-B CB-C CB-D	settling pond outflow 14-Level portal Sneffels Creek Canyon Creek	L16679
Solids and Leachate Analysis requested by DRMS on Dec. 18, 2013	2/9/2014	Pond Fill #1 Pond Fill #2 Pond Fill #3 Pond Fill #4 Shop 1 Shop 2	composite of pond fill material composite of pond fill material composite of pond fill material composite of pond fill material composite of fill excavated for shop composite of fill excavated for shop	L16884
Solids and Leachate Analysis requested by DRMS on Dec. 18, 2013	2/9/2014	PDH-025 PDH-038 PDH-049	composite of tailings drill hole PDH-025 composite of tailings drill hole PDH-038 composite of tailings drill hole PDH-049	L16885

* Sample location is outside of permit boundary



August 13, 2012

Report to:

John Bryan

Watley Group LLC

8439 Sunset Blvd. Suite 402

West Hollywood, CA 90069

Bill to:

John Bryan

Watley Group LLC

8439 Sunset Blvd. Suite 402

West Hollywood, CA 90069

cc: Mike Thompson

Project ID:

ACZ Project ID: L95717

John Bryan:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 18, 2012. This project has been assigned to ACZ's project number, L95717. 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 L95717. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after September 13, 2012. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Tony Antalek has reviewed and
approved this report.



Watley Group LLC

August 13, 2012

Project ID:

ACZ Project ID: L95717

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 2 miscellaneous samples from Watley Group LLC on July 18, 2012. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L95717. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses except those qualified with an ACZ 'H' flag were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic, organic and radiochemistry parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports.

Watley Group LLC

Project ID:

Sample ID: CBLEVEL3-071712

ACZ Sample ID: **L95717-01**

Date Sampled: 07/17/12 08:30

Date Received: 07/18/12

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidify and filter (Potentially Dissolved)	Colorado 5 CCR 1002-31.5.31 (2009)							07/19/12 14:36	mfm
Cyanide, total	M335.4 - Manual Distillation							07/30/12 11:44	las
Cyanide, WAD	SM4500-CN I- distillation							07/29/12 17:51	jlf
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							07/27/12 11:49	tcd
Phenol	420.4, Manual Distillation							08/06/12 12:40	bsu/mp b
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion							07/26/12 13:43	lhb
Total Hot Plate Digestion	M200.2 ICP			*				07/27/12 9:34	mfm
Total Hot Plate Digestion	M200.2 ICP-MS							07/26/12 11:19	mfm
Total Recoverable Digestion	M200.2 ICP			*				07/27/12 10:08	mfm
Total Recoverable Digestion	M200.2 ICP-MS							07/20/12 16:56	mfm

Watley Group LLC

Project ID:

Sample ID: CBLEVEL3-071712

ACZ Sample ID: **L95717-01**

Date Sampled: 07/17/12 08:30

Date Received: 07/18/12

Sample Matrix: Surface Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.8 ICP-MS	0.004	B		mg/L	0.001	0.005	07/31/12 20:31	msh
Arsenic, total	M200.8 ICP-MS	0.0018			mg/L	0.0002	0.001	07/27/12 3:17	pmc
Boron, total	M200.7 ICP		U		mg/L	0.05	0.3	07/27/12 20:02	aeb
Cadmium, total recoverable	M200.8 ICP-MS	0.0001	B		mg/L	0.0001	0.0005	07/23/12 18:15	msh
Calcium, dissolved	M200.7 ICP	17.8			mg/L	0.2	1	07/24/12 1:38	aeb
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	07/27/12 3:17	pmc
Chromium, total recoverable	M200.8 ICP-MS		U		mg/L	0.0005	0.002	07/23/12 18:15	msh
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	08/13/12 0:00	calc
Cobalt, total	M200.8 ICP-MS	0.00005	B		mg/L	0.00005	0.0003	07/27/12 3:17	pmc
Copper, potentially dissolved	M200.8 ICP-MS	0.0017	B		mg/L	0.0005	0.003	07/25/12 1:46	pmc
Copper, total recoverable	M200.8 ICP-MS	0.0011	B		mg/L	0.0005	0.003	07/23/12 18:15	msh
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	07/24/12 1:38	aeb
Iron, total recoverable	M200.7 ICP		U		mg/L	0.1	0.3	07/30/12 11:28	aeb
Lead, potentially dissolved	M200.8 ICP-MS	0.0012		*	mg/L	0.0001	0.0005	07/25/12 1:46	pmc
Lead, total recoverable	M200.8 ICP-MS	0.0018			mg/L	0.0001	0.0005	07/23/12 18:15	msh
Magnesium, dissolved	M200.7 ICP	0.6	B		mg/L	0.2	1	07/24/12 1:38	aeb
Manganese, dissolved	M200.7 ICP		U		mg/L	0.005	0.03	07/24/12 1:38	aeb
Manganese, total recoverable	M200.7 ICP		U		mg/L	0.03	0.1	07/27/12 18:12	aeb
Mercury, dissolved	M245.1 CVAA		U		mg/L	0.0002	0.001	08/03/12 17:08	erf
Mercury, total	M245.1 CVAA		U	*	mg/L	0.0002	0.001	08/03/12 18:38	erf
Nickel, potentially dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/20/12 2:44	aeb
Nickel, total recoverable	M200.7 ICP		U		mg/L	0.05	0.3	07/27/12 18:12	aeb
Selenium, total recoverable	M200.8 ICP-MS	0.0002	B		mg/L	0.0001	0.0003	07/23/12 18:15	msh
Silver, potentially dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	07/25/12 1:46	pmc
Silver, total recoverable	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	07/24/12 20:13	msh
Uranium, total recoverable	M200.8 ICP-MS	0.0003	B		mg/L	0.0001	0.0005	07/23/12 18:15	msh
Zinc, potentially dissolved	M200.7 ICP	0.04	B		mg/L	0.01	0.05	07/20/12 2:44	aeb
Zinc, total recoverable	M200.7 ICP		U		mg/L	0.05	0.3	07/27/12 18:12	aeb

Watley Group LLC

Project ID:

Sample ID: CBLEVEL3-071712

ACZ Sample ID: **L95717-01**

Date Sampled: 07/17/12 08:30

Date Received: 07/18/12

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		27			mg/L	2	20	07/20/12 0:00	jad
Carbonate as CaCO ₃			U		mg/L	2	20	07/20/12 0:00	jad
Hydroxide as CaCO ₃			U		mg/L	2	20	07/20/12 0:00	jad
Total Alkalinity		27			mg/L	2	20	07/20/12 0:00	jad
Biochemical Oxygen Demand (5 day)	SM5210B		U	*	mg/L	2	2	07/18/12 12:54	jad
Chemical Oxygen Demand	M410.4		U	*	mg/L	10	20	07/20/12 11:42	abm
Chloride	SM4500Cl-E		U	*	mg/L	1	5	08/01/12 12:17	lhb
Coliforms, fecal	SM9222D - Membrane Filter	4	H	*	#/100ml	1	1	07/18/12 12:23	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	07/30/12 17:14	lhb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	07/30/12 16:40	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	07/18/12 12:26	las
Fluoride	SM4500F-C		U	*	mg/L	0.1	0.5	07/26/12 13:01	las
Hardness as CaCO ₃	SM2340B - Calculation	47			mg/L	1	7	08/13/12 0:00	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							07/18/12 16:40	mfm
Lab Filtration (glass fiber filter)	SOPWC050							07/18/12 13:55	abm
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	0.38			mg/L	0.02	0.1	08/13/12 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.38			mg/L	0.02	0.1	07/18/12 23:46	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U		mg/L	0.01	0.05	07/18/12 23:19	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	08/03/12 15:49	tcd
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		U		mg/L	0.1	0.5	08/13/12 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester		U	*	mg/L	0.1	0.5	07/28/12 13:26	pjb
Phenol	420.4, Manual Distillation		U	*	mg/L	0.003	0.02	08/07/12 10:00	tcd
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	0.01	B		mg/L	0.01	0.05	07/26/12 22:34	pjb
Residue, Filterable (TDS) @180C	SM2540C	50			mg/L	10	20	07/24/12 15:17	ljr
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	07/20/12 12:24	mia
Sulfate	D516-02 - Turbidimetric	21		*	mg/L	1	5	08/03/12 12:00	lhb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	07/19/12 12:38	mia

Watley Group LLC

Project ID:

Sample ID: CBLEVEL14-071712

ACZ Sample ID: **L95717-02**

Date Sampled: 07/17/12 10:00

Date Received: 07/18/12

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Acidify and filter (Potentially Dissolved)	Colorado 5 CCR 1002-31.5.31 (2009)							07/19/12 14:45	mfm
Cyanide, total	M335.4 - Manual Distillation							07/30/12 11:52	las
Cyanide, WAD	SM4500-CN I- distillation							07/29/12 19:32	jlf
Nitrogen, total Kjeldahl	M351.2 - Block Digestor							07/27/12 12:00	tcd
Phenol	420.4, Manual Distillation							08/06/12 13:09	bsu/mp b
Phosphorus, total	M365.1 - Auto Ascorbic Acid Digestion							07/26/12 13:50	lhb
Total Hot Plate Digestion	M200.2 ICP			*				07/27/12 9:45	mfm
Total Hot Plate Digestion	M200.2 ICP-MS							07/26/12 11:31	mfm
Total Recoverable Digestion	M200.2 ICP			*				07/27/12 10:23	mfm
Total Recoverable Digestion	M200.2 ICP-MS							07/20/12 17:39	mfm

Watley Group LLC

Project ID:

Sample ID: CBLEVEL14-071712

ACZ Sample ID: **L95717-02**

Date Sampled: 07/17/12 10:00

Date Received: 07/18/12

Sample Matrix: Surface Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, dissolved	M200.8 ICP-MS	0.011			mg/L	0.001	0.005	07/31/12 20:35	msh
Arsenic, total	M200.8 ICP-MS	0.0012			mg/L	0.0002	0.001	07/27/12 3:20	pmc
Boron, total	M200.7 ICP	0.03	B		mg/L	0.02	0.1	07/27/12 20:05	aeb
Cadmium, total recoverable	M200.8 ICP-MS	0.0015			mg/L	0.0001	0.0005	07/23/12 18:31	msh
Calcium, dissolved	M200.7 ICP	219			mg/L	0.2	1	07/25/12 22:04	aeb
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	07/27/12 3:20	pmc
Chromium, total recoverable	M200.8 ICP-MS		U		mg/L	0.0005	0.002	07/23/12 18:31	msh
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	08/13/12 0:00	calc
Cobalt, total	M200.8 ICP-MS	0.00071			mg/L	0.00005	0.0003	07/27/12 3:20	pmc
Copper, potentially dissolved	M200.8 ICP-MS	0.0212			mg/L	0.0005	0.003	07/25/12 1:49	pmc
Copper, total recoverable	M200.8 ICP-MS	0.0229			mg/L	0.0005	0.003	07/23/12 18:31	msh
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	07/25/12 22:04	aeb
Iron, total recoverable	M200.7 ICP	0.30			mg/L	0.04	0.1	07/30/12 11:31	aeb
Lead, potentially dissolved	M200.8 ICP-MS	0.0034		*	mg/L	0.0001	0.0005	07/25/12 1:49	pmc
Lead, total recoverable	M200.8 ICP-MS	0.0038			mg/L	0.0001	0.0005	07/23/12 18:31	msh
Magnesium, dissolved	M200.7 ICP	3.2			mg/L	0.2	1	07/25/12 22:04	aeb
Manganese, dissolved	M200.7 ICP	0.117			mg/L	0.005	0.03	07/25/12 22:04	aeb
Manganese, total recoverable	M200.7 ICP	0.12			mg/L	0.01	0.05	07/27/12 18:15	aeb
Mercury, dissolved	M245.1 CVAA		U		mg/L	0.0002	0.001	08/03/12 17:11	erf
Mercury, total	M245.1 CVAA		U	*	mg/L	0.0002	0.001	08/03/12 18:40	erf
Nickel, potentially dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/20/12 2:53	aeb
Nickel, total recoverable	M200.7 ICP		U		mg/L	0.02	0.1	07/27/12 18:15	aeb
Selenium, total recoverable	M200.8 ICP-MS	0.0006			mg/L	0.0001	0.0003	07/23/12 18:31	msh
Silver, potentially dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	07/25/12 1:49	pmc
Silver, total recoverable	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	07/24/12 20:23	msh
Uranium, total recoverable	M200.8 ICP-MS	0.0006			mg/L	0.0001	0.0005	07/23/12 18:31	msh
Zinc, potentially dissolved	M200.7 ICP	0.39			mg/L	0.01	0.05	07/20/12 2:53	aeb
Zinc, total recoverable	M200.7 ICP	0.39			mg/L	0.02	0.1	07/27/12 18:15	aeb

Watley Group LLC

Project ID:

Sample ID: CBLEVEL14-071712

ACZ Sample ID: **L95717-02**

Date Sampled: 07/17/12 10:00

Date Received: 07/18/12

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		44			mg/L	2	20	07/20/12 0:00	jad
Carbonate as CaCO ₃			U		mg/L	2	20	07/20/12 0:00	jad
Hydroxide as CaCO ₃			U		mg/L	2	20	07/20/12 0:00	jad
Total Alkalinity		44			mg/L	2	20	07/20/12 0:00	jad
Biochemical Oxygen Demand (5 day)	SM5210B		U	*	mg/L	2	2	07/18/12 13:04	jad
Chemical Oxygen Demand	M410.4		U	*	mg/L	10	20	07/20/12 11:49	abm
Chloride	SM4500Cl-E		U	*	mg/L	1	5	08/01/12 12:17	lhb
Coliforms, fecal	SM9222D - Membrane Filter	0	H	*	#/100ml	1	1	07/18/12 12:27	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	07/30/12 17:15	lhb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	07/30/12 16:41	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	07/18/12 12:28	las
Fluoride	SM4500F-C	1.1		*	mg/L	0.1	0.5	07/26/12 13:05	las
Hardness as CaCO ₃	SM2340B - Calculation	561			mg/L	1	7	08/13/12 0:00	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							07/18/12 16:40	mfm
Lab Filtration (glass fiber filter)	SOPWC050							07/18/12 13:56	abm
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	0.08	B		mg/L	0.02	0.1	08/13/12 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.08	B		mg/L	0.02	0.1	07/18/12 23:22	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U		mg/L	0.01	0.05	07/18/12 23:22	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	08/03/12 15:52	tcd
Nitrogen, organic	M351.2 & M350.1 - TKN minus NH ₃		U		mg/L	0.1	0.5	08/13/12 0:00	calc
Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester		U	*	mg/L	0.1	0.5	07/28/12 13:27	pjb
Phenol	420.4, Manual Distillation		U	*	mg/L	0.003	0.02	08/07/12 10:01	tcd
Phosphorus, total	M365.1 - Auto Ascorbic Acid (digest)	0.01	B		mg/L	0.01	0.05	07/26/12 22:35	pjb
Residue, Filterable (TDS) @180C	SM2540C	810		*	mg/L	10	20	07/20/12 16:27	abm
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	07/20/12 12:26	mia
Sulfate	D516-02 - Turbidimetric	490		*	mg/L	20	100	08/03/12 12:46	lhb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	07/19/12 12:39	mia

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>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, Third Edition with Update III, December 1996.
- (5) Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

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.

For a complete list of ACZ's Extended Qualifiers, please click:

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

Watley Group LLC

ACZ Project ID: L95717

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95717-01	WG327150	Total Hot Plate Digestion	M200.2 ICP	DJ	Sample dilution required due to insufficient sample.
	WG327149	Total Recoverable Digestion	M200.2 ICP	DJ	Sample dilution required due to insufficient sample.
	WG326943	Lead, potentially dissolved	M200.8 ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG327591	Mercury, total	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG326456	Biochemical Oxygen Demand (5 day)	SM5210B	HF	BOD analysis performed outside of 24-hour hold time stated in the method but within 48-hour hold time stated in 40 CFR.
	WG326634	Chemical Oxygen Demand	M410.4	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M410.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327464	Chloride	SM4500Cl-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327324	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327318	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG326464	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327082	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327620	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327248	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327731	Phenol	420.4, Manual Distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG326667	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327604	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG326561	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Watley Group LLC

ACZ Project ID: L95717

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95717-02	WG327150	Total Hot Plate Digestion	M200.2 ICP	DJ	Sample dilution required due to insufficient sample.
	WG327149	Total Recoverable Digestion	M200.2 ICP	DJ	Sample dilution required due to insufficient sample.
	WG326943	Lead, potentially dissolved	M200.8 ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG327591	Mercury, total	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG326456	Biochemical Oxygen Demand (5 day)	SM5210B	HF	BOD analysis performed outside of 24-hour hold time stated in the method but within 48-hour hold time stated in 40 CFR.
	WG326634	Chemical Oxygen Demand	M410.4	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M410.4	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327464	Chloride	SM4500Cl-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327324	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327318	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG326464	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327082	Fluoride	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327620	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327248	Nitrogen, total Kjeldahl	M351.2 - TKN by Block Digester	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327731	Phenol	420.4, Manual Distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG326715	Residue, Filterable (TDS) @180C	SM2540C	B7	Target analyte detected in prep / method blank at or above acceptance limit. Sample value is > 10X the concentration in the method blank.
	WG326667	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG327604	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG326561	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Watley Group LLC

Project ID:

Sample ID: CBLEVEL3-071712

ACZ Sample ID: **L95717-01**

Date Sampled: 07/17/12 8:30

Date Received: 07/18/12

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG327322**

Analyst: dhc

Extract Date:

Analysis Date: 07/30/12 9:11

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.042		mg/L	2.084	10.42

Watley Group LLC

Project ID:

Sample ID: CBLEVEL14-071712

ACZ Sample ID: **L95717-02**

Date Sampled: 07/17/12 10:00

Date Received: 07/18/12

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG327322**

Analyst: dhc

Extract Date:

Analysis Date: 07/30/12 9:24

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.042		mg/L	2.084	10.42

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

B	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
E	Analyte concentration is estimated due to result exceeding calibration range.
H	Analysis exceeded method hold time. pH is a field test with an immediate hold time.
J	Analyte concentration detected at a value between MDL and PQL. The associated value is an estimated quantity.
L	Target analyte response was below the laboratory defined negative threshold.
M	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.
P	Analyte concentration differs from second detector by more than 40%.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Relative Percent Difference (RPD) accepted because sample concentrations are less than 10x the MDL.
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.
V	High blank data accepted because sample concentration is 10 times higher than blank concentration.
X	Quality control sample is out of control.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method References

(1)	EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
(2)	EPA 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
(3)	EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
(4)	EPA SW-846. Test Methods for Evaluating Solid Waste, Third Edition with Update III, December 1996.
(5)	Standard Methods for the Examination of Water and Wastewater, 19th edition, 1995 & 20th edition (1998).

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)	An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click:

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

Watley Group LLC

ACZ Project ID: **L95717**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
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No extended qualifiers associated with this analysis

Watley Group LLC

Project ID:

Sample ID: CBLEVEL3-071712

Locator:

ACZ Sample ID: **L95717-01**

Date Sampled: 07/17/12 8:30

Date Received: 07/18/12

Sample Matrix: Surface Water

Gross Alpha, total

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha, total	07/30/12 11:34		1.1	1.6	1.6	pCi/L	*	mla

Radium 226 + Alpha Emitting Radium Isotopes

Prep Method:

M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/12 15:30		0.69	0.35	1.2	pCi/L	*	thf

Radium 228, total

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228, total	08/09/12 12:14		3.7	0.61	0.64	pCi/L		thf

Watley Group LLC

Project ID:

Sample ID: CBLEVEL14-071712

Locator:

ACZ Sample ID: **L95717-02**

Date Sampled: 07/17/12 10:00

Date Received: 07/18/12

Sample Matrix: Surface Water

Gross Alpha, total

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha, total	07/30/12 11:35		-0.81	1.7	2.4	pCi/L	*	mla

Radium 226 + Alpha Emitting Radium Isotopes

Prep Method:

M9315

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 + Alpha	08/02/12 15:32		0.75	0.38	1.3	pCi/L	*	thf

Radium 228, total

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228, total	08/09/12 12:14		2.7	0.55	1.3	pCi/L		thf

Report Header Explanations

Batch	A distinct set of samples analyzed at a specific time
Error(+/-)	Calculated sample specific uncertainty
Found	Value of the QC Type of interest
Limit	Upper limit for RPD, in %.
LCL	Lower Control Limit, in % (except for LCSS, mg/Kg)
LLD	Calculated sample specific Lower Limit of Detection
PCN/SCN	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
PQL	Practical Quantitation Limit
QC	True Value of the Control Sample or the amount added to the Spike
Rec	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
RER	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
UCL	Upper Control Limit, in % (except for LCSS, mg/Kg)
Sample	Value of the Sample of interest

QC Sample Types

DUP	Sample Duplicate	MS/MSD	Matrix Spike/Matrix Spike Duplicate
LCSS	Laboratory Control Sample - Soil	PBS	Prep Blank - Soil
LCSW	Laboratory Control Sample - Water	PBW	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
R	Poor spike recovery accepted because the other spike in the set fell within the given limits.
T	High Replicate Error Ratio (RER) accepted because sample concentrations are less than 10x the MDL.
U	No nuclides detected above the Lower Limit of Detection (LLD)
V	High blank data accepted because sample concentration is 10 times higher than blank concentration
X	QC is out of control. See Case Narrative.
Z	Poor spike recovery is accepted because sample concentration is four times greater than spike concentration.

Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater, 19th edition (1995) & 20th edition (1998).
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

- (1) Solid matrices are reported on a dry weight basis.
- (2) Preparation method: "Method" indicates preparation defined in analytical method.
- (3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click:

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

Watley Group LLC

ACZ Project ID: **L95717**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95717-01	WG327357	Gross Alpha, total	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG327594	Radium 226 + Alpha Emitting Radium Isotopes	M9315	DJ	Sample dilution required due to insufficient sample.
L95717-02	WG327357	Gross Alpha, total	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG327594	Radium 226 + Alpha Emitting Radium Isotopes	M9315	DJ	Sample dilution required due to insufficient sample.

Watley Group LLC

ACZ Project ID: **L95717**

Wet Chemistry

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

Coliforms, fecal

SM9222D - Membrane Filter

Sulfide as S

SM4500S2-D

Watley Group LLC

ACZ Project ID: L95717

Date Received: 07/18/2012 10:27

Received By: gac

Date Printed: 7/19/2012

Receipt Verification

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

Samples/Containers

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

Some parameters were received past hold time.

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3068	5.4	15	Yes
3363	4.4	15	Yes

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

1773 Deerpark Drive, Stearns, MN 56157 (507) 334-5493

Report to:

Name: Mike Thompson	Address: 18050 Rd. G
Company: Reardon Steel LLC	Cor. 7, CO 81321
E-mail: mjt@reardonsteel.us	Telephone: 970 426 2924

Copy of Report to:

Name: John Bryan	E-mail: j.bryan@watley.com
Company: Watley Group LLC	Telephone: 310-777-8889

Invoice to:

Name: John Bryan	Address: 8439 Sunset Blvd, Ste 402
Company: Watley Group LLC	West Hollywood, CA 90069
E-mail: jbryan@watley.com	Telephone: 310-777-8889

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

Yi 'i'

N()

calculated $\hat{\theta}_0^{(1)}$ is replaced with proposed $\hat{\theta}_0^{(1)}$, $\alpha = 0.05$. For a signed and differentiable quality

Are samples for SDWA (e.g., Heavy Metals) Monitoring?	Yes	<input type="checkbox"/>	No	<input checked="" type="checkbox"/>
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If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: <u>KK125</u>	Sampler's date of collection	State	<u>CO</u>	Zip code	<u>81324</u>	Time/Zone	<u>MDT</u>
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PROJECT INFORMATION

[illegible]

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

RE MARKS:

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

REINQUISHED BY:	DATE-TIME	RECEIVED BY	DATE-TIME
<i>Mike Thompson</i>	07/17/12 1345	<i>UCC</i>	7-18-12 10:26

October 30, 2012

Report to:

John Bryan

Watley Group LLC

8439 Sunset Blvd. Suite 402

West Hollywood, CA 90069

Bill to:

John Bryan

Watley Group LLC

8439 Sunset Blvd. Suite 402

West Hollywood, CA 90069

cc: Mike Thompson

Project ID:

ACZ Project ID: L97071

John Bryan:

Enclosed are revised analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 02, 2012 and originally reported on October 16, 2012. Refer to the case narrative for an explanation of the changes. This project was assigned to ACZ's project number, L97071. 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 L97071. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after November 16, 2012. If the samples are determined to be hazardous, additional charges apply for disposal (typically less than \$10/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 reports for five years.

If you have any questions or other needs, please contact your Project Manager.



Tony Antalek has reviewed and approved this report.



Watley Group LLC

October 29, 2012

Project ID:

ACZ Project ID: L97071

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 1 miscellaneous sample from Watley Group LLC on October 2, 2012. The sample was received in good condition. Upon receipt, the sample custodian removed the sample from the cooler, inspected the contents, and logged the sample into ACZ's computerized Laboratory Information Management System (LIMS). The sample was assigned ACZ LIMS project number L97071. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses except those qualified with an ACZ 'H' flag were performed within EPA recommended holding times.

Sample Analysis

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

1. This is a revised report for correction of Electrical Conductivity (EC) results. Although the EC meter was calibrated prior to analysis, it was somehow reset causing incorrect readings biased low while producing passing QC results. It is unclear how this problem propagated but it was confirmed to be isolated to a single analytical batch. Corrective actions have been implemented to ensure this anomaly does not recur.

Watley Group LLC

Project ID:

Sample ID: CB-CDPS001-093012

ACZ Sample ID: **L97071-01**

Date Sampled: 09/30/12 11:00

Date Received: 10/02/12

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							10/09/12 12:37	lhb
Cyanide, WAD	SM4500-CN I- distillation							10/08/12 16:25	mpb
Total Hot Plate Digestion	M200.2 ICP							10/09/12 18:06	jjc
Total Hot Plate Digestion	M200.2 ICP-MS							10/10/12 12:16	mfm
Total Recoverable Digestion	M200.2 ICP-MS							10/05/12 13:36	mfm

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.023			mg/L	0.001	0.005	10/05/12 20:19	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0002	0.001	10/12/12 3:50	msh
Barium, dissolved	M200.7 ICP	0.016	B		mg/L	0.003	0.02	10/08/12 23:11	jjc
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/08/12 23:11	jjc
Boron, dissolved	M200.7 ICP	0.03	B		mg/L	0.01	0.05	10/08/12 23:11	jjc
Cadmium, dissolved	M200.8 ICP-MS	0.0008			mg/L	0.0001	0.0005	10/12/12 3:50	msh
Cadmium, total	M200.8 ICP-MS	0.0010			mg/L	0.0001	0.0005	10/11/12 2:07	pmc
Calcium, dissolved	M200.7 ICP	189			mg/L	0.2	1	10/08/12 23:11	jjc
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	10/12/12 3:50	msh
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	10/11/12 2:07	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	10/29/12 0:00	calc
Copper, dissolved	M200.8 ICP-MS	0.0021	B		mg/L	0.0005	0.003	10/12/12 3:50	msh
Copper, total	M200.8 ICP-MS	0.0097			mg/L	0.0005	0.003	10/11/12 2:07	pmc
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	10/08/12 23:11	jjc
Iron, total	M200.7 ICP	0.17			mg/L	0.02	0.05	10/10/12 14:08	jjc
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	10/12/12 3:50	msh
Lead, total	M200.8 ICP-MS	0.0020			mg/L	0.0001	0.0005	10/11/12 2:07	pmc
Magnesium, dissolved	M200.7 ICP	2.9			mg/L	0.2	1	10/08/12 23:11	jjc
Manganese, dissolved	M200.7 ICP	0.096			mg/L	0.005	0.03	10/08/12 23:11	jjc
Manganese, total	M200.7 ICP	0.106			mg/L	0.005	0.03	10/10/12 14:08	jjc
Mercury, total	M245.1 CVAA		U		mg/L	0.0002	0.001	10/09/12 21:39	erf
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/08/12 23:11	jjc
Nickel, total	M200.7 ICP		U		mg/L	0.01	0.05	10/10/12 14:08	jjc
Selenium, dissolved	M200.8 ICP-MS	0.0004			mg/L	0.0001	0.0003	10/12/12 3:50	msh
Silver, dissolved	M200.8 ICP-MS		U	*	mg/L	0.00005	0.0003	10/12/12 3:50	msh
Silver, total	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	10/11/12 2:07	pmc
Uranium, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0001	0.0005	10/12/12 3:50	msh
Uranium, total	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0005	10/11/12 2:07	pmc
Zinc, dissolved	M200.7 ICP	0.15			mg/L	0.01	0.05	10/08/12 23:11	jjc
Zinc, total	M200.7 ICP	0.25			mg/L	0.01	0.05	10/10/12 14:08	jjc

Watley Group LLC

Project ID:

Sample ID: CB-CDPS001-093012

ACZ Sample ID: **L97071-01**

Date Sampled: 09/30/12 11:00

Date Received: 10/02/12

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		63			mg/L	2	20	10/06/12 0:00	jad
Carbonate as CaCO ₃			U		mg/L	2	20	10/06/12 0:00	jad
Hydroxide as CaCO ₃			U		mg/L	2	20	10/06/12 0:00	jad
Total Alkalinity		63			mg/L	2	20	10/06/12 0:00	jad
Chloride	SM4500Cl-E		U	*	mg/L	1	5	10/11/12 11:48	lhb
Conductivity @25C	SM2510B	1130			umhos/cm	1	10	10/26/12 17:05	jad
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	10/10/12 11:01	mpb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	10/09/12 16:49	tcd
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	10/03/12 9:34	ljr
Hardness as CaCO ₃	SM2340B - Calculation	484			mg/L	1	7	10/29/12 0:00	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							10/03/12 12:18	mfm
Lab Filtration (glass fiber filter)	SOPWC050							10/02/12 16:13	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	0.05	BH		mg/L	0.02	0.1	10/29/12 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.05	HB	*	mg/L	0.02	0.1	10/02/12 19:47	jlf
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		HU	*	mg/L	0.01	0.05	10/02/12 19:47	jlf
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	10/10/12 18:25	mpb
pH (lab)	SM4500H+ B								
pH		8.0	H		units	0.1	0.1	10/06/12 0:00	jad
pH measured at		20.0			C	0.1	0.1	10/06/12 0:00	jad
Residue, Filterable (TDS) @180C	SM2540C	900			mg/L	10	20	10/03/12 15:40	las
Residue, Non-Filterable (TSS) @105C	SM2540D	11	B	*	mg/L	5	20	10/04/12 16:15	abm
Sulfate	D516-02 - Turbidimetric	550		*	mg/L	20	80	10/11/12 15:51	lhb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	10/02/12 16:44	las


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Watley Group LLC

ACZ Project ID: **L97071**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331591													
WG331591PBW1	PBW	10/06/12 10:06				U	mg/L		-20	20			
WG331591LCSW2	LCSW	10/06/12 10:20	WC121001-	820.0001		768.5	mg/L	93.7	90	110			
L97092-01DUP	DUP	10/06/12 13:49			82	81.6	mg/L				0.5	20	
WG331591PBW2	PBW	10/06/12 13:54				U	mg/L		-20	20			
WG331591LCSW5	LCSW	10/06/12 14:07	WC121001-	820.0001		778.2	mg/L	94.9	90	110			
WG331591PBW3	PBW	10/06/12 16:58				3.2	mg/L		-20	20			
WG331591LCSW8	LCSW	10/06/12 17:11	WC121001-	820.0001		765.7	mg/L	93.4	90	110			
WG331591PBW4	PBW	10/06/12 20:39				U	mg/L		-20	20			
WG331591LCSW11	LCSW	10/06/12 20:52	WC121001-	820.0001		766.8	mg/L	93.5	90	110			
WG331591LCSW14	LCSW	10/06/12 23:35	WC121001-	820.0001		779	mg/L	95	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331597													
WG331597ICV	ICV	10/05/12 18:41	MS121001-5	.1		.1	mg/L	100	90	110			
WG331597ICB	ICB	10/05/12 18:44				U	mg/L		-0.003	0.003			
WG331515LRB	LRB	10/05/12 18:48				U	mg/L		-0.0022	0.0022			
WG331515LFB	LFB	10/05/12 18:51	MS120906-3	.050055		.05	mg/L	99.9	85	115			
L97065-06LFM	LFM	10/05/12 19:50	MS120906-3	.050055	.182	.2322	mg/L	100.3	70	130			
L97065-06LFMD	LFMD	10/05/12 19:53	MS120906-3	.050055	.182	.2325	mg/L	100.9	70	130	0.13	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331933													
WG331933ICV	ICV	10/12/12 2:26	MS121001-5	.05		.05393	mg/L	107.9	90	110			
WG331933ICB	ICB	10/12/12 2:30				U	mg/L		-0.0006	0.0006			
WG331933LFB	LFB	10/12/12 2:33	MS121009-6	.05005		.05152	mg/L	102.9	85	115			
L97082-01AS	AS	10/12/12 3:57	MS121009-6	.05005	.0044	.0632	mg/L	117.5	70	130			
L97082-01ASD	ASD	10/12/12 4:00	MS121009-6	.05005	.0044	.06421	mg/L	119.5	70	130	1.59	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331640													
WG331640ICV	ICV	10/08/12 21:25	II120914-1	2		2.002	mg/L	100.1	95	105			
WG331640ICB	ICB	10/08/12 21:31				U	mg/L		-0.009	0.009			
WG331640LFB	LFB	10/08/12 21:44	II121001-3	.5		.504	mg/L	100.8	85	115			
L97068-01AS	AS	10/08/12 22:39	II121001-3	.5	.009	.5113	mg/L	100.5	85	115			
L97068-01ASD	ASD	10/08/12 22:42	II121001-3	.5	.009	.5145	mg/L	101.1	85	115	0.62	20	

Beryllium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331640													
WG331640ICV	ICV	10/08/12 21:25	II120914-1	2		1.992	mg/L	99.6	95	105			
WG331640ICB	ICB	10/08/12 21:31				U	mg/L		-0.03	0.03			
WG331640LFB	LFB	10/08/12 21:44	II121001-3	.5		.515	mg/L	103	85	115			
L97068-01AS	AS	10/08/12 22:39	II121001-3	.5	U	.5	mg/L	100	85	115			
L97068-01ASD	ASD	10/08/12 22:42	II121001-3	.5	U	.506	mg/L	101.2	85	115	1.19	20	

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Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331640													
WG331640ICV	ICV	10/08/12 21:25	II120914-1	2		2.005	mg/L	100.3	95	105			
WG331640ICB	ICB	10/08/12 21:31				U	mg/L		-0.03	0.03			
WG331640LFB	LFB	10/08/12 21:44	II121001-3	.5005		.513	mg/L	102.5	85	115			
L97068-01AS	AS	10/08/12 22:39	II121001-3	.5005	.14	.633	mg/L	98.5	85	115			
L97068-01ASD	ASD	10/08/12 22:42	II121001-3	.5005	.14	.645	mg/L	100.9	85	115	1.88	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331933													
WG331933ICV	ICV	10/12/12 2:26	MS121001-5	.05		.05065	mg/L	101.3	90	110			
WG331933ICB	ICB	10/12/12 2:30				U	mg/L		-0.0003	0.0003			
WG331933LFB	LFB	10/12/12 2:33	MS121009-6	.0501		.04825	mg/L	96.3	85	115			
L97082-01AS	AS	10/12/12 3:57	MS121009-6	.0501	U	.05105	mg/L	101.9	70	130			
L97082-01ASD	ASD	10/12/12 4:00	MS121009-6	.0501	U	.05078	mg/L	101.4	70	130	0.53	20	

Cadmium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331878													
WG331878ICV	ICV	10/11/12 1:15	MS121001-5	.05		.05169	mg/L	103.4	90	110			
WG331878ICB	ICB	10/11/12 1:18				U	mg/L		-0.0003	0.0003			
WG331878LRB	LRB	10/11/12 1:21				U	mg/L		-0.00022	0.00022			
WG331878LFB	LFB	10/11/12 1:25	MS121009-6	.0501		.04963	mg/L	99.1	85	115			
L97069-03LFM	LFM	10/11/12 1:38	MS121009-6	.0501	U	.05043	mg/L	100.7	70	130			
L97069-03LFMD	LFMD	10/11/12 1:41	MS121009-6	.0501	U	.0497	mg/L	99.2	70	130	1.46	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331640													
WG331640ICV	ICV	10/08/12 21:25	II120914-1	100		98.26	mg/L	98.3	95	105			
WG331640ICB	ICB	10/08/12 21:31				U	mg/L		-0.6	0.6			
WG331640LFB	LFB	10/08/12 21:44	II121001-3	67.97554		69.54	mg/L	102.3	85	115			
L97068-01AS	AS	10/08/12 22:39	II121001-3	67.97554	1.3	69.69	mg/L	100.6	85	115			
L97068-01ASD	ASD	10/08/12 22:42	II121001-3	67.97554	1.3	70.75	mg/L	102.2	85	115	1.51	20	

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331923													
WG331923ICB	ICB	10/11/12 9:29				U	mg/L		-3	3			
WG331923ICV	ICV	10/11/12 9:29	WI120904-1	54.945		56.9	mg/L	103.6	90	110			
WG331923LFB1	LFB	10/11/12 11:48	WI120716-1	30		32.7	mg/L	109	90	110			
L97071-01AS	AS	10/11/12 11:48	WI120716-1	30	U	33.3	mg/L	111	90	110			M1
L97074-01DUP	DUP	10/11/12 11:48			16	16.4	mg/L				2.5	20	
WG331923LFB2	LFB	10/11/12 11:52	WI120716-1	30		32.5	mg/L	108.3	90	110			

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Chromium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331933													
WG331933ICV	ICV	10/12/12 2:26	MS121001-5	.05		.04985	mg/L	99.7	90	110			
WG331933ICB	ICB	10/12/12 2:30				U	mg/L		-0.0015	0.0015			
WG331933LFB	LFB	10/12/12 2:33	MS121009-6	.05005		.04715	mg/L	94.2	85	115			
L97082-01AS	AS	10/12/12 3:57	MS121009-6	.05005	U	.04935	mg/L	98.6	70	130			
L97082-01ASD	ASD	10/12/12 4:00	MS121009-6	.05005	U	.04931	mg/L	98.5	70	130	0.08	20	

Chromium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331878													
WG331878ICV	ICV	10/11/12 1:15	MS121001-5	.05		.05405	mg/L	108.1	90	110			
WG331878ICB	ICB	10/11/12 1:18				U	mg/L		-0.0015	0.0015			
WG331782LRB	LRB	10/11/12 1:21				U	mg/L		-0.0011	0.0011			
WG331782LFB	LFB	10/11/12 1:25	MS121009-6	.05005		.04741	mg/L	94.7	85	115			
L97069-03LFM	LFM	10/11/12 1:38	MS121009-6	.05005	U	.04983	mg/L	99.6	70	130			
L97069-03LFMD	LFMD	10/11/12 1:41	MS121009-6	.05005	U	.0486	mg/L	97.1	70	130	2.5	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG333003													
WG333003LCSW1	LCSW	10/26/12 16:53	PCN40827	1408.8		1424.1	µmhos/crr	101.1	90	110			
L97092-02DUP	DUP	10/26/12 17:09			185	183.2	µmhos/crr				1	20	
WG333003LCSW2	LCSW	10/26/12 17:27	PCN40827	1408.8		1448.4	µmhos/crr	102.8	90	110			
WG333003LCSW3	LCSW	10/26/12 18:01	PCN40827	1408.8		1333.2	µmhos/crr	94.6	90	110			
WG333003LCSW4	LCSW	10/26/12 18:26	PCN40827	1408.8		1332.1	µmhos/crr	94.6	90	110			

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331933													
WG331933ICV	ICV	10/12/12 2:26	MS121001-5	.05		.05003	mg/L	100.1	90	110			
WG331933ICB	ICB	10/12/12 2:30				U	mg/L		-0.0015	0.0015			
WG331933LFB	LFB	10/12/12 2:33	MS121009-6	.05005		.04576	mg/L	91.4	85	115			
L97082-01AS	AS	10/12/12 3:57	MS121009-6	.05005	.0008	.04793	mg/L	94.2	70	130			
L97082-01ASD	ASD	10/12/12 4:00	MS121009-6	.05005	.0008	.04759	mg/L	93.5	70	130	0.71	20	

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331878													
WG331878ICV	ICV	10/11/12 1:15	MS121001-5	.05		.05504	mg/L	110.1	90	110			
WG331878ICB	ICB	10/11/12 1:18				U	mg/L		-0.0015	0.0015			
WG331782LRB	LRB	10/11/12 1:21				U	mg/L		-0.0011	0.0011			
WG331782LFB	LFB	10/11/12 1:25	MS121009-6	.05005		.04793	mg/L	95.8	85	115			
L97069-03LFM	LFM	10/11/12 1:38	MS121009-6	.05005	U	.04887	mg/L	97.6	70	130			
L97069-03LFMD	LFMD	10/11/12 1:41	MS121009-6	.05005	U	.04756	mg/L	95	70	130	2.72	20	

Watley Group LLC

ACZ Project ID: **L97071**

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331794													
WG331794ICV	ICV	10/10/12 10:58	WI121003-7	.3		.3178	mg/L	105.9	90	110			
WG331794ICB	ICB	10/10/12 10:59				U	mg/L		-0.009	0.009			
WG331730LRB	LRB	10/10/12 11:00				U	mg/L		-0.009	0.009			
WG331730LFB	LFB	10/10/12 11:00	WI121003-3	.2		.2186	mg/L	109.3	90	110			
L97071-01DUP	DUP	10/10/12 11:02			U	U	mg/L				0	20	RA
L97075-01LFM	LFM	10/10/12 11:04	WI121003-3	.2	.016	.235	mg/L	109.5	90	110			

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331756													
WG331756ICV	ICV	10/09/12 16:08	WI121003-7	.3		.3111	mg/L	103.7	90	110			
WG331756ICB	ICB	10/09/12 16:09				U	mg/L		-0.009	0.009			
WG331761													
WG331666LRB	LRB	10/09/12 16:46				U	mg/L		-0.009	0.009			
WG331666LFB	LFB	10/09/12 16:47	WI121003-5	.2		.2071	mg/L	103.6	90	110			
L96991-01DUP	DUP	10/09/12 16:48			U	U	mg/L				0	20	RA
L97071-01LFM	LFM	10/09/12 16:50	WI121003-5	.2	U	.206	mg/L	103	90	110			

Dissolved Chromium, Hexavalent

SM3500Cr-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331331													
WG331331ICV	ICV	10/03/12 9:25	WC120504-	.05		.045	mg/L	90	90	110			
WG331331ICB	ICB	10/03/12 9:28				U	mg/L		-0.015	0.015			
WG331331LFB	LFB	10/03/12 9:31	WC120409-	.05		.0489	mg/L	97.8	90	110			
L97084-01AS	AS	10/03/12 9:51	WC120409-	.05	U	.0597	mg/L	119.4	90	110			M1
L97084-01DUP	DUP	10/03/12 9:54			U	U	mg/L				0	20	RA

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331640													
WG331640ICV	ICV	10/08/12 21:25	II120914-1	2		1.981	mg/L	99.1	95	105			
WG331640ICB	ICB	10/08/12 21:31				U	mg/L		-0.06	0.06			
WG331640LFB	LFB	10/08/12 21:44	II121001-3	1		1.021	mg/L	102.1	85	115			
L97068-01AS	AS	10/08/12 22:39	II121001-3	1	.05	1.047	mg/L	99.7	85	115			
L97068-01ASD	ASD	10/08/12 22:42	II121001-3	1	.05	1.06	mg/L	101	85	115	1.23	20	

Iron, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331791													
WG331791ICV	ICV	10/10/12 13:25	II120914-3	2		1.998	mg/L	99.9	95	105			
WG331791ICB	ICB	10/10/12 13:31				U	mg/L		-0.06	0.06			
WG331757LRB	LRB	10/10/12 13:43				U	mg/L		-0.044	0.044			
WG331757LFB	LFB	10/10/12 13:46	II121001-3	1		1.043	mg/L	104.3	85	115			
L97070-01LFM	LFM	10/10/12 13:52	II121001-3	1	U	1.04	mg/L	104	70	130			
L97070-01LFMD	LFMD	10/10/12 13:55	II121001-3	1	U	1.036	mg/L	103.6	70	130	0.39	20	

Watley Group LLC

ACZ Project ID: **L97071**

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331933													
WG331933ICV	ICV	10/12/12 2:26	MS121001-5	.05		.05264	mg/L	105.3	90	110			
WG331933ICB	ICB	10/12/12 2:30				U	mg/L		-0.0003	0.0003			
WG331933LFB	LFB	10/12/12 2:33	MS121009-6	.05005		.04688	mg/L	93.7	85	115			
L97082-01AS	AS	10/12/12 3:57	MS121009-6	.05005	U	.05	mg/L	99.9	70	130			
L97082-01ASD	ASD	10/12/12 4:00	MS121009-6	.05005	U	.05011	mg/L	100.1	70	130	0.22	20	

Lead, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331878													
WG331878ICV	ICV	10/11/12 1:15	MS121001-5	.05		.05215	mg/L	104.3	90	110			
WG331878ICB	ICB	10/11/12 1:18				U	mg/L		-0.0003	0.0003			
WG331782LRB	LRB	10/11/12 1:21				U	mg/L		-0.00022	0.00022			
WG331782LFB	LFB	10/11/12 1:25	MS121009-6	.05005		.0441	mg/L	88.1	85	115			
L97069-03LFM	LFM	10/11/12 1:38	MS121009-6	.05005	.0002	.04711	mg/L	93.7	70	130			
L97069-03LFMD	LFMD	10/11/12 1:41	MS121009-6	.05005	.0002	.04668	mg/L	92.9	70	130	0.92	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331640													
WG331640ICV	ICV	10/08/12 21:25	II120914-1	100		100.53	mg/L	100.5	95	105			
WG331640ICB	ICB	10/08/12 21:31				U	mg/L		-0.6	0.6			
WG331640LFB	LFB	10/08/12 21:44	II121001-3	50.00131		50.8	mg/L	101.6	85	115			
L97068-01AS	AS	10/08/12 22:39	II121001-3	50.00131	.6	50.85	mg/L	100.5	85	115			
L97068-01ASD	ASD	10/08/12 22:42	II121001-3	50.00131	.6	51.33	mg/L	101.5	85	115	0.94	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331640													
WG331640ICV	ICV	10/08/12 21:25	II120914-1	2		1.964	mg/L	98.2	95	105			
WG331640ICB	ICB	10/08/12 21:31				U	mg/L		-0.015	0.015			
WG331640LFB	LFB	10/08/12 21:44	II121001-3	.5		.501	mg/L	100.2	85	115			
L97068-01AS	AS	10/08/12 22:39	II121001-3	.5	U	.4959	mg/L	99.2	85	115			
L97068-01ASD	ASD	10/08/12 22:42	II121001-3	.5	U	.4997	mg/L	99.9	85	115	0.76	20	

Manganese, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331791													
WG331791ICV	ICV	10/10/12 13:25	II120914-3	2		1.9665	mg/L	98.3	95	105			
WG331791ICB	ICB	10/10/12 13:31				U	mg/L		-0.015	0.015			
WG331757LRB	LRB	10/10/12 13:43				U	mg/L		-0.011	0.011			
WG331757LFB	LFB	10/10/12 13:46	II121001-3	.5		.5089	mg/L	101.8	85	115			
L97070-01LFM	LFM	10/10/12 13:52	II121001-3	.5	U	.5108	mg/L	102.2	70	130			
L97070-01LFMD	LFMD	10/10/12 13:55	II121001-3	.5	U	.5084	mg/L	101.7	70	130	0.47	20	

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ACZ Project ID: **L97071**

Mercury, total

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331587													
WG331587ICV	ICV	10/09/12 18:32	II121005-1	.005025		.00504	mg/L	100.3	95	105			
WG331587ICB	ICB	10/09/12 18:34				U	mg/L		-0.0002	0.0002			
WG331599													
WG331599LRB	LRB	10/09/12 21:06				U	mg/L		-0.00044	0.00044			
WG331599LFB	LFB	10/09/12 21:08	II121001-5	.002002		.00176	mg/L	87.9	85	115			
L97069-03LFM	LFM	10/09/12 21:19	II121001-5	.002002	U	.00185	mg/L	92.4	85	115			
L97069-03LFMD	LFMD	10/09/12 21:21	II121001-5	.002002	U	.00184	mg/L	91.9	85	115	0.54	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331640													
WG331640ICV	ICV	10/08/12 21:25	II120914-1	2.002		1.973	mg/L	98.6	95	105			
WG331640ICB	ICB	10/08/12 21:31				U	mg/L		-0.03	0.03			
WG331640LFB	LFB	10/08/12 21:44	II121001-3	.5		.488	mg/L	97.6	85	115			
L97068-01AS	AS	10/08/12 22:39	II121001-3	.5	U	.486	mg/L	97.2	85	115			
L97068-01ASD	ASD	10/08/12 22:42	II121001-3	.5	U	.483	mg/L	96.6	85	115	0.62	20	

Nickel, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331791													
WG331791ICV	ICV	10/10/12 13:25	II120914-3	2.002		1.982	mg/L	99	95	105			
WG331791ICB	ICB	10/10/12 13:31				U	mg/L		-0.03	0.03			
WG331757LRB	LRB	10/10/12 13:43				U	mg/L		-0.022	0.022			
WG331757LFB	LFB	10/10/12 13:46	II121001-3	.5		.507	mg/L	101.4	85	115			
L97070-01LFM	LFM	10/10/12 13:52	II121001-3	.5	U	.5	mg/L	100	70	130			
L97070-01LFMD	LFMD	10/10/12 13:55	II121001-3	.5	U	.512	mg/L	102.4	70	130	2.37	20	

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331326													
WG331326ICV	ICV	10/02/12 19:08	WI120706-1	2.416		2.383	mg/L	98.6	90	110			
WG331326ICB	ICB	10/02/12 19:09				U	mg/L		-0.06	0.06			
WG331326LFB	LFB	10/02/12 19:30	WI120814-9	2		1.944	mg/L	97.2	90	110			
L97071-01AS	AS	10/02/12 19:48	WI120814-9	2	.05	1.953	mg/L	95.2	90	110			
L97072-01DUP	DUP	10/02/12 19:51			.09	.076	mg/L				16.9	20	RA

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331326													
WG331326ICV	ICV	10/02/12 19:08	WI120706-1	.609		.629	mg/L	103.3	90	110			
WG331326ICB	ICB	10/02/12 19:09				U	mg/L		-0.03	0.03			
WG331326LFB	LFB	10/02/12 19:30	WI120814-9	1		.971	mg/L	97.1	90	110			
L97071-01AS	AS	10/02/12 19:48	WI120814-9	1		.955	mg/L	95.5	90	110			
L97072-01DUP	DUP	10/02/12 19:51				U	mg/L				0	20	RA

Watley Group LLC

ACZ Project ID: **L97071**

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331827													
WG331827ICV	ICV	10/10/12 13:07	WI111117-1	1.002		.973	mg/L	97.1	90	110			
WG331827ICB	ICB	10/10/12 13:08				U	mg/L		-0.15	0.15			
WG331867													
WG331867LFB1	LFB	10/10/12 18:06	WI111101-3	1		1.038	mg/L	103.8	90	110			
L97069-04AS	AS	10/10/12 18:24	WI111101-3	1	U	1.06	mg/L	106	90	110			
L97071-01DUP	DUP	10/10/12 18:26			U	U	mg/L				0	20	RA
WG331867LFB2	LFB	10/10/12 18:38	WI111101-3	1		1.091	mg/L	109.1	90	110			

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331591													
WG331591LCSW3	LCSW	10/06/12 10:23	PCN39825	6		6.05	units	100.8	98	102			
L97092-01DUP	DUP	10/06/12 13:49			7.9	7.82	units				1	20	
WG331591LCSW6	LCSW	10/06/12 14:11	PCN39825	6		6.07	units	101.2	98	102			
WG331591LCSW9	LCSW	10/06/12 17:14	PCN39825	6		6.07	units	101.2	98	102			
WG331591LCSW12	LCSW	10/06/12 20:56	PCN39825	6		6.08	units	101.3	98	102			
WG331591LCSW15	LCSW	10/06/12 23:39	PCN39825	6		6.08	units	101.3	98	102			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331365													
WG331365PBW	PBW	10/03/12 14:00				U	mg/L		-20	20			
WG331365LCSW	LCSW	10/03/12 14:09	PCN40246	260		258	mg/L	99.2	80	120			
L97071-01DUP	DUP	10/03/12 15:49			900	904	mg/L				0.4	20	

Residue, Non-Filterable (TSS) @105C

SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331498													
WG331498PBW	PBW	10/04/12 16:10				U	mg/L		-15	15			
WG331498LCSW	LCSW	10/04/12 16:10	PCN40246	160		151	mg/L	94.4	80	120			
L97152-03DUP	DUP	10/04/12 16:20			12	13	mg/L				8	20	RA

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331933													
WG331933ICV	ICV	10/12/12 2:26	MS121001-5	.05		.05137	mg/L	102.7	90	110			
WG331933ICB	ICB	10/12/12 2:30				U	mg/L		-0.0003	0.0003			
WG331933LFB	LFB	10/12/12 2:33	MS121009-6	.05005		.04802	mg/L	95.9	85	115			
L97082-01AS	AS	10/12/12 3:57	MS121009-6	.05005	U	.05265	mg/L	105.2	70	130			
L97082-01ASD	ASD	10/12/12 4:00	MS121009-6	.05005	U	.05381	mg/L	107.5	70	130	2.18	20	

Watley Group LLC

ACZ Project ID: **L97071**

Silver, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331933													
WG331933ICV	ICV	10/12/12 2:26	MS121001-5	.02006		.02042	mg/L	101.8	90	110			
WG331933ICB	ICB	10/12/12 2:30				U	mg/L		-0.00015	0.00015			
WG331933LFB	LFB	10/12/12 2:33	MS121009-6	.01001		.009892	mg/L	98.8	85	115			
L97082-01AS	AS	10/12/12 3:57	MS121009-6	.01001	U	.005603	mg/L	56	70	130			M2 ZA
L97082-01ASD	ASD	10/12/12 4:00	MS121009-6	.01001	U	.006098	mg/L	60.9	70	130	8.46	20	M2 ZA

Silver, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331878													
WG331878ICV	ICV	10/11/12 1:15	MS121001-5	.02006		.0204	mg/L	101.7	90	110			
WG331878ICB	ICB	10/11/12 1:18				U	mg/L		-0.00015	0.00015			
WG331782LRB	LRB	10/11/12 1:21				U	mg/L		-0.00011	0.00011			
WG331782LFB	LFB	10/11/12 1:25	MS121009-6	.01001		.009707	mg/L	97	85	115			
L97069-03LFM	LFM	10/11/12 1:38	MS121009-6	.01001	U	.009789	mg/L	97.8	70	130			
L97069-03LFMD	LFMD	10/11/12 1:41	MS121009-6	.01001	U	.009758	mg/L	97.5	70	130	0.32	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331951													
WG331951ICB	ICB	10/11/12 14:41				U	mg/L		-3	3			
WG331951ICV	ICV	10/11/12 14:41	WI120928-8	20		19.4	mg/L	97	90	110			
WG331951LFB	LFB	10/11/12 15:37	WI120508-1	10		10.1	mg/L	101	90	110			
L97070-04DUP	DUP	10/11/12 15:40			27	26.4	mg/L				2.2	20	
L97071-01AS	AS	10/11/12 15:51	SO4TURB15	10.0000005	550	558	mg/L	80	90	110			M3

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331315													
WG331315ICV	ICV	10/02/12 16:35	WC121001-	.32534		.341	mg/L	104.8	90	110			
WG331315ICB	ICB	10/02/12 16:38				U	mg/L		-0.06	0.06			
WG331315LFB	LFB	10/02/12 16:41	WC121001-	.22044		.248	mg/L	112.5	80	120			
L97084-01AS	AS	10/02/12 16:59	WC121001-	.22044	U	.243	mg/L	110.2	75	125			
L97084-01DUP	DUP	10/02/12 17:02			U	U	mg/L				0	20	RA

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331933													
WG331933ICV	ICV	10/12/12 2:26	MS121001-5	.05		.05339	mg/L	106.8	90	110			
WG331933ICB	ICB	10/12/12 2:30				U	mg/L		-0.0003	0.0003			
WG331933LFB	LFB	10/12/12 2:33	MS121009-6	.05		.05	mg/L	100	85	115			
L97082-01AS	AS	10/12/12 3:57	MS121009-6	.05	U	.05438	mg/L	108.8	70	130			
L97082-01ASD	ASD	10/12/12 4:00	MS121009-6	.05	U	.05474	mg/L	109.5	70	130	0.66	20	

Watley Group LLC

ACZ Project ID: **L97071**

Uranium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331878													
WG331878ICV	ICV	10/11/12 1:15	MS121001-5	.05		.05419	mg/L	108.4	90	110			
WG331878ICB	ICB	10/11/12 1:18				U	mg/L		-0.0003	0.0003			
WG331782LRB	LRB	10/11/12 1:21				U	mg/L		-0.00022	0.00022			
WG331782LFB	LFB	10/11/12 1:25	MS121009-6	.05		.04949	mg/L	99	85	115			
L97069-03LFM	LFM	10/11/12 1:38	MS121009-6	.05	.0011	.05523	mg/L	108.3	70	130			
L97069-03LFMD	LFMD	10/11/12 1:41	MS121009-6	.05	.0011	.05449	mg/L	106.8	70	130	1.35	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331640													
WG331640ICV	ICV	10/08/12 21:25	II120914-1	2		1.94	mg/L	97	95	105			
WG331640ICB	ICB	10/08/12 21:31				U	mg/L		-0.03	0.03			
WG331640LFB	LFB	10/08/12 21:44	II121001-3	.5		.499	mg/L	99.8	85	115			
L97068-01AS	AS	10/08/12 22:39	II121001-3	.5	U	.496	mg/L	99.2	85	115			
L97068-01ASD	ASD	10/08/12 22:42	II121001-3	.5	U	.5	mg/L	100	85	115	0.8	20	

Zinc, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG331791													
WG331791ICV	ICV	10/10/12 13:25	II120914-3	2		1.966	mg/L	98.3	95	105			
WG331791ICB	ICB	10/10/12 13:31				U	mg/L		-0.03	0.03			
WG331757LRB	LRB	10/10/12 13:43				U	mg/L		-0.022	0.022			
WG331757LFB	LFB	10/10/12 13:46	II121001-3	.5		.524	mg/L	104.8	85	115			
L97070-01LFM	LFM	10/10/12 13:52	II121001-3	.5	.02	.526	mg/L	101.2	70	130			
L97070-01LFMD	LFMD	10/10/12 13:55	II121001-3	.5	.02	.526	mg/L	101.2	70	130	0	20	

Watley Group LLC

ACZ Project ID: **L97071**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L97071-01	WG331933	Silver, dissolved	M200.8 ICP-MS	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M200.8 ICP-MS	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.
	WG331923	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG331794	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG331761	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG331331	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG331326	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	HE	Analysis performed past holding time. Method holding time is less than or equal to 7 days and sample was received with less than half of the holding time remaining (refer to item C5 of ACZ's Terms & Conditions).
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG331867	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG331498	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG331951	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG331315	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Watley Group LLC

Project ID:

Sample ID: CB-CDPS001-093012

ACZ Sample ID: **L97071-01**

Date Sampled: 09/30/12 11:00

Date Received: 10/02/12

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG331514

Analyst: dhc

Extract Date:

Analysis Date: 10/05/12 10:06

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.042		mg/L	2.084	10.42


Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
- (3) EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Watley Group LLC

ACZ Project ID: **L97071**

Oil & Grease, Total Recoverable

1664A - Gravimetric

WG331514

MS	Sample ID: L96928-01MS			PCN/SCN: OP120830-1			Analyzed:			10/05/12 9:49	
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
OIL AND GREASE	40	U	37.3	mg/L	93.3	78	114				

LCSW		Sample ID: WG331514LCSW		PCN/SCN: OP120830-1			Analyzed: 10/05/12 10:07			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		38.8	ma/L	97.0	78	114			

LCSWD	Sample ID: WG331514LCSWD			PCN/SCN: OP120830-1			Analyzed: 10/05/12 10:08			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		39.2	mg/L	98.0	78	114	1	18	

PBW		Sample ID: WG331514PBW						Analyzed:		10/05/12 9:45	
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
OIL AND GREASE			U	mg/L		-5	5				

Watley Group LLC

ACZ Project ID: **L97071**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
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No extended qualifiers associated with this analysis

Watley Group LLC

ACZ Project ID: **L97071**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Watley Group LLC

ACZ Project ID: L97071

Date Received: 10/02/2012 09:56

Received By: ksj

Date Printed: 10/2/2012

Receipt Verification

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

Samples/Containers

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

Some parameters were received past hold time.

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3418	1.6	14	Yes

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

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

Report to

Name: Mike Thompson
Company: Reardon Steel LLC
E-mail: mtp@reardonsteel.us

Address:	18032 Rd C
	Corr 2 CO 81321
Telephone:	970-426-2924

Copy of Report to

Name: John Bryan
Company: Wentley Group LLC

E-mail:	jkbryan@wattby.com
Telephone:	310 - 777 - 8880

Invoice to

Name: Laurens Nuyens
Company: Caldera Mineral Resources
E-mail: Laurens@watbo.com

Address: 8439 Sunset Blvd. S.
West Hollywood, CA 90069
Telephone: 310-777-8889

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	2
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 the 180-day period has expired, and data will be qualified.

Are samples for SDWA Compliance Monitoring?

Yes		No	✓
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If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name:	C13	Sampler's site Information	State	CD	Zip code	81432	Time Zone	W.8
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PROJECT INFORMATION

Quote #: Bottle Order B0028450	
Project/PO #:	
Reporting state for compliance testing:	
Check box if samples include NRC licensed material?	

	of Containers
	576 m)
	S4 HND3
	200 m)
	17CJ
	200 m)
	110 D11
	500 m)
	RW
	2250 m)
	HV93
	2500
	VAD1
	252 m)
	17CJ
	2500

[illegible]

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

REMARKS

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

REINQUISHED BY	DATE TIME	RECEIVED BY	DATE TIME
<i>[Signature]</i>	10/1/12 9:00 am	<i>[Signature]</i>	10-2-12 9:13 AM

October 30, 2012

Report to:

John Bryan

Watley Group LLC

8439 Sunset Blvd. Suite 402

West Hollywood, CA 90069

Bill to:

John Bryan

Watley Group LLC

8439 Sunset Blvd. Suite 402

West Hollywood, CA 90069

cc: Mike Thompson

Project ID:

ACZ Project ID: L97415

John Bryan:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 18, 2012. This project has been assigned to ACZ's project number, L97415. 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 L97415. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after November 30, 2012. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Tony Antalek has reviewed and approved this report.



Watley Group LLC

October 30, 2012

Project ID:

ACZ Project ID: L97415

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 1 miscellaneous sample from Watley Group LLC on October 18, 2012. The sample was received in good condition. Upon receipt, the sample custodian removed the sample from the cooler, inspected the contents, and logged the sample into ACZ's computerized Laboratory Information Management System (LIMS). The sample was assigned ACZ LIMS project number L97415. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses except those qualified with an ACZ 'H' flag were performed within EPA recommended holding times.

Sample Analysis

This sample was analyzed for inorganic parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports.

Watley Group LLC

Project ID:

Sample ID: CB-LEVEL 3-10152012

ACZ Sample ID: **L97415-01**

Date Sampled: 10/15/12 00:00

Date Received: 10/18/12

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							10/22/12 17:38	bsu
Cyanide, WAD	SM4500-CN I- distillation							10/24/12 11:40	bsu
Total Hot Plate Digestion	M200.2 ICP							10/24/12 14:08	aeb
Total Hot Plate Digestion	M200.2 ICP-MS							10/23/12 16:06	las
Total Recoverable Digestion	M200.2 ICP-MS							10/24/12 12:32	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.021			mg/L	0.001	0.005	10/25/12 0:54	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0007	B		mg/L	0.0002	0.001	10/26/12 0:43	msh
Barium, dissolved	M200.7 ICP	0.023			mg/L	0.003	0.02	10/22/12 17:33	aeb
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/12 17:33	aeb
Boron, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/12 17:33	aeb
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	10/26/12 0:43	msh
Cadmium, total	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	10/25/12 21:37	pmc
Calcium, dissolved	M200.7 ICP	20.0			mg/L	0.2	1	10/22/12 17:33	aeb
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	10/26/12 0:43	msh
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	10/25/12 21:37	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	10/30/12 13:58	calc
Copper, dissolved	M200.8 ICP-MS	0.0013	B	*	mg/L	0.0005	0.003	10/26/12 0:43	msh
Copper, total	M200.8 ICP-MS		U		mg/L	0.0005	0.003	10/25/12 21:37	pmc
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	10/22/12 17:33	aeb
Iron, total	M200.7 ICP		U		mg/L	0.02	0.05	10/24/12 19:38	aeb
Lead, dissolved	M200.8 ICP-MS	0.0001	B		mg/L	0.0001	0.0005	10/26/12 0:43	msh
Lead, total	M200.8 ICP-MS	0.0003	B		mg/L	0.0001	0.0005	10/25/12 21:37	pmc
Magnesium, dissolved	M200.7 ICP	0.7	B		mg/L	0.2	1	10/22/12 17:33	aeb
Manganese, dissolved	M200.7 ICP		U		mg/L	0.005	0.03	10/22/12 17:33	aeb
Manganese, total	M200.7 ICP		U		mg/L	0.005	0.03	10/24/12 19:38	aeb
Mercury, total	M245.1 CVAA		U		mg/L	0.0002	0.001	10/29/12 12:16	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	10/22/12 17:33	aeb
Nickel, total	M200.7 ICP		U		mg/L	0.01	0.05	10/24/12 19:38	aeb
Selenium, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0001	0.0003	10/26/12 0:43	msh
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	10/26/12 0:43	msh
Silver, total	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	10/25/12 21:37	pmc
Uranium, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0001	0.0005	10/26/12 0:43	msh
Uranium, total	M200.8 ICP-MS	0.0004	B		mg/L	0.0001	0.0005	10/25/12 21:37	pmc
Zinc, dissolved	M200.7 ICP	0.02	B		mg/L	0.01	0.05	10/22/12 17:33	aeb
Zinc, total	M200.7 ICP	0.02	B		mg/L	0.01	0.05	10/24/12 19:38	aeb

Watley Group LLC

Project ID:

Sample ID: CB-LEVEL 3-10152012

ACZ Sample ID: **L97415-01**

Date Sampled: 10/15/12 00:00

Date Received: 10/18/12

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		30			mg/L	2	20	10/19/12 0:00	las
Carbonate as CaCO ₃			U		mg/L	2	20	10/19/12 0:00	las
Hydroxide as CaCO ₃			U		mg/L	2	20	10/19/12 0:00	las
Total Alkalinity		30			mg/L	2	20	10/19/12 0:00	las
Chloride	SM4500Cl-E		U	*	mg/L	1	5	10/24/12 14:05	lhb
Conductivity @25C	SM2510B	126			umhos/cm	1	10	10/19/12 3:23	las
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	10/22/12 18:47	mpb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	10/24/12 23:25	pjb
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	10/19/12 11:52	las
Hardness as CaCO ₃	SM2340B - Calculation	53			mg/L	1	7	10/30/12 13:58	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							10/19/12 12:19	mfm
Lab Filtration (glass fiber filter)	SOPWC050							10/18/12 17:51	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	0.39	H		mg/L	0.02	0.1	10/30/12 13:58	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.39	H	*	mg/L	0.02	0.1	10/18/12 19:23	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		UH	*	mg/L	0.01	0.05	10/18/12 19:23	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	10/25/12 13:52	tcd
pH (lab)	SM4500H+ B								
pH		7.9	H		units	0.1	0.1	10/19/12 0:00	las
pH measured at		22.0			C	0.1	0.1	10/19/12 0:00	las
Residue, Filterable (TDS) @180C	SM2540C	70			mg/L	10	20	10/19/12 14:44	abm
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	10/18/12 13:27	las
Sulfate	D516-02 - Turbidimetric	28			mg/L	1	5	10/26/12 11:26	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	10/22/12 14:08	abm


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Watley Group LLC

ACZ Project ID: **L97415**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332442													
WG332442PBW1	PBW	10/18/12 16:56				3.1	mg/L		-20	20			
WG332442LCSW2	LCSW	10/18/12 17:09	WC121011-	820.0001		756.7	mg/L	92.3	90	110			
WG332442LCSW5	LCSW	10/18/12 20:14	WC121011-	820.0001		782.7	mg/L	95.5	90	110			
WG332442PBW2	PBW	10/18/12 20:22				U	mg/L		-20	20			
WG332442LCSW8	LCSW	10/18/12 23:30	WC121011-	820.0001		785.2	mg/L	95.8	90	110			
WG332442PBW3	PBW	10/18/12 23:39				U	mg/L		-20	20			
WG332442LCSW11	LCSW	10/19/12 2:41	WC121011-	820.0001		786.8	mg/L	96	90	110			
WG332442PBW4	PBW	10/19/12 2:50				U	mg/L		-20	20			
L97416-06DUP	DUP	10/19/12 4:29			545	564.7	mg/L				3.6	20	
WG332442LCSW14	LCSW	10/19/12 5:55	WC121011-	820.0001		790.7	mg/L	96.4	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332849													
WG332849ICV	ICV	10/25/12 0:41	MS121001-5	.1		.1013	mg/L	101.3	90	110			
WG332849ICB	ICB	10/25/12 0:44				U	mg/L		-0.003	0.003			
WG332763LRB	LRB	10/25/12 0:47				U	mg/L		-0.0022	0.0022			
WG332763LFB	LFB	10/25/12 0:49	MS121009-6	.050055		.0489	mg/L	97.7	85	115			
L97445-03LFM	LFM	10/25/12 1:07	MS121009-6	.050055	.156	.2153	mg/L	118.5	70	130			
L97445-03LFMD	LFMD	10/25/12 1:15	MS121009-6	.050055	.156	.2127	mg/L	113.3	70	130	1.21	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332928													
WG332928ICV	ICV	10/25/12 23:49	MS121001-5	.05		.05387	mg/L	107.7	90	110			
WG332928ICB	ICB	10/25/12 23:52				U	mg/L		-0.0006	0.0006			
WG332928LFB	LFB	10/25/12 23:56	MS121009-6	.05005		.05126	mg/L	102.4	85	115			
L97265-03AS	AS	10/26/12 0:09	MS121009-6	.25025	.005	.2722	mg/L	106.8	70	130			
L97265-03ASD	ASD	10/26/12 0:12	MS121009-6	.25025	.005	.2693	mg/L	105.6	70	130	1.07	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332612													
WG332612ICV	ICV	10/22/12 16:47	II120914-1	2		1.9912	mg/L	99.6	95	105			
WG332612ICB	ICB	10/22/12 16:53				U	mg/L		-0.009	0.009			
WG332612LFB	LFB	10/22/12 17:05	II121001-3	.5		.5023	mg/L	100.5	85	115			
L97411-01AS	AS	10/22/12 17:23	II121001-3	.5	.056	.5603	mg/L	100.9	85	115			
L97411-01ASD	ASD	10/22/12 17:27	II121001-3	.5	.056	.5589	mg/L	100.6	85	115	0.25	20	

Beryllium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332612													
WG332612ICV	ICV	10/22/12 16:47	II120914-1	2		1.991	mg/L	99.6	95	105			
WG332612ICB	ICB	10/22/12 16:53				U	mg/L		-0.03	0.03			
WG332612LFB	LFB	10/22/12 17:05	II121001-3	.5		.517	mg/L	103.4	85	115			
L97411-01AS	AS	10/22/12 17:23	II121001-3	.5	U	.51	mg/L	102	85	115			
L97411-01ASD	ASD	10/22/12 17:27	II121001-3	.5	U	.508	mg/L	101.6	85	115	0.39	20	

Watley Group LLC

ACZ Project ID: **L97415**

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332612													
WG332612ICV	ICV	10/22/12 16:47	II120914-1	2		1.994	mg/L	99.7	95	105			
WG332612ICB	ICB	10/22/12 16:53				U	mg/L		-0.03	0.03			
WG332612LFB	LFB	10/22/12 17:05	II121001-3	.5005		.524	mg/L	104.7	85	115			
L97411-01AS	AS	10/22/12 17:23	II121001-3	.5005	.03	.548	mg/L	103.5	85	115			
L97411-01ASD	ASD	10/22/12 17:27	II121001-3	.5005	.03	.531	mg/L	100.1	85	115	3.15	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332928													
WG332928ICV	ICV	10/25/12 23:49	MS121001-5	.05		.05025	mg/L	100.5	90	110			
WG332928ICB	ICB	10/25/12 23:52				U	mg/L		-0.0003	0.0003			
WG332928LFB	LFB	10/25/12 23:56	MS121009-6	.0501		.04933	mg/L	98.5	85	115			
L97265-03AS	AS	10/26/12 0:09	MS121009-6	.2505	.1008	.3439	mg/L	97	70	130			
L97265-03ASD	ASD	10/26/12 0:12	MS121009-6	.2505	.1008	.3497	mg/L	99.4	70	130	1.67	20	

Cadmium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332838													
WG332838ICV	ICV	10/25/12 20:40	MS121001-5	.05		.05245	mg/L	104.9	90	110			
WG332838ICB	ICB	10/25/12 20:43				U	mg/L		-0.0003	0.0003			
WG332665LRB	LRB	10/25/12 20:48				U	mg/L		-0.00022	0.00022			
WG332665LFB	LFB	10/25/12 20:51	MS121009-6	.0501		.0496	mg/L	99	85	115			
L97398-02LFM	LFM	10/25/12 21:13	MS121009-6	.0501	U	.04744	mg/L	94.7	70	130			
L97398-02LFMD	LFMD	10/25/12 21:22	MS121009-6	.0501	U	.04848	mg/L	96.8	70	130	2.17	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332612													
WG332612ICV	ICV	10/22/12 16:47	II120914-1	100		98.53	mg/L	98.5	95	105			
WG332612ICB	ICB	10/22/12 16:53				U	mg/L		-0.6	0.6			
WG332612LFB	LFB	10/22/12 17:05	II121001-3	67.97554		69.91	mg/L	102.8	85	115			
L97411-01AS	AS	10/22/12 17:23	II121001-3	67.97554	84.4	150.9	mg/L	97.8	85	115			
L97411-01ASD	ASD	10/22/12 17:27	II121001-3	67.97554	84.4	150.8	mg/L	97.7	85	115	0.07	20	

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332816													
WG332816ICB	ICB	10/24/12 11:13				U	mg/L		-3	3			
WG332816ICV	ICV	10/24/12 11:13	WI120904-1	54.945		56.6	mg/L	103	90	110			
WG332816LFB1	LFB	10/24/12 13:55	WI120716-1	30		32.1	mg/L	107	90	110			
WG332816LFB2	LFB	10/24/12 13:59	WI120716-1	30		32.4	mg/L	108	90	110			
L97405-01AS	AS	10/24/12 13:59	WI120716-1	150	U	163.3	mg/L	108.9	90	110			
L97405-02DUP	DUP	10/24/12 13:59			U	U	mg/L				0	20	RA

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ACZ Project ID: **L97415**

Chromium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332928													
WG332928ICV	ICV	10/25/12 23:49	MS121001-5	.05		.05031	mg/L	100.6	90	110			
WG332928ICB	ICB	10/25/12 23:52				U	mg/L		-0.0015	0.0015			
WG332928LFB	LFB	10/25/12 23:56	MS121009-6	.05005		.04987	mg/L	99.6	85	115			
L97265-03AS	AS	10/26/12 0:09	MS121009-6	.25025	.012	.2592	mg/L	98.8	70	130			
L97265-03ASD	ASD	10/26/12 0:12	MS121009-6	.25025	.012	.2564	mg/L	97.7	70	130	1.09	20	

Chromium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332838													
WG332838ICV	ICV	10/25/12 20:40	MS121001-5	.05		.04944	mg/L	98.9	90	110			
WG332838ICB	ICB	10/25/12 20:43				U	mg/L		-0.0015	0.0015			
WG332665LRB	LRB	10/25/12 20:48				U	mg/L		-0.0011	0.0011			
WG332665LFB	LFB	10/25/12 20:51	MS121009-6	.05005		.04944	mg/L	98.8	85	115			
L97398-02LFM	LFM	10/25/12 21:13	MS121009-6	.05005	U	.0483	mg/L	96.5	70	130			
L97398-02LFMD	LFMD	10/25/12 21:22	MS121009-6	.05005	U	.0524	mg/L	104.7	70	130	8.14	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332442													
WG332442LCSW1	LCSW	10/18/12 16:58	PCN40621	1408.8		1470.2	µmhos/crr	104.4	90	110			
WG332442LCSW4	LCSW	10/18/12 20:02	PCN40621	1408.8		1452.8	µmhos/crr	103.1	90	110			
WG332442LCSW7	LCSW	10/18/12 23:18	PCN40621	1408.8		1434.4	µmhos/crr	101.8	90	110			
WG332442LCSW10	LCSW	10/19/12 2:28	PCN40621	1408.8		1401.8	µmhos/crr	99.5	90	110			
L97416-06DUP	DUP	10/19/12 4:29			2690	2690	µmhos/crr				0	20	
WG332442LCSW13	LCSW	10/19/12 5:43	PCN40621	1408.8		1371.1	µmhos/crr	97.3	90	110			

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332928													
WG332928ICV	ICV	10/25/12 23:49	MS121001-5	.05		.05069	mg/L	101.4	90	110			
WG332928ICB	ICB	10/25/12 23:52				U	mg/L		-0.0015	0.0015			
WG332928LFB	LFB	10/25/12 23:56	MS121009-6	.05005		.04849	mg/L	96.9	85	115			
L97265-03AS	AS	10/26/12 0:09	MS121009-6	.25025	40.8	41.79	mg/L	395.6	70	130			M3
L97265-03ASD	ASD	10/26/12 0:12	MS121009-6	.25025	40.8	41.25	mg/L	179.8	70	130	1.3	20	M3

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332838													
WG332838ICV	ICV	10/25/12 20:40	MS121001-5	.05		.05035	mg/L	100.7	90	110			
WG332838ICB	ICB	10/25/12 20:43				U	mg/L		-0.0015	0.0015			
WG332665LRB	LRB	10/25/12 20:48				U	mg/L		-0.0011	0.0011			
WG332665LFB	LFB	10/25/12 20:51	MS121009-6	.05005		.04912	mg/L	98.1	85	115			
L97398-02LFM	LFM	10/25/12 21:13	MS121009-6	.05005	U	.0463	mg/L	92.5	70	130			
L97398-02LFMD	LFMD	10/25/12 21:22	MS121009-6	.05005	U	.049	mg/L	97.9	70	130	5.67	20	

Watley Group LLC

ACZ Project ID: **L97415**

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332622													
WG332622ICV	ICV	10/22/12 15:14	WI121018-7	.3		.3183	mg/L	106.1	90	110			
WG332622ICB	ICB	10/22/12 15:15				U	mg/L		-0.009	0.009			
WG332689													
WG332621LRB	LRB	10/22/12 18:24				U	mg/L		-0.009	0.009			
WG332621LFB	LFB	10/22/12 18:25	WI121018-3	.2		.203	mg/L	101.5	90	110			
L97401-06DUP	DUP	10/22/12 18:39			U	U	mg/L				0	20	RA
L97401-07LFM	LFM	10/22/12 18:41	WI121018-3	.2	U	.192	mg/L	96	90	110			

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332847													
WG332847ICV	ICV	10/24/12 23:11	WI121018-7	.3		.3156	mg/L	105.2	90	110			
WG332847ICB	ICB	10/24/12 23:12				U	mg/L		-0.009	0.009			
WG332754LRB	LRB	10/24/12 23:13				U	mg/L		-0.009	0.009			
WG332754LFB	LFB	10/24/12 23:13	WI121018-5	.2		.2134	mg/L	106.7	90	110			
L97387-01DUP	DUP	10/24/12 23:15			U	U	mg/L				0	20	RA
L97387-02LFM	LFM	10/24/12 23:17	WI121018-5	.2	U	.2063	mg/L	103.2	90	110			

Dissolved Chromium, Hexavalent

SM3500Cr-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332516													
WG332516ICV	ICV	10/19/12 11:30	WC120504-	.05		.0513	mg/L	102.6	90	110			
WG332516ICB	ICB	10/19/12 11:34				U	mg/L		-0.015	0.015			
WG332516LFB	LFB	10/19/12 11:39	WC121009-	.05		.0484	mg/L	96.8	90	110			
L97415-01AS	AS	10/19/12 11:57	WC121009-	.05	U	.0472	mg/L	94.4	90	110			
L97415-01DUP	DUP	10/19/12 12:01			U	U	mg/L				0	20	RA

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332612													
WG332612ICV	ICV	10/22/12 16:47	II120914-1	2		1.988	mg/L	99.4	95	105			
WG332612ICB	ICB	10/22/12 16:53				U	mg/L		-0.06	0.06			
WG332612LFB	LFB	10/22/12 17:05	II121001-3	1		1.034	mg/L	103.4	85	115			
L97411-01AS	AS	10/22/12 17:23	II121001-3	1	U	1.05	mg/L	105	85	115			
L97411-01ASD	ASD	10/22/12 17:27	II121001-3	1	U	1.045	mg/L	104.5	85	115	0.48	20	

Iron, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332824													
WG332824ICV	ICV	10/24/12 17:53	II120914-3	2		2.003	mg/L	100.2	95	105			
WG332824ICB	ICB	10/24/12 17:59				U	mg/L		-0.06	0.06			
WG332744LRB	LRB	10/24/12 18:11				U	mg/L		-0.044	0.044			
WG332744LFB	LFB	10/24/12 18:15	II121001-3	1		1.024	mg/L	102.4	85	115			
L97412-01LFM	LFM	10/24/12 19:29	II121001-3	1	.21	1.233	mg/L	102.3	70	130			
L97412-01LFMD	LFMD	10/24/12 19:32	II121001-3	1	.21	1.252	mg/L	104.2	70	130	1.53	20	

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ACZ Project ID: **L97415**

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332928													
WG332928ICV	ICV	10/25/12 23:49	MS121001-5	.05		.05379	mg/L	107.6	90	110			
WG332928ICB	ICB	10/25/12 23:52				U	mg/L		-0.0003	0.0003			
WG332928LFB	LFB	10/25/12 23:56	MS121009-6	.05005		.04957	mg/L	99	85	115			
L97265-03AS	AS	10/26/12 0:09	MS121009-6	.25025	.0135	.26645	mg/L	101.1	70	130			
L97265-03ASD	ASD	10/26/12 0:12	MS121009-6	.25025	.0135	.26755	mg/L	101.5	70	130	0.41	20	

Lead, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332838													
WG332838ICV	ICV	10/25/12 20:40	MS121001-5	.05		.05278	mg/L	105.6	90	110			
WG332838ICB	ICB	10/25/12 20:43				U	mg/L		-0.0003	0.0003			
WG332665LRB	LRB	10/25/12 20:48				U	mg/L		-0.00022	0.00022			
WG332665LFB	LFB	10/25/12 20:51	MS121009-6	.05005		.04769	mg/L	95.3	85	115			
L97398-02LFM	LFM	10/25/12 21:13	MS121009-6	.05005	U	.04706	mg/L	94	70	130			
L97398-02LFMD	LFMD	10/25/12 21:22	MS121009-6	.05005	U	.04854	mg/L	97	70	130	3.1	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332612													
WG332612ICV	ICV	10/22/12 16:47	II120914-1	100		100.33	mg/L	100.3	95	105			
WG332612ICB	ICB	10/22/12 16:53				U	mg/L		-0.6	0.6			
WG332612LFB	LFB	10/22/12 17:05	II121001-3	50.00131		50.79	mg/L	101.6	85	115			
L97411-01AS	AS	10/22/12 17:23	II121001-3	50.00131	14.9	65.54	mg/L	101.3	85	115			
L97411-01ASD	ASD	10/22/12 17:27	II121001-3	50.00131	14.9	65.44	mg/L	101.1	85	115	0.15	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332612													
WG332612ICV	ICV	10/22/12 16:47	II120914-1	2		1.9622	mg/L	98.1	95	105			
WG332612ICB	ICB	10/22/12 16:53				U	mg/L		-0.015	0.015			
WG332612LFB	LFB	10/22/12 17:05	II121001-3	.5		.5026	mg/L	100.5	85	115			
L97411-01AS	AS	10/22/12 17:23	II121001-3	.5	U	.5091	mg/L	101.8	85	115			
L97411-01ASD	ASD	10/22/12 17:27	II121001-3	.5	U	.5077	mg/L	101.5	85	115	0.28	20	

Manganese, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332824													
WG332824ICV	ICV	10/24/12 17:53	II120914-3	2		1.9788	mg/L	98.9	95	105			
WG332824ICB	ICB	10/24/12 17:59				U	mg/L		-0.015	0.015			
WG332744LRB	LRB	10/24/12 18:11				U	mg/L		-0.011	0.011			
WG332744LFB	LFB	10/24/12 18:15	II121001-3	.5		.5028	mg/L	100.6	85	115			
L97412-01LFM	LFM	10/24/12 19:29	II121001-3	.5	.026	.5307	mg/L	100.9	70	130			
L97412-01LFMD	LFMD	10/24/12 19:32	II121001-3	.5	.026	.5354	mg/L	101.9	70	130	0.88	20	

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ACZ Project ID: **L97415**

Mercury, total

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332868													
WG332868ICV	ICV	10/29/12 11:43	II121022-2	.005025		.00497	mg/L	98.9	95	105			
WG332868ICB	ICB	10/29/12 11:45				U	mg/L		-0.0002	0.0002			
WG332868LRB	LRB	10/29/12 11:47				U	mg/L		-0.00044	0.00044			
WG332868LFB	LFB	10/29/12 11:50	II121001-5	.002002		.00185	mg/L	92.4	85	115			
L97400-02LFM	LFM	10/29/12 11:58	II121001-5	.002002	U	.00192	mg/L	95.9	85	115			
L97400-02LFMD	LFMD	10/29/12 12:00	II121001-5	.002002	U	.00185	mg/L	92.4	85	115	3.71	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332612													
WG332612ICV	ICV	10/22/12 16:47	II120914-1	2.002		1.946	mg/L	97.2	95	105			
WG332612ICB	ICB	10/22/12 16:53				U	mg/L		-0.03	0.03			
WG332612LFB	LFB	10/22/12 17:05	II121001-3	.5		.492	mg/L	98.4	85	115			
L97411-01AS	AS	10/22/12 17:23	II121001-3	.5	U	.484	mg/L	96.8	85	115			
L97411-01ASD	ASD	10/22/12 17:27	II121001-3	.5	U	.485	mg/L	97	85	115	0.21	20	

Nickel, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332824													
WG332824ICV	ICV	10/24/12 17:53	II120914-3	2.002		2.009	mg/L	100.3	95	105			
WG332824ICB	ICB	10/24/12 17:59				U	mg/L		-0.03	0.03			
WG332744LRB	LRB	10/24/12 18:11				U	mg/L		-0.022	0.022			
WG332744LFB	LFB	10/24/12 18:15	II121001-3	.5		.516	mg/L	103.2	85	115			
L97412-01LFM	LFM	10/24/12 19:29	II121001-3	.5	U	.499	mg/L	99.8	70	130			
L97412-01LFMD	LFMD	10/24/12 19:32	II121001-3	.5	U	.493	mg/L	98.6	70	130	1.21	20	

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332464													
WG332464ICV	ICV	10/18/12 19:06	WI121009-1	2.416		2.441	mg/L	101	90	110			
WG332464ICB	ICB	10/18/12 19:07				U	mg/L		-0.06	0.06			
WG332464LFB	LFB	10/18/12 19:11	WI120814-9	2		2.059	mg/L	103	90	110			
L97411-01AS	AS	10/18/12 19:16	WI120814-9	2	.14	2.138	mg/L	99.9	90	110			
L97411-02DUP	DUP	10/18/12 19:18			.13	.137	mg/L				5.2	20	RA

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332464													
WG332464ICV	ICV	10/18/12 19:06	WI121009-1	.609		.625	mg/L	102.6	90	110			
WG332464ICB	ICB	10/18/12 19:07				U	mg/L		-0.03	0.03			
WG332464LFB	LFB	10/18/12 19:11	WI120814-9	1		1.046	mg/L	104.6	90	110			
L97411-01AS	AS	10/18/12 19:16	WI120814-9	1	U	1.038	mg/L	103.8	90	110			
L97411-02DUP	DUP	10/18/12 19:18			U	U	mg/L				0	20	RA

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ACZ Project ID: **L97415**

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332881													
WG332881ICV	ICV	10/25/12 11:20	WI111117-1	1.002		.989	mg/L	98.7	90	110			
WG332881ICB	ICB	10/25/12 11:21				U	mg/L		-0.15	0.15			
WG332895													
WG332895LFB1	LFB	10/25/12 12:57	WI111101-3	1		.987	mg/L	98.7	90	110			
L97317-03AS	AS	10/25/12 13:15	WI111101-3	1	U	.932	mg/L	93.2	90	110			
L97317-04DUP	DUP	10/25/12 13:17			U	U	mg/L				0	20	RA
WG332895LFB2	LFB	10/25/12 13:30	WI111101-3	1		.977	mg/L	97.7	90	110			

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332537													
WG332537LCSW3	LCSW	10/19/12 17:23	PCN39825	6		6.03	units	100.5	98	102			
L97426-04DUP	DUP	10/19/12 19:47			8.3	8.32	units				0.2	20	
WG332537LCSW6	LCSW	10/19/12 20:03	PCN39825	6		6.04	units	100.7	98	102			
WG332537LCSW9	LCSW	10/19/12 23:44	PCN39825	6		6.05	units	100.8	98	102			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332528													
WG332528PBW	PBW	10/19/12 14:40				U	mg/L		-20	20			
WG332528LCSW	LCSW	10/19/12 14:40	PCN41152	260		254	mg/L	97.7	80	120			
L97431-07DUP	DUP	10/19/12 14:50			3790	3744	mg/L				1.2	20	

Residue, Non-Filterable (TSS) @105C

SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332429													
WG332429PBW	PBW	10/18/12 12:45				U	mg/L		-15	15			
WG332429LCSW	LCSW	10/18/12 12:46	PCN41152	160		161	mg/L	100.6	80	120			
L97415-01DUP	DUP	10/18/12 13:29			U	U	mg/L				0	20	RA

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332928													
WG332928ICV	ICV	10/25/12 23:49	MS121001-5	.05		.05274	mg/L	105.5	90	110			
WG332928ICB	ICB	10/25/12 23:52				U	mg/L		-0.0003	0.0003			
WG332928LFB	LFB	10/25/12 23:56	MS121009-6	.05005		.04924	mg/L	98.4	85	115			
L97265-03AS	AS	10/26/12 0:09	MS121009-6	.25025	.0034	.26455	mg/L	104.4	70	130			
L97265-03ASD	ASD	10/26/12 0:12	MS121009-6	.25025	.0034	.2596	mg/L	102.4	70	130	1.89	20	

Watley Group LLC

ACZ Project ID: **L97415**

Silver, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332928													
WG332928ICV	ICV	10/25/12 23:49	MS121001-5	.02006		.02037	mg/L	101.5	90	110			
WG332928ICB	ICB	10/25/12 23:52				U	mg/L		-0.00015	0.00015			
WG332928LFB	LFB	10/25/12 23:56	MS121009-6	.01001		.00944	mg/L	94.3	85	115			
L97265-03AS	AS	10/26/12 0:09	MS121009-6	.05005	.0003	.04838	mg/L	96.1	70	130			
L97265-03ASD	ASD	10/26/12 0:12	MS121009-6	.05005	.0003	.04829	mg/L	95.9	70	130	0.19	20	

Silver, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332838													
WG332838ICV	ICV	10/25/12 20:40	MS121001-5	.02006		.02129	mg/L	106.1	90	110			
WG332838ICB	ICB	10/25/12 20:43				U	mg/L		-0.00015	0.00015			
WG332665LRB	LRB	10/25/12 20:48				U	mg/L		-0.00011	0.00011			
WG332665LFB	LFB	10/25/12 20:51	MS121009-6	.01001		.01004	mg/L	100.3	85	115			
L97398-02LFM	LFM	10/25/12 21:13	MS121009-6	.01001	U	.00916	mg/L	91.5	70	130			
L97398-02LFMD	LFMD	10/25/12 21:22	MS121009-6	.01001	U	.00927	mg/L	92.6	70	130	1.19	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332977													
WG332977ICB	ICB	10/26/12 10:14				U	mg/L		-3	3			
WG332977ICV	ICV	10/26/12 10:14	WI121025-5	20		20	mg/L	100	90	110			
WG332977LFB	LFB	10/26/12 11:26	WI121025-3	10		9.9	mg/L	99	90	110			
L97266-01DUP	DUP	10/26/12 11:43			6000	6270	mg/L				4.4	20	
L97266-02AS	AS	10/26/12 11:47	SO4TURB10	10	1000	1010	mg/L	100	90	110			

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332594													
WG332594ICV	ICV	10/22/12 14:00	WC121022-	.35466		.387	mg/L	109.1	90	110			
WG332594ICB	ICB	10/22/12 14:02				U	mg/L		-0.06	0.06			
WG332594LFB	LFB	10/22/12 14:04	WC121022-	.232		.275	mg/L	118.5	80	120			
L97459-04AS	AS	10/22/12 14:18	WC121022-	.232	U	.248	mg/L	106.9	75	125			
L97459-04DUP	DUP	10/22/12 14:20			U	U	mg/L				0	20	RA

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332928													
WG332928ICV	ICV	10/25/12 23:49	MS121001-5	.05		.05453	mg/L	109.1	90	110			
WG332928ICB	ICB	10/25/12 23:52				U	mg/L		-0.0003	0.0003			
WG332928LFB	LFB	10/25/12 23:56	MS121009-6	.05		.05272	mg/L	105.4	85	115			
L97265-03AS	AS	10/26/12 0:09	MS121009-6	.25	.4988	.7615	mg/L	105.1	70	130			
L97265-03ASD	ASD	10/26/12 0:12	MS121009-6	.25	.4988	.7545	mg/L	102.3	70	130	0.92	20	

Watley Group LLC

ACZ Project ID: **L97415**

Uranium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332838													
WG332838ICV	ICV	10/25/12 20:40	MS121001-5	.05		.05376	mg/L	107.5	90	110			
WG332838ICB	ICB	10/25/12 20:43				U	mg/L		-0.0003	0.0003			
WG332665LRB	LRB	10/25/12 20:48				U	mg/L		-0.00022	0.00022			
WG332665LFB	LFB	10/25/12 20:51	MS121009-6	.05		.05098	mg/L	102	85	115			
L97398-02LFM	LFM	10/25/12 21:13	MS121009-6	.05	U	.0528	mg/L	105.6	70	130			
L97398-02LFMD	LFMD	10/25/12 21:22	MS121009-6	.05	U	.0543	mg/L	108.6	70	130	2.8	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332612													
WG332612ICV	ICV	10/22/12 16:47	II120914-1	2		1.985	mg/L	99.3	95	105			
WG332612ICB	ICB	10/22/12 16:53				U	mg/L		-0.03	0.03			
WG332612LFB	LFB	10/22/12 17:05	II121001-3	.5		.512	mg/L	102.4	85	115			
L97411-01AS	AS	10/22/12 17:23	II121001-3	.5	.02	.534	mg/L	102.8	85	115			
L97411-01ASD	ASD	10/22/12 17:27	II121001-3	.5	.02	.536	mg/L	103.2	85	115	0.37	20	

Zinc, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332824													
WG332824ICV	ICV	10/24/12 17:53	II120914-3	2		1.994	mg/L	99.7	95	105			
WG332824ICB	ICB	10/24/12 17:59				U	mg/L		-0.03	0.03			
WG332744LRB	LRB	10/24/12 18:11				U	mg/L		-0.022	0.022			
WG332744LFB	LFB	10/24/12 18:15	II121001-3	.5		.519	mg/L	103.8	85	115			
L97412-01LFM	LFM	10/24/12 19:29	II121001-3	.5	U	.5	mg/L	100	70	130			
L97412-01LFMD	LFMD	10/24/12 19:32	II121001-3	.5	U	.503	mg/L	100.6	70	130	0.6	20	

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ACZ Project ID: L97415

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L97415-01	WG332928	Copper, 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.
	WG332816	Chloride	SM4500Cl-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG332689	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG332847	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG332516	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG332464	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG332895	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG332429	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG332594	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Watley Group LLC

ACZ Project ID: **L97415**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Watley Group LLC

ACZ Project ID: L97415

Date Received: 10/18/2012 09:56

Received By: ksj

Date Printed: 10/18/2012

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Are all labels on containers and are they intact and legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) For preserved bottle types, was the pH checked and within limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12) Is there sufficient sample volume to perform all requested work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) Is the custody seal intact on all containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14) Are samples that require zero headspace acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15) Are all sample containers appropriate for analytical requirements?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
L97415-01 : A orange container was not received and the associated analysis could not be run.			
16) Is there an Hg-1631 trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17) Is there a VOA trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18) Were all samples received within hold time?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Some parameters were received past hold time.

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA16417	3.2	13	Yes

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



Laboratories, Inc.

197415

CHAIN of CUSTODY

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

Report to:

Name: Mike Thompson
Company: Reardon Steel LLC
E-mail: mt@reardonsteel.us

Address: 18032 Rd 6
Cortez CO 81321
Telephone: 970 - 426 - 2924

Copy of Report to:

Name: John Bryan
Company: Watley Group LLC

E-mail: jbryan@watley.com
Telephone: 310 - 777 - 8889

Invoice to:

Name: Laurens Nuyens
Company: Caldera Mineral Resources
E-mail: Laurens@watley.com

Address: 8439 Sunset Blvd Suite 401
West Hollywood, CA 90069
Telephone: 310 - 777 - 8889

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.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Bottle Order BO028450
Project/PO #:
Reporting state for compliance testing:
Sampler's Name: CB
Are any samples NRC licensable material? NO

of Containers

please refer
to Bottle Quote.

SAMPLE IDENTIFICATION DATE:TIME Matrix
CB - Level 3 - 10152012 10/15/2012 SW 7

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

ARKS/ SAMPLE DISCLOSURES

PAGE

of

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

10/14/12

10/16/12 9:50

December 10, 2012

Report to:

John Bryan

Watley Group LLC

8439 Sunset Blvd. Suite 402

West Hollywood, CA 90069

Bill to:

John Bryan

Watley Group LLC

8439 Sunset Blvd. Suite 402

West Hollywood, CA 90069

cc: Mike Thompson

Project ID:

ACZ Project ID: L98049

John Bryan:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 28, 2012. This project has been assigned to ACZ's project number, L98049. 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 L98049. 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 January 10, 2013. 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.



Tony Antalek has reviewed and approved this report.



Watley Group LLC

December 10, 2012

Project ID:

ACZ Project ID: L98049

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 6 miscellaneous samples from Watley Group LLC on November 28, 2012. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L98049. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses except those qualified with an ACZ 'H' flag were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic and organic parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports.

Watley Group LLC

Project ID:

Sample ID: CB-01

ACZ Sample ID: **L98049-01**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/05/12 15:21	bsu
Cyanide, WAD	SM4500-CN I- distillation							12/05/12 10:48	bsu
Total Hot Plate Digestion	M200.2 ICP-MS							12/03/12 11:57	scp
Total Hot Plate Digestion	M200.2 ICP			*				12/05/12 9:23	aeb
Total Recoverable Digestion	M200.2 ICP-MS							12/04/12 13:21	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.058			mg/L	0.001	0.005	12/05/12 23:30	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0002	0.001	12/05/12 2:43	pmc
Barium, dissolved	M200.7 ICP	0.035			mg/L	0.003	0.02	12/03/12 21:23	aeb
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:23	aeb
Boron, dissolved	M200.7 ICP	0.02	B		mg/L	0.01	0.05	12/03/12 21:23	aeb
Cadmium, dissolved	M200.8 ICP-MS	0.0008			mg/L	0.0001	0.0005	12/05/12 2:43	pmc
Cadmium, total	M200.8 ICP-MS	0.0010			mg/L	0.0001	0.0005	12/05/12 19:32	pmc
Calcium, dissolved	M200.7 ICP	182			mg/L	0.2	1	12/03/12 21:23	aeb
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	12/05/12 2:43	pmc
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	12/05/12 19:32	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	12/10/12 15:51	calc
Copper, dissolved	M200.8 ICP-MS	0.0011	B		mg/L	0.0005	0.003	12/05/12 2:43	pmc
Copper, total	M200.8 ICP-MS	0.0085			mg/L	0.0005	0.003	12/05/12 19:32	pmc
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	12/03/12 21:23	aeb
Iron, total	M200.7 ICP	0.35			mg/L	0.04	0.1	12/05/12 19:02	aeb
Lead, dissolved	M200.8 ICP-MS	0.0025			mg/L	0.0001	0.0005	12/05/12 2:43	pmc
Lead, total	M200.8 ICP-MS	0.0407			mg/L	0.0001	0.0005	12/05/12 19:32	pmc
Magnesium, dissolved	M200.7 ICP	3.3			mg/L	0.2	1	12/03/12 21:23	aeb
Manganese, dissolved	M200.7 ICP	0.151			mg/L	0.005	0.03	12/03/12 21:23	aeb
Manganese, total	M200.7 ICP	0.22			mg/L	0.01	0.05	12/05/12 19:02	aeb
Mercury, total	M245.1 CVAA		U	*	mg/L	0.0002	0.001	12/06/12 10:05	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:23	aeb
Nickel, total	M200.7 ICP		U		mg/L	0.02	0.1	12/06/12 12:02	aeb
Selenium, dissolved	M200.8 ICP-MS	0.0004			mg/L	0.0001	0.0003	12/05/12 2:43	pmc
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	12/05/12 2:43	pmc
Silver, total	M200.8 ICP-MS	0.00008	B		mg/L	0.00005	0.0003	12/05/12 19:32	pmc
Uranium, dissolved	M200.8 ICP-MS	0.0004	B		mg/L	0.0001	0.0005	12/05/12 2:43	pmc
Uranium, total	M200.8 ICP-MS	0.0003	B		mg/L	0.0001	0.0005	12/05/12 19:32	pmc
Zinc, dissolved	M200.7 ICP	0.24			mg/L	0.01	0.05	12/03/12 21:23	aeb
Zinc, total	M200.7 ICP	0.32			mg/L	0.02	0.1	12/05/12 19:02	aeb

Watley Group LLC

Project ID:

Sample ID: CB-01

ACZ Sample ID: **L98049-01**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		44			mg/L	2	20	11/29/12 0:00	abm
Carbonate as CaCO ₃			U		mg/L	2	20	11/29/12 0:00	abm
Hydroxide as CaCO ₃			U		mg/L	2	20	11/29/12 0:00	abm
Total Alkalinity		44			mg/L	2	20	11/29/12 0:00	abm
Chloride	SM4500Cl-E		U	*	mg/L	1	5	12/06/12 12:51	lhb
Conductivity @25C	SM2510B	845			umhos/cm	1	10	11/29/12 21:15	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/07/12 11:45	lhb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/05/12 14:49	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	11/29/12 10:37	ljr
Hardness as CaCO ₃	SM2340B - Calculation	469			mg/L	1	7	12/10/12 15:51	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							11/28/12 15:47	ljr
Lab Filtration (glass fiber filter)	SOPWC050							11/28/12 15:15	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	0.12			mg/L	0.02	0.1	12/10/12 15:51	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.12		*	mg/L	0.02	0.1	11/28/12 19:54	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	11/28/12 19:54	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	12/03/12 17:13	lhb
pH (lab)	SM4500H+ B								
pH		8.1	H		units	0.1	0.1	11/29/12 0:00	abm
pH measured at		19.0			C	0.1	0.1	11/29/12 0:00	abm
Residue, Filterable (TDS) @180C	SM2540C	680			mg/L	10	20	11/30/12 12:01	ljr
Residue, Non-Filterable (TSS) @105C	SM2540D	7	B	*	mg/L	5	20	11/28/12 16:12	ljr
Sulfate	D516-02 - Turbidimetric	450		*	mg/L	20	100	12/07/12 17:02	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	11/28/12 14:33	abm

Watley Group LLC

Project ID:

Sample ID: CB-02

ACZ Sample ID: **L98049-02**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/05/12 15:29	bsu
Cyanide, WAD	SM4500-CN I- distillation							12/05/12 10:55	bsu
Total Hot Plate Digestion	M200.2 ICP			*				12/05/12 9:34	aeb
Total Hot Plate Digestion	M200.2 ICP-MS							12/03/12 12:09	scp
Total Recoverable Digestion	M200.2 ICP-MS							12/04/12 13:57	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.019			mg/L	0.001	0.005	12/05/12 23:45	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0007	B		mg/L	0.0002	0.001	12/05/12 2:47	pmc
Barium, dissolved	M200.7 ICP	0.049			mg/L	0.003	0.02	12/03/12 21:26	aeb
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:26	aeb
Boron, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:26	aeb
Cadmium, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0001	0.0005	12/05/12 2:47	pmc
Cadmium, total	M200.8 ICP-MS	0.0002	B		mg/L	0.0001	0.0005	12/05/12 19:41	pmc
Calcium, dissolved	M200.7 ICP	38.2			mg/L	0.2	1	12/03/12 21:26	aeb
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	12/05/12 2:47	pmc
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	12/05/12 19:41	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	12/10/12 15:51	calc
Copper, dissolved	M200.8 ICP-MS	0.0007	B		mg/L	0.0005	0.003	12/05/12 2:47	pmc
Copper, total	M200.8 ICP-MS	0.0007	B		mg/L	0.0005	0.003	12/05/12 19:41	pmc
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	12/03/12 21:26	aeb
Iron, total	M200.7 ICP		U		mg/L	0.04	0.1	12/05/12 19:05	aeb
Lead, dissolved	M200.8 ICP-MS	0.0001	B		mg/L	0.0001	0.0005	12/05/12 2:47	pmc
Lead, total	M200.8 ICP-MS	0.0008			mg/L	0.0001	0.0005	12/05/12 19:41	pmc
Magnesium, dissolved	M200.7 ICP	2.7			mg/L	0.2	1	12/03/12 21:26	aeb
Manganese, dissolved	M200.7 ICP	0.044			mg/L	0.005	0.03	12/03/12 21:26	aeb
Manganese, total	M200.7 ICP	0.06			mg/L	0.01	0.05	12/05/12 19:05	aeb
Mercury, total	M245.1 CVAA		U	*	mg/L	0.0002	0.001	12/06/12 10:07	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:26	aeb
Nickel, total	M200.7 ICP		U		mg/L	0.02	0.1	12/06/12 12:05	aeb
Selenium, dissolved	M200.8 ICP-MS	0.0004			mg/L	0.0001	0.0003	12/05/12 2:47	pmc
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	12/05/12 2:47	pmc
Silver, total	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	12/05/12 19:41	pmc
Uranium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	12/05/12 2:47	pmc
Uranium, total	M200.8 ICP-MS	0.0001	B		mg/L	0.0001	0.0005	12/05/12 19:41	pmc
Zinc, dissolved	M200.7 ICP	0.11			mg/L	0.01	0.05	12/03/12 21:26	aeb
Zinc, total	M200.7 ICP	0.13			mg/L	0.02	0.1	12/05/12 19:05	aeb

Watley Group LLC

Project ID:

Sample ID: CB-02

ACZ Sample ID: **L98049-02**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		43			mg/L	2	20	11/29/12 0:00	abm
Carbonate as CaCO ₃			U		mg/L	2	20	11/29/12 0:00	abm
Hydroxide as CaCO ₃			U		mg/L	2	20	11/29/12 0:00	abm
Total Alkalinity		43			mg/L	2	20	11/29/12 0:00	abm
Chloride	SM4500Cl-E		U	*	mg/L	1	5	12/06/12 12:51	lhb
Conductivity @25C	SM2510B	241			umhos/cm	1	10	11/29/12 21:23	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/07/12 11:46	lhb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/05/12 14:50	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	11/29/12 10:38	ljr
Hardness as CaCO ₃	SM2340B - Calculation	107			mg/L	1	7	12/10/12 15:51	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							11/28/12 15:52	ljr
Lab Filtration (glass fiber filter)	SOPWC050							11/28/12 15:20	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	0.22			mg/L	0.02	0.1	12/10/12 15:51	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.22		*	mg/L	0.02	0.1	11/28/12 19:55	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	11/28/12 19:55	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	12/03/12 17:14	lhb
pH (lab)	SM4500H+ B								
pH		8.1	H		units	0.1	0.1	11/29/12 0:00	abm
pH measured at		19.0			C	0.1	0.1	11/29/12 0:00	abm
Residue, Filterable (TDS) @180C	SM2540C	140			mg/L	10	20	11/30/12 12:02	ljr
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	11/28/12 16:13	ljr
Sulfate	D516-02 - Turbidimetric	72		*	mg/L	5	30	12/07/12 16:59	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	11/28/12 14:35	abm

Watley Group LLC

Project ID:

Sample ID: CB-03

ACZ Sample ID: **L98049-03**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/05/12 15:36	bsu
Cyanide, WAD	SM4500-CN I- distillation							12/05/12 11:03	bsu
Total Hot Plate Digestion	M200.2 ICP-MS							12/03/12 12:21	scp
Total Hot Plate Digestion	M200.2 ICP							12/05/12 10:09	aeb
Total Recoverable Digestion	M200.2 ICP-MS							12/04/12 14:09	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.023			mg/L	0.001	0.005	12/05/12 23:48	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0004	B		mg/L	0.0002	0.001	12/07/12 4:43	pmc
Barium, dissolved	M200.7 ICP	0.017	B		mg/L	0.003	0.02	12/03/12 21:29	aeb
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:29	aeb
Boron, dissolved	M200.7 ICP	0.03	B		mg/L	0.01	0.05	12/03/12 21:29	aeb
Cadmium, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0001	0.0005	12/05/12 2:56	pmc
Cadmium, total	M200.8 ICP-MS	0.0008			mg/L	0.0001	0.0005	12/05/12 19:44	pmc
Calcium, dissolved	M200.7 ICP	287			mg/L	0.2	1	12/03/12 21:29	aeb
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	12/05/12 2:56	pmc
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	12/05/12 19:44	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	12/10/12 15:51	calc
Copper, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0005	0.003	12/05/12 2:56	pmc
Copper, total	M200.8 ICP-MS	0.0080			mg/L	0.0005	0.003	12/05/12 19:44	pmc
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	12/03/12 21:29	aeb
Iron, total	M200.7 ICP	0.21			mg/L	0.02	0.05	12/05/12 19:15	aeb
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	12/05/12 2:56	pmc
Lead, total	M200.8 ICP-MS	0.0029			mg/L	0.0001	0.0005	12/05/12 19:44	pmc
Magnesium, dissolved	M200.7 ICP	3.5			mg/L	0.2	1	12/03/12 21:29	aeb
Manganese, dissolved	M200.7 ICP	0.131			mg/L	0.005	0.03	12/03/12 21:29	aeb
Manganese, total	M200.7 ICP	0.153			mg/L	0.005	0.03	12/05/12 19:15	aeb
Mercury, total	M245.1 CVAA		U	*	mg/L	0.0002	0.001	12/06/12 10:09	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:29	aeb
Nickel, total	M200.7 ICP		U		mg/L	0.01	0.05	12/06/12 12:15	aeb
Selenium, dissolved	M200.8 ICP-MS	0.0004			mg/L	0.0001	0.0003	12/05/12 2:56	pmc
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	12/05/12 2:56	pmc
Silver, total	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	12/05/12 19:44	pmc
Uranium, dissolved	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0005	12/05/12 2:56	pmc
Uranium, total	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0005	12/05/12 19:44	pmc
Zinc, dissolved	M200.7 ICP	0.17			mg/L	0.01	0.05	12/03/12 21:29	aeb
Zinc, total	M200.7 ICP	0.20			mg/L	0.01	0.05	12/05/12 19:15	aeb

Watley Group LLC

Project ID:

Sample ID: CB-03

ACZ Sample ID: **L98049-03**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		44			mg/L	2	20	11/29/12 0:00	abm
Carbonate as CaCO ₃			U		mg/L	2	20	11/29/12 0:00	abm
Hydroxide as CaCO ₃			U		mg/L	2	20	11/29/12 0:00	abm
Total Alkalinity		44			mg/L	2	20	11/29/12 0:00	abm
Chloride	SM4500Cl-E	1	B	*	mg/L	1	5	12/06/12 12:51	lhb
Conductivity @25C	SM2510B	1200			umhos/cm	1	10	11/29/12 21:30	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/07/12 11:47	lhb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/05/12 14:51	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	11/29/12 10:39	ljr
Hardness as CaCO ₃	SM2340B - Calculation	732			mg/L	1	7	12/10/12 15:51	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							11/28/12 15:57	ljr
Lab Filtration (glass fiber filter)	SOPWC050							11/28/12 15:25	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		U		mg/L	0.02	0.1	12/10/12 15:51	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.02	0.1	11/28/12 19:59	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	11/28/12 19:59	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	12/03/12 17:15	lhb
pH (lab)	SM4500H+ B								
pH		8.1	H		units	0.1	0.1	11/29/12 0:00	abm
pH measured at		19.0			C	0.1	0.1	11/29/12 0:00	abm
Residue, Filterable (TDS) @180C	SM2540C	1080			mg/L	10	20	11/30/12 12:03	ljr
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	11/28/12 16:14	ljr
Sulfate	D516-02 - Turbidimetric	700		*	mg/L	20	100	12/07/12 17:02	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	11/28/12 14:36	abm

Watley Group LLC

Project ID:

Sample ID: CB-04

ACZ Sample ID: **L98049-04**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/05/12 15:44	bsu
Cyanide, WAD	SM4500-CN I- distillation							12/05/12 11:11	bsu
Total Hot Plate Digestion	M200.2 ICP-MS							12/03/12 12:33	scp
Total Hot Plate Digestion	M200.2 ICP							12/05/12 10:21	aeb
Total Recoverable Digestion	M200.2 ICP-MS							12/04/12 14:21	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.067			mg/L	0.001	0.005	12/05/12 23:52	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0002	0.001	12/07/12 4:52	pmc
Barium, dissolved	M200.7 ICP	0.018	B		mg/L	0.003	0.02	12/03/12 21:32	aeb
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:32	aeb
Boron, dissolved	M200.7 ICP	0.03	B		mg/L	0.01	0.05	12/03/12 21:32	aeb
Cadmium, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0001	0.0005	12/05/12 2:59	pmc
Cadmium, total	M200.8 ICP-MS	0.0009			mg/L	0.0001	0.0005	12/05/12 19:48	pmc
Calcium, dissolved	M200.7 ICP	291			mg/L	0.2	1	12/03/12 21:32	aeb
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	12/05/12 2:59	pmc
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	12/05/12 19:48	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	12/10/12 15:51	calc
Copper, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.003	12/07/12 4:52	pmc
Copper, total	M200.8 ICP-MS	0.0099			mg/L	0.0005	0.003	12/05/12 19:48	pmc
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	12/03/12 21:32	aeb
Iron, total	M200.7 ICP	0.38			mg/L	0.02	0.05	12/05/12 19:18	aeb
Lead, dissolved	M200.8 ICP-MS	0.0019			mg/L	0.0001	0.0005	12/05/12 2:59	pmc
Lead, total	M200.8 ICP-MS	0.0542			mg/L	0.0001	0.0005	12/05/12 19:48	pmc
Magnesium, dissolved	M200.7 ICP	3.5			mg/L	0.2	1	12/03/12 21:32	aeb
Manganese, dissolved	M200.7 ICP	0.125			mg/L	0.005	0.03	12/03/12 21:32	aeb
Manganese, total	M200.7 ICP	0.177			mg/L	0.005	0.03	12/05/12 19:18	aeb
Mercury, total	M245.1 CVAA		U	*	mg/L	0.0002	0.001	12/06/12 10:15	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:32	aeb
Nickel, total	M200.7 ICP		U		mg/L	0.01	0.05	12/06/12 12:18	aeb
Selenium, dissolved	M200.8 ICP-MS	0.0004			mg/L	0.0001	0.0003	12/05/12 2:59	pmc
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	12/05/12 2:59	pmc
Silver, total	M200.8 ICP-MS	0.00007	B		mg/L	0.00005	0.0003	12/05/12 19:48	pmc
Uranium, dissolved	M200.8 ICP-MS	0.0006			mg/L	0.0001	0.0005	12/05/12 2:59	pmc
Uranium, total	M200.8 ICP-MS	0.0006			mg/L	0.0001	0.0005	12/05/12 19:48	pmc
Zinc, dissolved	M200.7 ICP	0.15			mg/L	0.01	0.05	12/03/12 21:32	aeb
Zinc, total	M200.7 ICP	0.22			mg/L	0.01	0.05	12/05/12 19:18	aeb

Watley Group LLC

Project ID:

Sample ID: CB-04

ACZ Sample ID: **L98049-04**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		45			mg/L	2	20	11/29/12 0:00	abm
Carbonate as CaCO ₃			U		mg/L	2	20	11/29/12 0:00	abm
Hydroxide as CaCO ₃			U		mg/L	2	20	11/29/12 0:00	abm
Total Alkalinity		45			mg/L	2	20	11/29/12 0:00	abm
Chloride	SM4500Cl-E	1	B	*	mg/L	1	5	12/06/12 12:51	lhb
Conductivity @25C	SM2510B	1200			umhos/cm	1	10	11/29/12 21:37	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/07/12 11:49	lhb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/05/12 14:52	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	11/29/12 10:41	ljr
Hardness as CaCO ₃	SM2340B - Calculation	742			mg/L	1	7	12/10/12 15:51	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							11/28/12 16:01	ljr
Lab Filtration (glass fiber filter)	SOPWC050							11/28/12 15:30	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		U		mg/L	0.02	0.1	12/10/12 15:51	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.02	0.1	11/28/12 20:00	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	11/28/12 20:00	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	12/03/12 17:16	lhb
pH (lab)	SM4500H+ B								
pH		8.1	H		units	0.1	0.1	11/29/12 0:00	abm
pH measured at		19.0			C	0.1	0.1	11/29/12 0:00	abm
Residue, Filterable (TDS) @180C	SM2540C	1080			mg/L	10	20	11/30/12 12:04	ljr
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	11/28/12 16:17	ljr
Sulfate	D516-02 - Turbidimetric	720		*	mg/L	20	100	12/07/12 17:02	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	11/28/12 14:37	abm

Watley Group LLC

Project ID:

Sample ID: CB-05

ACZ Sample ID: **L98049-05**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/05/12 15:51	bsu
Cyanide, WAD	SM4500-CN I- distillation							12/05/12 11:19	bsu
Total Hot Plate Digestion	M200.2 ICP							12/05/12 10:32	aeb
Total Hot Plate Digestion	M200.2 ICP-MS							12/03/12 12:45	scp
Total Recoverable Digestion	M200.2 ICP-MS							12/04/12 14:33	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.010		*	mg/L	0.001	0.005	12/05/12 23:55	pmc
Arsenic, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	12/05/12 3:02	pmc
Barium, dissolved	M200.7 ICP	0.039			mg/L	0.003	0.02	12/03/12 21:35	aeb
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:35	aeb
Boron, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:35	aeb
Cadmium, dissolved	M200.8 ICP-MS	0.0010			mg/L	0.0001	0.0005	12/05/12 3:02	pmc
Cadmium, total	M200.8 ICP-MS	0.0009			mg/L	0.0001	0.0005	12/05/12 19:51	pmc
Calcium, dissolved	M200.7 ICP	28.0			mg/L	0.2	1	12/03/12 21:35	aeb
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	12/05/12 3:02	pmc
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	12/05/12 19:51	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	12/10/12 15:52	calc
Copper, dissolved	M200.8 ICP-MS	0.0017	B		mg/L	0.0005	0.003	12/05/12 3:02	pmc
Copper, total	M200.8 ICP-MS	0.0030			mg/L	0.0005	0.003	12/05/12 19:51	pmc
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	12/03/12 21:35	aeb
Iron, total	M200.7 ICP		U		mg/L	0.02	0.05	12/05/12 19:21	aeb
Lead, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0001	0.0005	12/05/12 3:02	pmc
Lead, total	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0005	12/05/12 19:51	pmc
Magnesium, dissolved	M200.7 ICP	1.7			mg/L	0.2	1	12/03/12 21:35	aeb
Manganese, dissolved	M200.7 ICP		U		mg/L	0.005	0.03	12/03/12 21:35	aeb
Manganese, total	M200.7 ICP		U		mg/L	0.005	0.03	12/05/12 19:21	aeb
Mercury, total	M245.1 CVAA		U	*	mg/L	0.0002	0.001	12/06/12 10:17	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	12/03/12 21:35	aeb
Nickel, total	M200.7 ICP		U		mg/L	0.01	0.05	12/06/12 12:21	aeb
Selenium, dissolved	M200.8 ICP-MS	0.0004			mg/L	0.0001	0.0003	12/05/12 3:02	pmc
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	12/05/12 3:02	pmc
Silver, total	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	12/05/12 19:51	pmc
Uranium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	12/05/12 3:02	pmc
Uranium, total	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	12/05/12 19:51	pmc
Zinc, dissolved	M200.7 ICP	0.23			mg/L	0.01	0.05	12/03/12 21:35	aeb
Zinc, total	M200.7 ICP	0.26			mg/L	0.01	0.05	12/05/12 19:21	aeb

Watley Group LLC

Project ID:

Sample ID: CB-05

ACZ Sample ID: **L98049-05**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		49			mg/L	2	20	11/29/12 0:00	abm
Carbonate as CaCO ₃			U		mg/L	2	20	11/29/12 0:00	abm
Hydroxide as CaCO ₃			U		mg/L	2	20	11/29/12 0:00	abm
Total Alkalinity		49			mg/L	2	20	11/29/12 0:00	abm
Chloride	SM4500Cl-E		U	*	mg/L	1	5	12/06/12 12:51	lhb
Conductivity @25C	SM2510B	178			umhos/cm	1	10	11/29/12 21:45	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/07/12 11:50	lhb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/05/12 14:53	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	11/29/12 10:42	ljr
Hardness as CaCO ₃	SM2340B - Calculation	77			mg/L	1	7	12/10/12 15:52	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							11/28/12 16:06	ljr
Lab Filtration (glass fiber filter)	SOPWC050							11/28/12 15:35	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	0.33			mg/L	0.02	0.1	12/10/12 15:52	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.33		*	mg/L	0.02	0.1	11/28/12 20:01	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	11/28/12 20:01	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	12/03/12 17:17	lhb
pH (lab)	SM4500H+ B								
pH		8.1	H		units	0.1	0.1	11/29/12 0:00	abm
pH measured at		19.0			C	0.1	0.1	11/29/12 0:00	abm
Residue, Filterable (TDS) @180C	SM2540C	100			mg/L	10	20	11/30/12 12:05	ljr
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	11/28/12 16:18	ljr
Sulfate	D516-02 - Turbidimetric	43			mg/L	2	10	12/07/12 17:18	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	11/28/12 14:38	abm

Watley Group LLC

Project ID:

Sample ID: TB092512-1

ACZ Sample ID: **L98049-06**

Date Sampled: 11/27/12 00:00

Date Received: 11/28/12

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							12/05/12 15:58	bsu
Cyanide, WAD	SM4500-CN I- distillation							12/05/12 11:34	bsu

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/07/12 11:51	lhb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	12/05/12 14:54	lhb


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Watley Group LLC

ACZ Project ID: **L98049**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334928													
WG334928PBW1	PBW	11/29/12 13:08				U	mg/L		-20	20			
WG334928LCSW2	LCSW	11/29/12 13:20	WC121114-	820.0001		761.9	mg/L	92.9	90	110			
WG334928LCSW5	LCSW	11/29/12 15:58	WC121114-	820.0001		791.4	mg/L	96.5	90	110			
WG334928PBW2	PBW	11/29/12 16:06				U	mg/L		-20	20			
WG334928LCSW8	LCSW	11/29/12 19:22	WC121114-	820.0001		773.8	mg/L	94.4	90	110			
WG334928PBW3	PBW	11/29/12 19:30				U	mg/L		-20	20			
L98051-02DUP	DUP	11/29/12 22:36			140	140.3	mg/L				0.2	20	
WG334928LCSW11	LCSW	11/29/12 22:49	WC121114-	820.0001		799.7	mg/L	97.5	90	110			
WG334928PBW4	PBW	11/29/12 22:57				U	mg/L		-20	20			
WG334928LCSW14	LCSW	11/30/12 2:12	WC121114-	820.0001		795.7	mg/L	97	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335347													
WG335347ICV	ICV	12/05/12 22:58	MS121001-5	.1		.0999	mg/L	99.9	90	110			
WG335347ICB	ICB	12/05/12 23:01				U	mg/L		-0.003	0.003			
WG335198LRB	LRB	12/05/12 23:04				U	mg/L		-0.0022	0.0022			
WG335198LFB	LFB	12/05/12 23:08	MS121130-3	.050055		.0484	mg/L	96.7	85	115			
L98049-01LFM	LFM	12/05/12 23:39	MS121130-3	.050055	.058	.1021	mg/L	88.1	70	130			
L98049-01LFMD	LFMD	12/05/12 23:42	MS121130-3	.050055	.058	.1003	mg/L	84.5	70	130	1.78	20	
L98054-05LFM	LFM	12/06/12 0:29	MS2XW	.10017	.463	.535	mg/L	71.9	70	130			
L98054-05LFMD	LFMD	12/06/12 0:33	MS2XW	.10017	.463	.5266	mg/L	63.5	70	130	1.58	20	M3

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335258													
WG335258ICV	ICV	12/05/12 2:15	MS121001-5	.05		.05066	mg/L	101.3	90	110			
WG335258ICB	ICB	12/05/12 2:18				U	mg/L		-0.0006	0.0006			
WG335258LFB	LFB	12/05/12 2:22	MS121130-3	.05005		.04845	mg/L	96.8	85	115			
L98036-02AS	AS	12/05/12 2:37	MS121130-3	.05005	.0016	.05567	mg/L	108	70	130			
L98036-02ASD	ASD	12/05/12 2:40	MS121130-3	.05005	.0016	.05845	mg/L	113.6	70	130	4.87	20	
L98049-05AS	AS	12/05/12 3:05	MS121130-3	.05005	U	.05228	mg/L	104.5	70	130			
L98049-05ASD	ASD	12/05/12 3:09	MS121130-3	.05005	U	.05269	mg/L	105.3	70	130	0.78	20	
WG335358													
WG335358ICV	ICV	12/07/12 4:27	MS121001-5	.05		.05388	mg/L	107.8	90	110			
WG335358ICB	ICB	12/07/12 4:30				U	mg/L		-0.0006	0.0006			
WG335358LFB	LFB	12/07/12 4:34	MS121130-3	.05005		.04908	mg/L	98.1	85	115			
L98049-03AS	AS	12/07/12 4:46	MS121130-3	.05005	.0004	.05902	mg/L	117.1	70	130			
L98049-03ASD	ASD	12/07/12 4:49	MS121130-3	.05005	.0004	.06024	mg/L	119.6	70	130	2.05	20	

Watley Group LLC

ACZ Project ID: **L98049**

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335118													
WG335118ICV	ICV	12/03/12 19:50	II121126-1	2		1.9818	mg/L	99.1	95	105			
WG335118ICB	ICB	12/03/12 19:56				U	mg/L		-0.009	0.009			
WG335118LFB	LFB	12/03/12 20:08	II121129-6	.5		.4828	mg/L	96.6	85	115			
L98016-02AS	AS	12/03/12 20:58	II121129-6	.5	.063	.5523	mg/L	97.9	85	115			
L98016-02ASD	ASD	12/03/12 21:01	II121129-6	.5	.063	.5525	mg/L	97.9	85	115	0.04	20	

Beryllium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335118													
WG335118ICV	ICV	12/03/12 19:50	II121126-1	2		1.971	mg/L	98.6	95	105			
WG335118ICB	ICB	12/03/12 19:56				U	mg/L		-0.03	0.03			
WG335118LFB	LFB	12/03/12 20:08	II121129-6	.5		.495	mg/L	99	85	115			
L98016-02AS	AS	12/03/12 20:58	II121129-6	.5	U	.481	mg/L	96.2	85	115			
L98016-02ASD	ASD	12/03/12 21:01	II121129-6	.5	U	.482	mg/L	96.4	85	115	0.21	20	

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335118													
WG335118ICV	ICV	12/03/12 19:50	II121126-1	2		2.019	mg/L	101	95	105			
WG335118ICB	ICB	12/03/12 19:56				U	mg/L		-0.03	0.03			
WG335118LFB	LFB	12/03/12 20:08	II121129-6	.5005		.514	mg/L	102.7	85	115			
L98016-02AS	AS	12/03/12 20:58	II121129-6	.5005	.06	.565	mg/L	100.9	85	115			
L98016-02ASD	ASD	12/03/12 21:01	II121129-6	.5005	.06	.568	mg/L	101.5	85	115	0.53	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335258													
WG335258ICV	ICV	12/05/12 2:15	MS121001-5	.05		.04836	mg/L	96.7	90	110			
WG335258ICB	ICB	12/05/12 2:18				U	mg/L		-0.0003	0.0003			
WG335258LFB	LFB	12/05/12 2:22	MS121130-3	.0501		.04793	mg/L	95.7	85	115			
L98036-02AS	AS	12/05/12 2:37	MS121130-3	.0501	.0002	.04924	mg/L	97.9	70	130			
L98036-02ASD	ASD	12/05/12 2:40	MS121130-3	.0501	.0002	.04957	mg/L	98.5	70	130	0.67	20	
L98049-05AS	AS	12/05/12 3:05	MS121130-3	.0501	.001	.04992	mg/L	97.6	70	130			
L98049-05ASD	ASD	12/05/12 3:09	MS121130-3	.0501	.001	.05	mg/L	97.8	70	130	0.16	20	

Cadmium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335256													
WG335256ICV	ICV	12/05/12 19:00	MS121001-5	.05		.05202	mg/L	104	90	110			
WG335256ICB	ICB	12/05/12 19:04				U	mg/L		-0.0003	0.0003			
WG335113LRB	LRB	12/05/12 19:07				U	mg/L		-0.00022	0.00022			
WG335113LFB	LFB	12/05/12 19:10	MS121130-3	.0501		.04785	mg/L	95.5	85	115			
L98016-01LFM	LFM	12/05/12 19:16	MS121130-3	.0501	U	.0492	mg/L	98.2	70	130			
L98016-01LFMD	LFMD	12/05/12 19:19	MS121130-3	.0501	U	.04923	mg/L	98.3	70	130	0.06	20	

Watley Group LLC

ACZ Project ID: **L98049**

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335118													
WG335118ICV	ICV	12/03/12 19:50	II121126-1	100		100.13	mg/L	100.1	95	105			
WG335118ICB	ICB	12/03/12 19:56				U	mg/L		-0.6	0.6			
WG335118LFB	LFB	12/03/12 20:08	II121129-6	67.97554		69.48	mg/L	102.2	85	115			
L98016-02AS	AS	12/03/12 20:58	II121129-6	67.97554	72.6	140	mg/L	99.2	85	115			
L98016-02ASD	ASD	12/03/12 21:01	II121129-6	67.97554	72.6	140	mg/L	99.2	85	115	0	20	

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335390													
WG335390ICB	ICB	12/06/12 10:57				U	mg/L		-3	3			
WG335390ICV	ICV	12/06/12 10:57	WI120904-1	54.945		57.9	mg/L	105.4	90	110			
WG335390LFB1	LFB	12/06/12 12:41	WI120716-1	30		32.4	mg/L	108	90	110			
WG335390LFB2	LFB	12/06/12 12:45	WI120716-1	30		32.4	mg/L	108	90	110			
L98043-10AS	AS	12/06/12 12:45	WI120716-1	30	U	33.6	mg/L	112	90	110			M1
L98043-11DUP	DUP	12/06/12 12:45			U	U	mg/L				0	20	RA

Chromium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335258													
WG335258ICV	ICV	12/05/12 2:15	MS121001-5	.05		.0471	mg/L	94.2	90	110			
WG335258ICB	ICB	12/05/12 2:18				U	mg/L		-0.0015	0.0015			
WG335258LFB	LFB	12/05/12 2:22	MS121130-3	.05005		.04882	mg/L	97.5	85	115			
L98036-02AS	AS	12/05/12 2:37	MS121130-3	.05005	U	.04496	mg/L	89.8	70	130			
L98036-02ASD	ASD	12/05/12 2:40	MS121130-3	.05005	U	.04917	mg/L	98.2	70	130	8.95	20	
L98049-05AS	AS	12/05/12 3:05	MS121130-3	.05005	U	.0467	mg/L	93.3	70	130			
L98049-05ASD	ASD	12/05/12 3:09	MS121130-3	.05005	U	.04705	mg/L	94	70	130	0.75	20	

Chromium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335256													
WG335256ICV	ICV	12/05/12 19:00	MS121001-5	.05		.04981	mg/L	99.6	90	110			
WG335256ICB	ICB	12/05/12 19:04				U	mg/L		-0.0015	0.0015			
WG335113LRB	LRB	12/05/12 19:07				U	mg/L		-0.0011	0.0011			
WG335113LFB	LFB	12/05/12 19:10	MS121130-3	.05005		.04569	mg/L	91.3	85	115			
L98016-01LFM	LFM	12/05/12 19:16	MS121130-3	.05005	U	.05024	mg/L	100.4	70	130			
L98016-01LFMD	LFMD	12/05/12 19:19	MS121130-3	.05005	U	.04674	mg/L	93.4	70	130	7.22	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334928													
WG334928LCSW1	LCSW	11/29/12 13:09	PCN40827	1408.8		1474.4	µmhos/crr	104.7	90	110			
WG334928LCSW4	LCSW	11/29/12 15:46	PCN40827	1408.8		1403.8	µmhos/crr	99.6	90	110			
WG334928LCSW7	LCSW	11/29/12 19:11	PCN40827	1408.8		1380.2	µmhos/crr	98	90	110			
L98051-02DUP	DUP	11/29/12 22:36			550	548	µmhos/crr				0.4	20	
WG334928LCSW10	LCSW	11/29/12 22:37	PCN40827	1408.8		1348.5	µmhos/crr	95.7	90	110			
WG334928LCSW13	LCSW	11/30/12 2:00	PCN40827	1408.8		1316.8	µmhos/crr	93.5	90	110			

Watley Group LLC

ACZ Project ID: **L98049**

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335258													
WG335258ICV	ICV	12/05/12 2:15	MS121001-5	.05		.0492	mg/L	98.4	90	110			
WG335258ICB	ICB	12/05/12 2:18				U	mg/L		-0.0015	0.0015			
WG335258LFB	LFB	12/05/12 2:22	MS121130-3	.05005		.04847	mg/L	96.8	85	115			
L98036-02AS	AS	12/05/12 2:37	MS121130-3	.05005	.0237	.06539	mg/L	83.3	70	130			
L98036-02ASD	ASD	12/05/12 2:40	MS121130-3	.05005	.0237	.06869	mg/L	89.9	70	130	4.92	20	
L98049-05AS	AS	12/05/12 3:05	MS121130-3	.05005	.0017	.0453	mg/L	87.1	70	130			
L98049-05ASD	ASD	12/05/12 3:09	MS121130-3	.05005	.0017	.04595	mg/L	88.4	70	130	1.42	20	

WG335358

WG335358ICV	ICV	12/07/12 4:27	MS121001-5	.05		.05037	mg/L	100.7	90	110			
WG335358ICB	ICB	12/07/12 4:30				U	mg/L		-0.0015	0.0015			
WG335358LFB	LFB	12/07/12 4:34	MS121130-3	.05005		.04644	mg/L	92.8	85	115			
L98049-03AS	AS	12/07/12 4:46	MS121130-3	.05005	.0006	.04562	mg/L	90	70	130			
L98049-03ASD	ASD	12/07/12 4:49	MS121130-3	.05005	.0006	.04719	mg/L	93.1	70	130	3.38	20	

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335256													
WG335256ICV	ICV	12/05/12 19:00	MS121001-5	.05		.05044	mg/L	100.9	90	110			
WG335256ICB	ICB	12/05/12 19:04				U	mg/L		-0.0015	0.0015			
WG335113LRB	LRB	12/05/12 19:07				U	mg/L		-0.0011	0.0011			
WG335113LFB	LFB	12/05/12 19:10	MS121130-3	.05005		.04718	mg/L	94.3	85	115			
L98016-01LFM	LFM	12/05/12 19:16	MS121130-3	.05005	.0009	.05118	mg/L	100.5	70	130			
L98016-01LFMD	LFMD	12/05/12 19:19	MS121130-3	.05005	.0009	.048	mg/L	94.1	70	130	6.41	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335479													
WG335479ICV	ICV	12/07/12 11:37	WI121130-1	.3		.3204	mg/L	106.8	90	110			
WG335479ICB	ICB	12/07/12 11:38				U	mg/L		-0.009	0.009			
WG335317LRB	LRB	12/07/12 11:39				U	mg/L		-0.009	0.009			
L98008-01DUP	DUP	12/07/12 11:41			U	U	mg/L				0	20	RA
L98008-02LFM	LFM	12/07/12 11:43	WI121130-5	.2	U	.2112	mg/L	105.6	90	110			
WG335317LFB	LFB	12/07/12 12:05	WI121130-5	.2		.2247	mg/L	112.4	90	110			LA

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335288													
WG335288ICV	ICV	12/05/12 12:04	WI121130-1	.3		.3152	mg/L	105.1	90	110			
WG335288ICB	ICB	12/05/12 12:05				U	mg/L		-0.009	0.009			
WG335319													
WG335271LRB	LRB	12/05/12 14:39				U	mg/L		-0.009	0.009			
WG335271LFB	LFB	12/05/12 14:40	WI121130-7	.2		.2099	mg/L	105	90	110			
L98038-08DUP	DUP	12/05/12 14:41			U	U	mg/L				0	20	RA
L98038-09LFM	LFM	12/05/12 14:43	WI121130-7	.2	U	.213	mg/L	106.5	90	110			
L98049-05DUP	DUP	12/05/12 14:54			U	U	mg/L				0	20	RA
L98049-06LFM	LFM	12/05/12 14:55	WI121130-7	.2	U	.2106	mg/L	105.3	90	110			

Watley Group LLC

ACZ Project ID: **L98049**

Dissolved Chromium, Hexavalent SM3500Cr-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334911													
WG334911ICV	ICV	11/29/12 10:34	WC121108-	.05		.045	mg/L	90	90	110			
WG334911ICB	ICB	11/29/12 10:35				U	mg/L		-0.015	0.015			
WG334911LFB	LFB	11/29/12 10:36	WC121009-	.05		.0475	mg/L	95	90	110			
L98056-04AS	AS	11/29/12 10:51	WC121009-	.05	U	.049	mg/L	98	90	110			
L98056-04DUP	DUP	11/29/12 10:52			U	U	mg/L				0	20	RA

Iron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335118													
WG335118ICV	ICV	12/03/12 19:50	II121126-1	2		1.999	mg/L	100	95	105			
WG335118ICB	ICB	12/03/12 19:56				U	mg/L		-0.06	0.06			
WG335118LFB	LFB	12/03/12 20:08	II121129-6	1		1.004	mg/L	100.4	85	115			
L98016-02AS	AS	12/03/12 20:58	II121129-6	1	U	.989	mg/L	98.9	85	115			
L98016-02ASD	ASD	12/03/12 21:01	II121129-6	1	U	.992	mg/L	99.2	85	115	0.3	20	

Iron, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335328													
WG335328ICV	ICV	12/05/12 18:38	II121127-3	2		2.054	mg/L	102.7	95	105			
WG335328ICB	ICB	12/05/12 18:44				U	mg/L		-0.06	0.06			
WG335259LRB	LRB	12/05/12 18:56				U	mg/L		-0.044	0.044			
WG335259LFB	LFB	12/05/12 18:59	II121129-6	1		1.046	mg/L	104.6	85	115			
L98049-02LFM	LFM	12/05/12 19:09	II2XWATER	2	U	2.02	mg/L	101	70	130			
L98049-02LFMD	LFMD	12/05/12 19:12	II2XWATER	2	U	1.978	mg/L	98.9	70	130	2.1	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335258													
WG335258ICV	ICV	12/05/12 2:15	MS121001-5	.05		.04908	mg/L	98.2	90	110			
WG335258ICB	ICB	12/05/12 2:18				U	mg/L		-0.0003	0.0003			
WG335258LFB	LFB	12/05/12 2:22	MS121130-3	.05005		.04829	mg/L	96.5	85	115			
L98036-02AS	AS	12/05/12 2:37	MS121130-3	.05005	.004	.05325	mg/L	98.4	70	130			
L98036-02ASD	ASD	12/05/12 2:40	MS121130-3	.05005	.004	.05309	mg/L	98.1	70	130	0.3	20	
L98049-05AS	AS	12/05/12 3:05	MS121130-3	.05005	.0002	.04832	mg/L	96.1	70	130			
L98049-05ASD	ASD	12/05/12 3:09	MS121130-3	.05005	.0002	.04816	mg/L	95.8	70	130	0.33	20	

Lead, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335256													
WG335256ICV	ICV	12/05/12 19:00	MS121001-5	.05		.05209	mg/L	104.2	90	110			
WG335256ICB	ICB	12/05/12 19:04				U	mg/L		-0.0003	0.0003			
WG335113LRB	LRB	12/05/12 19:07				U	mg/L		-0.00022	0.00022			
WG335113LFB	LFB	12/05/12 19:10	MS121130-3	.05005		.04419	mg/L	88.3	85	115			
L98016-01LFM	LFM	12/05/12 19:16	MS121130-3	.05005	U	.04608	mg/L	92.1	70	130			
L98016-01LFMD	LFMD	12/05/12 19:19	MS121130-3	.05005	U	.04627	mg/L	92.4	70	130	0.41	20	

Watley Group LLC

ACZ Project ID: **L98049**

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335118													
WG335118ICV	ICV	12/03/12 19:50	II121126-1	100		101.95	mg/L	102	95	105			
WG335118ICB	ICB	12/03/12 19:56				U	mg/L		-0.6	0.6			
WG335118LFB	LFB	12/03/12 20:08	II121129-6	50.00131		50.09	mg/L	100.2	85	115			
L98016-02AS	AS	12/03/12 20:58	II121129-6	50.00131	12.8	63.09	mg/L	100.6	85	115			
L98016-02ASD	ASD	12/03/12 21:01	II121129-6	50.00131	12.8	63.08	mg/L	100.6	85	115	0.02	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335118													
WG335118ICV	ICV	12/03/12 19:50	II121126-1	2		1.9392	mg/L	97	95	105			
WG335118ICB	ICB	12/03/12 19:56				U	mg/L		-0.015	0.015			
WG335118LFB	LFB	12/03/12 20:08	II121129-6	.5		.4887	mg/L	97.7	85	115			
L98016-02AS	AS	12/03/12 20:58	II121129-6	.5	.012	.4987	mg/L	97.3	85	115			
L98016-02ASD	ASD	12/03/12 21:01	II121129-6	.5	.012	.5003	mg/L	97.7	85	115	0.32	20	

Manganese, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335328													
WG335328ICV	ICV	12/05/12 18:38	II121127-3	2		2.0198	mg/L	101	95	105			
WG335328ICB	ICB	12/05/12 18:44				U	mg/L		-0.015	0.015			
WG335259LRB	LRB	12/05/12 18:56				U	mg/L		-0.011	0.011			
WG335259LFB	LFB	12/05/12 18:59	II121129-6	.5		.5098	mg/L	102	85	115			
L98049-02LFM	LFM	12/05/12 19:09	II2XWATER	1	.06	1.036	mg/L	97.6	70	130			
L98049-02LFMD	LFMD	12/05/12 19:12	II2XWATER	1	.06	1.032	mg/L	97.2	70	130	0.39	20	

Mercury, total

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335265													
WG335265ICV	ICV	12/06/12 9:05	II121127-2	.005025		.00487	mg/L	96.9	95	105			
WG335265ICB	ICB	12/06/12 9:07				U	mg/L		-0.0002	0.0002			
WG335265LRB	LRB	12/06/12 9:12				U	mg/L		-0.00044	0.00044			
WG335265LFB	LFB	12/06/12 9:14	II121119-3	.002002		.00184	mg/L	91.9	85	115			
L98049-03LFM	LFM	12/06/12 10:11	II121119-3	.002002	U	.00167	mg/L	83.4	85	115			MA
L98049-03LFMD	LFMD	12/06/12 10:13	II121119-3	.002002	U	.00186	mg/L	92.9	85	115	10.76	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335118													
WG335118ICV	ICV	12/03/12 19:50	II121126-1	2.002		2.066	mg/L	103.2	95	105			
WG335118ICB	ICB	12/03/12 19:56				U	mg/L		-0.03	0.03			
WG335118LFB	LFB	12/03/12 20:08	II121129-6	.5		.506	mg/L	101.2	85	115			
L98016-02AS	AS	12/03/12 20:58	II121129-6	.5	.01	.487	mg/L	95.4	85	115			
L98016-02ASD	ASD	12/03/12 21:01	II121129-6	.5	.01	.497	mg/L	97.4	85	115	2.03	20	

Watley Group LLC

ACZ Project ID: **L98049**

Nickel, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335367													
WG335367ICV	ICV	12/06/12 11:40	II121127-3	2.002		2.076	mg/L	103.7	95	105			
WG335367ICB	ICB	12/06/12 11:44				U	mg/L		-0.03	0.03			
WG335259LRB	LRB	12/06/12 11:56				U	mg/L		-0.022	0.022			
WG335259LFB	LFB	12/06/12 11:59	II121129-6	.5		.497	mg/L	99.4	85	115			
L98049-02LFM	LFM	12/06/12 12:08	II2XWATER	1	U	1.017	mg/L	101.7	70	130			
L98049-02LFMD	LFMD	12/06/12 12:11	II2XWATER	1	U	1.02	mg/L	102	70	130	0.29	20	

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334871													
WG334871ICV	ICV	11/28/12 19:42	WI121009-1	2.416		2.462	mg/L	101.9	90	110			
WG334871ICB	ICB	11/28/12 19:44				U	mg/L		-0.06	0.06			
WG334871LFB1	LFB	11/28/12 19:47	WI120814-9	2		2.032	mg/L	101.6	90	110			
L98039-01AS	AS	11/28/12 19:49	WI120814-9	2	.05	2.021	mg/L	98.6	90	110			
L98039-02DUP	DUP	11/28/12 19:52			U	U	mg/L				0	20	RA
WG334871LFB2	LFB	11/28/12 20:21	WI120814-9	2		2.004	mg/L	100.2	90	110			

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334871													
WG334871ICV	ICV	11/28/12 19:42	WI121009-1	.609		.637	mg/L	104.6	90	110			
WG334871ICB	ICB	11/28/12 19:44				U	mg/L		-0.03	0.03			
WG334871LFB1	LFB	11/28/12 19:47	WI120814-9	1		1.05	mg/L	105	90	110			
L98039-01AS	AS	11/28/12 19:49	WI120814-9	1	U	1.023	mg/L	102.3	90	110			
L98039-02DUP	DUP	11/28/12 19:52			U	U	mg/L				0	20	RA
WG334871LFB2	LFB	11/28/12 20:21	WI120814-9	1		1.029	mg/L	102.9	90	110			

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335043													
WG335043ICV	ICV	12/03/12 15:25	WI121105-5	1.003		.96	mg/L	95.7	90	110			
WG335043ICB	ICB	12/03/12 15:26				U	mg/L		-0.3	0.3			
WG335149													
WG335149LFB1	LFB	12/03/12 16:11	WI111101-3	1		.978	mg/L	97.8	90	110			
WG335149LFB2	LFB	12/03/12 17:01	WI111101-3	1		1.032	mg/L	103.2	90	110			
L98042-01AS	AS	12/03/12 17:03	WI111101-3	1	U	1.075	mg/L	107.5	90	110			
L98042-02DUP	DUP	12/03/12 17:06			U	U	mg/L				0	20	RA

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ACZ Project ID: **L98049**

pH (lab) SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334928													
WG334928LCSW3	LCSW	11/29/12 13:24	PCN39825	6		6.03	units	100.5	98	102			
WG334928LCSW6	LCSW	11/29/12 16:01	PCN39825	6		6.05	units	100.8	98	102			
WG334928LCSW9	LCSW	11/29/12 19:25	PCN39825	6		6.07	units	101.2	98	102			
L98051-02DUP	DUP	11/29/12 22:36			8.5	8.56	units				0.7	20	
WG334928LCSW12	LCSW	11/29/12 22:52	PCN39825	6		6.07	units	101.2	98	102			
WG334928LCSW15	LCSW	11/30/12 2:15	PCN39825	6		6.07	units	101.2	98	102			

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335024													
WG335024PBW	PBW	11/30/12 12:00				U	mg/L		-20	20			
WG335024LCSW	LCSW	11/30/12 12:00	PCN41156	260		250	mg/L	96.2	80	120			
L98052-03DUP	DUP	11/30/12 12:10			240	242	mg/L				0.8	20	

Residue, Non-Filterable (TSS) @105C SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334846													
WG334846PBW	PBW	11/28/12 16:01				U	mg/L		-15	15			
WG334846LCSW	LCSW	11/28/12 16:02	PCN41156	160		148	mg/L	92.5	80	120			
L98049-03DUP	DUP	11/28/12 16:16			U	U	mg/L				0	20	RA
L98063-08DUP	DUP	11/28/12 16:30			42	47	mg/L				11.2	20	RA

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335258													
WG335258ICV	ICV	12/05/12 2:15	MS121001-5	.05		.05254	mg/L	105.1	90	110			
WG335258ICB	ICB	12/05/12 2:18				U	mg/L		-0.0003	0.0003			
WG335258LFB	LFB	12/05/12 2:22	MS121130-3	.05005		.05152	mg/L	102.9	85	115			
L98036-02AS	AS	12/05/12 2:37	MS121130-3	.05005	.0004	.05795	mg/L	115	70	130			
L98036-02ASD	ASD	12/05/12 2:40	MS121130-3	.05005	.0004	.05805	mg/L	115.2	70	130	0.17	20	
L98049-05AS	AS	12/05/12 3:05	MS121130-3	.05005	.0004	.05515	mg/L	109.4	70	130			
L98049-05ASD	ASD	12/05/12 3:09	MS121130-3	.05005	.0004	.05508	mg/L	109.3	70	130	0.13	20	

Silver, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335258													
WG335258ICV	ICV	12/05/12 2:15	MS121001-5	.02006		.01955	mg/L	97.5	90	110			
WG335258ICB	ICB	12/05/12 2:18				U	mg/L		-0.00015	0.00015			
WG335258LFB	LFB	12/05/12 2:22	MS121130-3	.01001		.009497	mg/L	94.9	85	115			
L98036-02AS	AS	12/05/12 2:37	MS121130-3	.01001	U	.00943	mg/L	94.2	70	130			
L98036-02ASD	ASD	12/05/12 2:40	MS121130-3	.01001	U	.009405	mg/L	94	70	130	0.27	20	
L98049-05AS	AS	12/05/12 3:05	MS121130-3	.01001	U	.009716	mg/L	97.1	70	130			
L98049-05ASD	ASD	12/05/12 3:09	MS121130-3	.01001	U	.009861	mg/L	98.5	70	130	1.48	20	

Watley Group LLC

ACZ Project ID: **L98049**

Silver, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335256													
WG335256ICV	ICV	12/05/12 19:00	MS121001-5	.02006		.02093	mg/L	104.3	90	110			
WG335256ICB	ICB	12/05/12 19:04				U	mg/L		-0.00015	0.00015			
WG335113LRB	LRB	12/05/12 19:07				U	mg/L		-0.00011	0.00011			
WG335113LFB	LFB	12/05/12 19:10	MS121130-3	.01001		.009439	mg/L	94.3	85	115			
L98016-01LFM	LFM	12/05/12 19:16	MS121130-3	.01001	U	.009363	mg/L	93.5	70	130			
L98016-01LFMD	LFMD	12/05/12 19:19	MS121130-3	.01001	U	.009325	mg/L	93.2	70	130	0.41	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335499													
WG335499ICB	ICB	12/07/12 9:18				U	mg/L		-3	3			
WG335499ICV	ICV	12/07/12 9:18	WI121126-2	20		19.8	mg/L	99	90	110			
WG335499LFB	LFB	12/07/12 16:49	WI121025-3	10		10.5	mg/L	105	90	110			
L98043-09DUP	DUP	12/07/12 16:49			U	U	mg/L				0	20	RA
L98043-10AS	AS	12/07/12 16:49	WI121025-3	10	U	10.7	mg/L	107	90	110			
L98052-01AS	AS	12/07/12 16:59	SO4TURB5	10	66	75.4	mg/L	94	90	110			
L98049-05DUP	DUP	12/07/12 17:18			43	43.1	mg/L				0.2	20	

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334812													
WG334812ICV	ICV	11/28/12 13:05	WC121128-	.364		.394	mg/L	108.2	90	110			
WG334812ICB	ICB	11/28/12 13:07				U	mg/L		-0.06	0.06			
WG334840													
WG334840ICV	ICV	11/28/12 14:25	WC121128-	.364		.382	mg/L	104.9	90	110			
WG334840ICB	ICB	11/28/12 14:26				U	mg/L		-0.06	0.06			
WG334840LFB1	LFB	11/28/12 14:27	WC121128-	.248		.283	mg/L	114.1	80	120			
L98050-01AS	AS	11/28/12 14:43	WC121128-	.93	1.61	2.261	mg/L	70	75	125			M2
L98050-01DUP	DUP	11/28/12 14:45			1.61	1.605	mg/L				0.3	20	
WG334840LFB2	LFB	11/28/12 15:03	WC121128-	.248		.279	mg/L	112.5	80	120			

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335258													
WG335258ICV	ICV	12/05/12 2:15	MS121001-5	.05		.0505	mg/L	101	90	110			
WG335258ICB	ICB	12/05/12 2:18				U	mg/L		-0.0003	0.0003			
WG335258LFB	LFB	12/05/12 2:22	MS121130-3	.05		.05012	mg/L	100.2	85	115			
L98036-02AS	AS	12/05/12 2:37	MS121130-3	.05	.0003	.05312	mg/L	105.6	70	130			
L98036-02ASD	ASD	12/05/12 2:40	MS121130-3	.05	.0003	.05369	mg/L	106.8	70	130	1.07	20	
L98049-05AS	AS	12/05/12 3:05	MS121130-3	.05	U	.05002	mg/L	100	70	130			
L98049-05ASD	ASD	12/05/12 3:09	MS121130-3	.05	U	.04985	mg/L	99.7	70	130	0.34	20	

Watley Group LLC

ACZ Project ID: **L98049**

Uranium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335256													
WG335256ICV	ICV	12/05/12 19:00	MS121001-5	.05		.05369	mg/L	107.4	90	110			
WG335256ICB	ICB	12/05/12 19:04				U	mg/L		-0.0003	0.0003			
WG335113LRB	LRB	12/05/12 19:07				U	mg/L		-0.00022	0.00022			
WG335113LFB	LFB	12/05/12 19:10	MS121130-3	.05		.04506	mg/L	90.1	85	115			
L98016-01LFM	LFM	12/05/12 19:16	MS121130-3	.05	.0003	.04887	mg/L	97.1	70	130			
L98016-01LFMD	LFMD	12/05/12 19:19	MS121130-3	.05	.0003	.04886	mg/L	97.1	70	130	0.02	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335118													
WG335118ICV	ICV	12/03/12 19:50	II121126-1	2		1.984	mg/L	99.2	95	105			
WG335118ICB	ICB	12/03/12 19:56				U	mg/L		-0.03	0.03			
WG335118LFB	LFB	12/03/12 20:08	II121129-6	.5		.499	mg/L	99.8	85	115			
L98016-02AS	AS	12/03/12 20:58	II121129-6	.5	U	.503	mg/L	100.6	85	115			
L98016-02ASD	ASD	12/03/12 21:01	II121129-6	.5	U	.503	mg/L	100.6	85	115	0	20	

Zinc, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG335328													
WG335328ICV	ICV	12/05/12 18:38	II121127-3	2		2.032	mg/L	101.6	95	105			
WG335328ICB	ICB	12/05/12 18:44				U	mg/L		-0.03	0.03			
WG335259LRB	LRB	12/05/12 18:56				U	mg/L		-0.022	0.022			
WG335259LFB	LFB	12/05/12 18:59	II121129-6	.5		.53	mg/L	106	85	115			
L98049-02LFM	LFM	12/05/12 19:09	II2XWATER	1	.14	1.152	mg/L	102.2	70	130			
L98049-02LFMD	LFMD	12/05/12 19:12	II2XWATER	1	.14	1.124	mg/L	99.4	70	130	2.46	20	

Watley Group LLC

ACZ Project ID: **L98049**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L98049-01	WG335259	Total Hot Plate Digestion	M200.2 ICP	DJ	Sample dilution required due to insufficient sample.
	WG335265	Mercury, total	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG335390	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335479	Cyanide, total	M335.4 - Colorimetric w/ distillation	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335319	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334911	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334871	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335149	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334846	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335499	Sulfate	D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334840	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

Watley Group LLC

ACZ Project ID: **L98049**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L98049-02	WG335259	Total Hot Plate Digestion	M200.2 ICP	DJ	Sample dilution required due to insufficient sample.
	WG335265	Mercury, total	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG335390	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335479	Cyanide, total	M335.4 - Colorimetric w/ distillation	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335319	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334911	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334871	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335149	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334846	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335499	Sulfate	D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334840	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

Watley Group LLC

ACZ Project ID: **L98049**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L98049-03	WG335265	Mercury, total	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG335390	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335479	Cyanide, total	M335.4 - Colorimetric w/ distillation	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335319	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334911	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334871	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335149	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334846	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335499	Sulfate	D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334840	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

Watley Group LLC

ACZ Project ID: L98049

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L98049-04	WG335265	Mercury, total	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG335390	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335479	Cyanide, total	M335.4 - Colorimetric w/ distillation	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335319	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334911	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334871	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335149	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334846	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335499	Sulfate	D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334840	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

Watley Group LLC

ACZ Project ID: **L98049**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L98049-05	WG335347	Aluminum, total recoverable	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.
	WG335265	Mercury, total	M245.1 CVAA	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG335390	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335479	Cyanide, total	M335.4 - Colorimetric w/ distillation	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335319	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334911	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334871	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335149	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG334846	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L98049-06	WG334840	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG335479	Cyanide, total	M335.4 - Colorimetric w/ distillation	LA	Recovery for target analyte in the control sample (LCS or LFB) exceeded the acceptance criteria. Target analyte was not detected in the sample [< MDL].
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG335319	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Watley Group LLC

Project ID:

Sample ID: CB-01

ACZ Sample ID: **L98049-01**

Date Sampled: 11/27/12 0:00

Date Received: 11/28/12

Sample Matrix: *Surface Water*

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG335209

Analyst: dhc

Extract Date:

Analysis Date: 12/04/12 11:59

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.031	*	mg/L	2.062	10.31

Watley Group LLC

Project ID:

Sample ID: CB-02

ACZ Sample ID: **L98049-02**

Date Sampled: 11/27/12 0:00

Date Received: 11/28/12

Sample Matrix: *Surface Water*

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG335209

Analyst: dhc

Extract Date:

Analysis Date: 12/04/12 12:00

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.042	*	mg/L	2.084	10.42

Watley Group LLC

Project ID:

Sample ID: CB-03

ACZ Sample ID: **L98049-03**

Date Sampled: 11/27/12 0:00

Date Received: 11/28/12

Sample Matrix: *Surface Water*

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG335209

Analyst: dhc

Extract Date:

Analysis Date: 12/04/12 12:01

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.042	*	mg/L	2.084	10.42

Watley Group LLC

Project ID:

Sample ID: CB-04

ACZ Sample ID: **L98049-04**

Date Sampled: 11/27/12 0:00

Date Received: 11/28/12

Sample Matrix: *Surface Water*

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG335209

Analyst: dhc

Extract Date:

Analysis Date: 12/04/12 12:02

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.042	*	mg/L	2.084	10.42

Watley Group LLC

Project ID:

Sample ID: CB-05

ACZ Sample ID: **L98049-05**

Date Sampled: 11/27/12 0:00

Date Received: 11/28/12

Sample Matrix: *Surface Water*

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG335209

Analyst: dhc

Extract Date:

Analysis Date: 12/04/12 12:03

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.031	*	mg/L	2.062	10.31


Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
- (3) EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Watley Group LLC

ACZ Project ID: **L98049**

Oil & Grease, Total Recoverable

1664A - Gravimetric

WG335209

LCSW		Sample ID: WG335209LCSW		PCN/SCN: OP121112-2			Analyzed: 12/04/12 12:04			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		37.5	mg/L	93.8	78	114			

LCSWD		Sample ID: WG335209LCSWD		PCN/SCN: OP121112-2			Analyzed: 12/04/12 12:05			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		37.6	mg/L	94.0	78	114	0.3	18	

PBW		Sample ID: WG335209PBW						Analyzed: 12/04/12 11:45		
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE			U	mg/L		-5	5			

Watley Group LLC

ACZ Project ID: **L98049**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L98049-01	WG335209	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L98049-02	WG335209	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L98049-03	WG335209	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L98049-04	WG335209	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L98049-05	WG335209	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.

Watley Group LLC

ACZ Project ID: **L98049**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Watley Group LLC

ACZ Project ID: L98049

Date Received: 11/28/2012 11:02

Received By: ksj

Date Printed: 11/29/2012

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 'sampled by' field on the Chain of Custody was not completed.		X	
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?		X	

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	X		
9) Are all labels on containers and are they intact and legible?	X		
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Time?	X		
11) For preserved bottle types, was the pH checked and within limits?	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? Some parameters were received past hold time.		X	

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
3473	2.1	14	Yes
NA16645	3.2	16	Yes

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



Laboratories, Inc.

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

L98049

CHAIN OF CUSTODY

Name: Mike Thompson
 Company: Reardon Steel LLC
 E-mail: mt@reardonsteel.us

Address: 18032 Rd G
 Cortez CO 81321
 Telephone: 970-426-2924

Name: John Bryan
 Company: Watley Group LLC

E-mail: jbryan@watley.com
 Telephone: 310-777-8889

Name: Lavrens Nuyens
 Company: Caldera Mineral Resources
 E-mail: Lavrens@Watley.com

Address: 8439 Sunset Blvd, Suite 402
 West Hollywood, CA 90069
 Telephone: 310-777-8889

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

YES ☒
 NO ☐

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

Are samples for SDWA Compliance Monitoring?

Yes ☐ No ☒

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

Sampler's Name: _____ Sampler's site Information State CD Zip code 81321 Time Zone MST

Quote #: Camp Bird SW Short

Project/PO #:

Reporting state for compliance testing:

Check box if samples include NRC licensed material? ☐

of Containers

Please refer
to Quote

CB-01	11/27/12	SW	8																	
CB-02	11/27/12	SW	8																	
CB-03	11/27/12	SW	8																	
CB-04	11/27/12	SW	8																	
CB-05	11/27/12	SW	8																	

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

2 Coolers

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

<i>[Signature]</i>	11/27/12	CB	11/28/12 10:54



February 07, 2013

Report to:

Mike Thompson
Caldera Mineral Resources
PO Box 297
Silverton, CO 81433

Bill to:

Lauren Nuyens
Caldera Mineral Resources
8439 Sunset Blvd. Suite 402
West Hollywood, CA 90069

cc: John Bryan

Project ID:

ACZ Project ID: L10356

Mike Thompson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 24, 2013. This project has been assigned to ACZ's project number, L10356. 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 L10356. 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 March 07, 2013. 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.



Tony Antalek has reviewed and
approved this report.



Caldera Mineral Resources

February 07, 2013

Project ID:

ACZ Project ID: L10356

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 3 miscellaneous samples from Caldera Mineral Resources on January 24, 2013. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L10356. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses except those qualified with an ACZ 'H' flag were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports.

Caldera Mineral Resources

Project ID:

Sample ID: CB-01

ACZ Sample ID: **L10356-01**

Date Sampled: 01/23/13 00:00

Date Received: 01/24/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							02/01/13 9:28	mpb
Cyanide, WAD	SM4500-CN I- distillation							02/01/13 11:30	lhb
Total Hot Plate Digestion	M200.2 ICP							01/31/13 11:54	jjc
Total Hot Plate Digestion	M200.2 ICP-MS							02/04/13 11:31	las
Total Recoverable Digestion	M200.2 ICP-MS							02/04/13 9:20	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.010		*	mg/L	0.001	0.005	02/05/13 15:45	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0007	B		mg/L	0.0002	0.001	02/01/13 0:39	msh
Arsenic, total recoverable	M200.8 ICP-MS	0.0008	B		mg/L	0.0002	0.001	02/05/13 15:45	msh
Barium, dissolved	M200.7 ICP	0.060			mg/L	0.003	0.02	01/31/13 10:13	aeb
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	01/31/13 10:13	aeb
Boron, dissolved	M200.7 ICP	0.02	B		mg/L	0.01	0.05	01/31/13 10:13	aeb
Cadmium, dissolved	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0005	02/01/13 0:39	msh
Cadmium, total	M200.8 ICP-MS	0.0005	B		mg/L	0.0001	0.0005	02/05/13 19:51	msh
Calcium, dissolved	M200.7 ICP	137			mg/L	0.2	1	01/31/13 10:13	aeb
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	02/01/13 0:39	msh
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	02/05/13 19:51	msh
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	02/07/13 9:20	calc
Copper, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.003	02/01/13 0:39	msh
Copper, total	M200.8 ICP-MS	0.0012	B		mg/L	0.0005	0.003	02/05/13 19:51	msh
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	01/31/13 10:13	aeb
Iron, total	M200.7 ICP		U		mg/L	0.02	0.05	02/01/13 0:37	jjc
Lead, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0001	0.0005	02/01/13 0:39	msh
Lead, total	M200.8 ICP-MS	0.0011			mg/L	0.0001	0.0005	02/05/13 19:51	msh
Magnesium, dissolved	M200.7 ICP	3.4			mg/L	0.2	1	01/31/13 10:13	aeb
Manganese, dissolved	M200.7 ICP	0.033			mg/L	0.005	0.03	01/31/13 10:13	aeb
Manganese, total	M200.7 ICP	0.033			mg/L	0.005	0.03	02/01/13 0:37	jjc
Mercury, total	M245.1 CVAA		U		mg/L	0.0002	0.001	01/31/13 12:47	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	01/31/13 10:13	aeb
Nickel, total	M200.7 ICP		U		mg/L	0.01	0.05	02/01/13 0:37	jjc
Selenium, dissolved	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0003	02/01/13 0:39	msh
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	02/01/13 0:39	msh
Silver, total	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	02/05/13 19:51	msh
Uranium, dissolved	M200.8 ICP-MS	0.0004	B		mg/L	0.0001	0.0005	02/01/13 0:39	msh
Uranium, total	M200.8 ICP-MS	0.0004	B		mg/L	0.0001	0.0005	02/05/13 19:51	msh
Zinc, dissolved	M200.7 ICP	0.17			mg/L	0.01	0.05	01/31/13 10:13	aeb
Zinc, total	M200.7 ICP	0.17			mg/L	0.01	0.05	02/01/13 0:37	jjc

Caldera Mineral Resources

Project ID:

Sample ID: CB-01

ACZ Sample ID: **L10356-01**

Date Sampled: 01/23/13 00:00

Date Received: 01/24/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		58			mg/L	2	20	01/25/13 0:00	las
Carbonate as CaCO ₃			U		mg/L	2	20	01/25/13 0:00	las
Hydroxide as CaCO ₃			U		mg/L	2	20	01/25/13 0:00	las
Total Alkalinity		58			mg/L	2	20	01/25/13 0:00	las
Chloride	SM4500Cl-E	1	B	*	mg/L	1	5	01/31/13 19:00	lhb
Conductivity @25C	SM2510B	708			umhos/cm	1	10	01/25/13 16:17	las
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	02/01/13 16:35	tcd
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	02/01/13 17:30	tcd
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	01/25/13 11:11	las
Hardness as CaCO ₃	SM2340B - Calculation	356			mg/L	1	7	02/07/13 9:20	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							01/28/13 14:13	las
Lab Filtration (glass fiber filter)	SOPWC050							01/24/13 14:13	ljr
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	0.18			mg/L	0.02	0.1	02/07/13 9:20	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.18		*	mg/L	0.02	0.1	01/24/13 22:58	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/24/13 22:58	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	02/04/13 17:47	bsu
pH (lab)	SM4500H+ B								
pH		8.1			units	0.1	0.1	01/25/13 0:00	las
pH measured at		22.0			C	0.1	0.1	01/25/13 0:00	las
Residue, Filterable (TDS) @180C	SM2540C	540			mg/L	10	20	01/25/13 16:31	ljr
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	01/28/13 14:30	las
Sulfate	D516-02 - Turbidimetric	320		*	mg/L	20	100	02/04/13 14:46	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	01/28/13 14:09	jad

Caldera Mineral Resources

Project ID:

Sample ID: CB-03

ACZ Sample ID: **L10356-02**

Date Sampled: 01/23/13 00:00

Date Received: 01/24/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							02/01/13 9:41	mpb
Cyanide, WAD	SM4500-CN I- distillation							02/01/13 11:46	lhb
Total Hot Plate Digestion	M200.2 ICP-MS			*				02/04/13 11:43	las
Total Hot Plate Digestion	M200.2 ICP							01/31/13 12:06	jjc
Total Recoverable Digestion	M200.2 ICP-MS			*				02/04/13 9:32	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.030		*	mg/L	0.002	0.01	02/05/13 15:48	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0009	B		mg/L	0.0002	0.001	02/01/13 0:43	msh
Arsenic, total recoverable	M200.8 ICP-MS	0.0013	B		mg/L	0.0004	0.002	02/05/13 15:48	msh
Barium, dissolved	M200.7 ICP	0.030			mg/L	0.003	0.02	01/31/13 10:22	aeb
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	01/31/13 10:22	aeb
Boron, dissolved	M200.7 ICP	0.06			mg/L	0.01	0.05	01/31/13 10:22	aeb
Cadmium, dissolved	M200.8 ICP-MS	0.0014			mg/L	0.0001	0.0005	02/01/13 0:43	msh
Cadmium, total	M200.8 ICP-MS	0.0014			mg/L	0.0002	0.001	02/05/13 19:55	msh
Calcium, dissolved	M200.7 ICP	427			mg/L	0.2	1	01/31/13 10:22	aeb
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	02/01/13 0:43	msh
Chromium, total	M200.8 ICP-MS		U		mg/L	0.001	0.004	02/05/13 19:55	msh
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.001	0.004	02/07/13 9:21	calc
Copper, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.003	02/01/13 0:43	msh
Copper, total	M200.8 ICP-MS	0.008			mg/L	0.001	0.005	02/05/13 19:55	msh
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	01/31/13 10:22	aeb
Iron, total	M200.7 ICP	0.19			mg/L	0.02	0.05	02/01/13 0:40	jjc
Lead, dissolved	M200.8 ICP-MS	0.0004	B		mg/L	0.0001	0.0005	02/01/13 0:43	msh
Lead, total	M200.8 ICP-MS	0.0104			mg/L	0.0002	0.001	02/05/13 19:55	msh
Magnesium, dissolved	M200.7 ICP	5.4			mg/L	0.2	1	01/31/13 10:22	aeb
Manganese, dissolved	M200.7 ICP	0.206			mg/L	0.005	0.03	01/31/13 10:22	aeb
Manganese, total	M200.7 ICP	0.245			mg/L	0.005	0.03	02/01/13 0:40	jjc
Mercury, total	M245.1 CVAA		U		mg/L	0.0002	0.001	01/31/13 12:49	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	01/31/13 10:22	aeb
Nickel, total	M200.7 ICP		U		mg/L	0.01	0.05	02/01/13 0:40	jjc
Selenium, dissolved	M200.8 ICP-MS	0.0006			mg/L	0.0001	0.0003	02/01/13 0:43	msh
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	02/01/13 0:43	msh
Silver, total	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	02/05/13 19:55	msh
Uranium, dissolved	M200.8 ICP-MS	0.0010			mg/L	0.0001	0.0005	02/01/13 0:43	msh
Uranium, total	M200.8 ICP-MS	0.0007	B		mg/L	0.0002	0.001	02/05/13 19:55	msh
Zinc, dissolved	M200.7 ICP	0.34			mg/L	0.01	0.05	01/31/13 10:22	aeb
Zinc, total	M200.7 ICP	0.32			mg/L	0.01	0.05	02/01/13 0:40	jjc

Caldera Mineral Resources

Project ID:

Sample ID: CB-03

ACZ Sample ID: **L10356-02**

Date Sampled: 01/23/13 00:00

Date Received: 01/24/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		59			mg/L	2	20	01/25/13 0:00	las
Carbonate as CaCO ₃			U		mg/L	2	20	01/25/13 0:00	las
Hydroxide as CaCO ₃			U		mg/L	2	20	01/25/13 0:00	las
Total Alkalinity		59			mg/L	2	20	01/25/13 0:00	las
Chloride	SM4500Cl-E	2	B	*	mg/L	1	5	01/31/13 19:00	lhb
Conductivity @25C	SM2510B	1650			umhos/cm	1	10	01/25/13 16:25	las
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	02/01/13 16:37	tcd
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	02/01/13 17:32	tcd
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	01/25/13 11:18	las
Hardness as CaCO ₃	SM2340B - Calculation	1090			mg/L	1	7	02/07/13 9:21	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							01/28/13 14:20	las
Lab Filtration (glass fiber filter)	SOPWC050							01/24/13 14:14	ljr
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		U		mg/L	0.02	0.1	02/07/13 9:21	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.02	0.1	01/24/13 23:00	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/24/13 23:00	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	02/04/13 17:49	bsu
pH (lab)	SM4500H+ B								
pH		8.0			units	0.1	0.1	01/25/13 0:00	las
pH measured at		21.0			C	0.1	0.1	01/25/13 0:00	las
Residue, Filterable (TDS) @180C	SM2540C	1630			mg/L	10	20	01/25/13 16:32	ljr
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	01/28/13 14:31	las
Sulfate	D516-02 - Turbidimetric	1070		*	mg/L	50	300	02/04/13 14:49	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	01/28/13 14:15	jad

Caldera Mineral Resources

Project ID:

Sample ID: CB-04

ACZ Sample ID: **L10356-03**

Date Sampled: 01/23/13 00:00

Date Received: 01/24/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							02/01/13 9:54	mpb
Cyanide, WAD	SM4500-CN I- distillation							02/01/13 12:01	lhb
Total Hot Plate Digestion	M200.2 ICP-MS							02/04/13 11:55	las
Total Hot Plate Digestion	M200.2 ICP							01/31/13 12:40	jjc
Total Recoverable Digestion	M200.2 ICP-MS							02/04/13 9:45	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.017		*	mg/L	0.001	0.005	02/05/13 15:52	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0006	B		mg/L	0.0002	0.001	02/01/13 0:46	msh
Arsenic, total recoverable	M200.8 ICP-MS	0.0010	B		mg/L	0.0002	0.001	02/05/13 15:52	msh
Barium, dissolved	M200.7 ICP	0.022			mg/L	0.003	0.02	01/31/13 10:26	aeb
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	01/31/13 10:26	aeb
Boron, dissolved	M200.7 ICP	0.05	B		mg/L	0.01	0.05	01/31/13 10:26	aeb
Cadmium, dissolved	M200.8 ICP-MS	0.0010			mg/L	0.0001	0.0005	02/01/13 0:46	msh
Cadmium, total	M200.8 ICP-MS	0.0010			mg/L	0.0001	0.0005	02/05/13 19:58	msh
Calcium, dissolved	M200.7 ICP	300			mg/L	0.2	1	01/31/13 10:26	aeb
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	02/01/13 0:46	msh
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	02/05/13 19:58	msh
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	02/07/13 9:21	calc
Copper, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.003	02/01/13 0:46	msh
Copper, total	M200.8 ICP-MS	0.0044			mg/L	0.0005	0.003	02/05/13 19:58	msh
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	01/31/13 10:26	aeb
Iron, total	M200.7 ICP	0.16			mg/L	0.02	0.05	02/01/13 0:49	jjc
Lead, dissolved	M200.8 ICP-MS	0.0004	B		mg/L	0.0001	0.0005	02/01/13 0:46	msh
Lead, total	M200.8 ICP-MS	0.0069			mg/L	0.0001	0.0005	02/05/13 19:58	msh
Magnesium, dissolved	M200.7 ICP	3.6			mg/L	0.2	1	01/31/13 10:26	aeb
Manganese, dissolved	M200.7 ICP	0.140			mg/L	0.005	0.03	01/31/13 10:26	aeb
Manganese, total	M200.7 ICP	0.142			mg/L	0.005	0.03	02/01/13 0:49	jjc
Mercury, total	M245.1 CVAA		U		mg/L	0.0002	0.001	01/31/13 12:55	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	01/31/13 10:26	aeb
Nickel, total	M200.7 ICP		U		mg/L	0.01	0.05	02/01/13 0:49	jjc
Selenium, dissolved	M200.8 ICP-MS	0.0003			mg/L	0.0001	0.0003	02/01/13 0:46	msh
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	02/01/13 0:46	msh
Silver, total	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	02/05/13 19:58	msh
Uranium, dissolved	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0005	02/01/13 0:46	msh
Uranium, total	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0005	02/05/13 19:58	msh
Zinc, dissolved	M200.7 ICP	0.26			mg/L	0.01	0.05	01/31/13 10:26	aeb
Zinc, total	M200.7 ICP	0.26			mg/L	0.01	0.05	02/01/13 0:49	jjc

Caldera Mineral Resources

Project ID:

Sample ID: CB-04

ACZ Sample ID: **L10356-03**

Date Sampled: 01/23/13 00:00

Date Received: 01/24/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		44			mg/L	2	20	01/25/13 0:00	las
Carbonate as CaCO ₃			U		mg/L	2	20	01/25/13 0:00	las
Hydroxide as CaCO ₃			U		mg/L	2	20	01/25/13 0:00	las
Total Alkalinity		44			mg/L	2	20	01/25/13 0:00	las
Chloride	SM4500Cl-E	2	B	*	mg/L	1	5	01/31/13 19:00	lhb
Conductivity @25C	SM2510B	1270			umhos/cm	1	10	01/25/13 16:32	las
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	02/01/13 16:38	tcd
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	02/01/13 17:34	tcd
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	01/25/13 11:20	las
Hardness as CaCO ₃	SM2340B - Calculation	765			mg/L	1	7	02/07/13 9:21	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							01/28/13 14:27	las
Lab Filtration (glass fiber filter)	SOPWC050							01/24/13 14:15	ljr
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		U		mg/L	0.02	0.1	02/07/13 9:21	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.02	0.1	01/24/13 23:03	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	01/24/13 23:03	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	02/04/13 17:50	bsu
pH (lab)	SM4500H+ B								
pH		8.0			units	0.1	0.1	01/25/13 0:00	las
pH measured at		21.0			C	0.1	0.1	01/25/13 0:00	las
Residue, Filterable (TDS) @180C	SM2540C	1160			mg/L	10	20	01/25/13 16:33	ljr
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	01/28/13 14:33	las
Sulfate	D516-02 - Turbidimetric	710		*	mg/L	20	100	02/04/13 14:17	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	01/28/13 14:21	jad


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources

ACZ Project ID: **L10356**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG337980													
WG337980PBW1	PBW	01/25/13 15:27				4.3	mg/L		-20	20			
WG337980LCSW2	LCSW	01/25/13 15:40	WC130111-7	820.0001		752.4	mg/L	91.8	90	110			
L10356-03DUP	DUP	01/25/13 16:40			44	44.1	mg/L				0.2	20	
WG337980LCSW5	LCSW	01/25/13 17:44	WC130111-7	820.0001		756.1	mg/L	92.2	90	110			
WG337980PBW2	PBW	01/25/13 17:52				3.4	mg/L		-20	20			
WG337980LCSW8	LCSW	01/25/13 20:56	WC130111-7	820.0001		763.6	mg/L	93.1	90	110			
WG337980PBW3	PBW	01/25/13 21:04				U	mg/L		-20	20			
WG337980LCSW11	LCSW	01/26/13 0:18	WC130111-7	820.0001		784	mg/L	95.6	90	110			
WG337980PBW4	PBW	01/26/13 0:26				U	mg/L		-20	20			
WG337980LCSW14	LCSW	01/26/13 2:45	WC130111-7	820.0001		789.7	mg/L	96.3	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338451													
WG338451ICV	ICV	02/05/13 15:32	MS130102-2	.1		.1029	mg/L	102.9	90	110			
WG338451ICB	ICB	02/05/13 15:35				U	mg/L		-0.003	0.003			
WG338366LRB	LRB	02/05/13 15:38				.0014	mg/L		-0.0022	0.0022			
WG338366LFB	LFB	02/05/13 15:42	MS130108-1	.050055		.0525	mg/L	104.9	85	115			
L10386-02LFM	LFM	02/05/13 16:22	MS130108-1	.050055	.036	.0972	mg/L	122.3	70	130			
L10386-02LFMD	LFMD	02/05/13 16:25	MS130108-1	.050055	.036	.1037	mg/L	135.3	70	130	6.47	20	MA

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338270													
WG338270ICV	ICV	01/31/13 23:52	MS130102-2	.05		.05282	mg/L	105.6	90	110			
WG338270ICB	ICB	01/31/13 23:56				U	mg/L		-0.0006	0.0006			
WG338270LFB	LFB	01/31/13 23:59	MS130108-1	.05005		.04875	mg/L	97.4	85	115			
L10347-02AS	AS	02/01/13 0:16	MS130108-1	.25025	U	.2435	mg/L	97.3	70	130			
L10347-02ASD	ASD	02/01/13 0:19	MS130108-1	.25025	U	.2498	mg/L	99.8	70	130	2.55	20	

Arsenic, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338451													
WG338451ICV	ICV	02/05/13 15:32	MS130102-2	.05		.05155	mg/L	103.1	90	110			
WG338451ICB	ICB	02/05/13 15:35				U	mg/L		-0.0006	0.0006			
WG338366LRB	LRB	02/05/13 15:38				U	mg/L		-0.00044	0.00044			
WG338366LFB	LFB	02/05/13 15:42	MS130108-1	.05005		.05326	mg/L	106.4	85	115			
L10386-02LFM	LFM	02/05/13 16:22	MS130108-1	.05005	U	.05588	mg/L	111.6	70	130			
L10386-02LFMD	LFMD	02/05/13 16:25	MS130108-1	.05005	U	.05748	mg/L	114.8	70	130	2.82	20	

Caldera Mineral Resources

ACZ Project ID: **L10356**

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338145													
WG338145ICV	ICV	01/31/13 9:52	II130114-3	2		1.9878	mg/L	99.4	95	105			
WG338145ICB	ICB	01/31/13 9:58				U	mg/L		-0.009	0.009			
WG338145LFB	LFB	01/31/13 10:10	II121231-2	.5		.5169	mg/L	103.4	85	115			
L10356-01AS	AS	01/31/13 10:16	II121231-2	.5	.06	.5841	mg/L	104.8	85	115			
L10356-01ASD	ASD	01/31/13 10:19	II121231-2	.5	.06	.5824	mg/L	104.5	85	115	0.29	20	

Beryllium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338145													
WG338145ICV	ICV	01/31/13 9:52	II130114-3	2		1.945	mg/L	97.3	95	105			
WG338145ICB	ICB	01/31/13 9:58				U	mg/L		-0.03	0.03			
WG338145LFB	LFB	01/31/13 10:10	II121231-2	.5		.505	mg/L	101	85	115			
L10356-01AS	AS	01/31/13 10:16	II121231-2	.5	U	.503	mg/L	100.6	85	115			
L10356-01ASD	ASD	01/31/13 10:19	II121231-2	.5	U	.499	mg/L	99.8	85	115	0.8	20	

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338145													
WG338145ICV	ICV	01/31/13 9:52	II130114-3	2		1.998	mg/L	99.9	95	105			
WG338145ICB	ICB	01/31/13 9:58				U	mg/L		-0.03	0.03			
WG338145LFB	LFB	01/31/13 10:10	II121231-2	.5005		.53	mg/L	105.9	85	115			
L10356-01AS	AS	01/31/13 10:16	II121231-2	.5005	.02	.558	mg/L	107.5	85	115			
L10356-01ASD	ASD	01/31/13 10:19	II121231-2	.5005	.02	.544	mg/L	104.7	85	115	2.54	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338270													
WG338270ICV	ICV	01/31/13 23:52	MS130102-2	.05		.05169	mg/L	103.4	90	110			
WG338270ICB	ICB	01/31/13 23:56				U	mg/L		-0.0003	0.0003			
WG338270LFB	LFB	01/31/13 23:59	MS130108-1	.0501		.04795	mg/L	95.7	85	115			
L10347-02AS	AS	02/01/13 0:16	MS130108-1	.2505	U	.2387	mg/L	95.3	70	130			
L10347-02ASD	ASD	02/01/13 0:19	MS130108-1	.2505	U	.24295	mg/L	97	70	130	1.76	20	

Cadmium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338469													
WG338469ICV	ICV	02/05/13 18:54	MS130102-2	.05		.05161	mg/L	103.2	90	110			
WG338469ICB	ICB	02/05/13 18:57				U	mg/L		-0.0003	0.0003			
WG338365LRB	LRB	02/05/13 19:01				U	mg/L		-0.00022	0.00022			
WG338365LFB	LFB	02/05/13 19:04	MS130108-1	.0501		.04931	mg/L	98.4	85	115			
L10262-04LFM	LFM	02/05/13 19:45	MS130108-1	.0501	U	.04646	mg/L	92.7	70	130			
L10262-04LFMD	LFMD	02/05/13 19:48	MS130108-1	.0501	U	.04602	mg/L	91.9	70	130	0.95	20	
L10425-02LFM	LFM	02/05/13 20:35	MS130108-1	.0501	U	.04626	mg/L	92.3	70	130			
L10425-02LFMD	LFMD	02/05/13 20:39	MS130108-1	.0501	U	.04593	mg/L	91.7	70	130	0.72	20	

Caldera Mineral Resources

ACZ Project ID: **L10356**

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338145													
WG338145ICV	ICV	01/31/13 9:52	II130114-3	100		98.26	mg/L	98.3	95	105			
WG338145ICB	ICB	01/31/13 9:58				U	mg/L		-0.6	0.6			
WG338145LFB	LFB	01/31/13 10:10	II121231-2	67.97554		69.42	mg/L	102.1	85	115			
L10356-01AS	AS	01/31/13 10:16	II121231-2	67.97554	137	202	mg/L	95.6	85	115			
L10356-01ASD	ASD	01/31/13 10:19	II121231-2	67.97554	137	201.3	mg/L	94.6	85	115	0.35	20	

Chloride

SM4500CI-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338281													
WG338281ICB	ICB	01/31/13 15:49				U	mg/L		-3	3			
WG338281ICV	ICV	01/31/13 15:49	WI130131-1	54.945		57.6	mg/L	104.8	90	110			
WG338281LFB1	LFB	01/31/13 18:58	WI130201-8	30		31.3	mg/L	104.3	90	110			
L10356-01DUP	DUP	01/31/13 19:00			1	1.4	mg/L				33.3	20	RA
WG338281LFB2	LFB	01/31/13 19:02	WI130201-8	30		31.6	mg/L	105.3	90	110			
L10244-04AS	AS	01/31/13 19:10	10XCL	30	430	446	mg/L	53.3	90	110			M3

Chromium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338270													
WG338270ICV	ICV	01/31/13 23:52	MS130102-2	.05		.05073	mg/L	101.5	90	110			
WG338270ICB	ICB	01/31/13 23:56				U	mg/L		-0.0015	0.0015			
WG338270LFB	LFB	01/31/13 23:59	MS130108-1	.05005		.04849	mg/L	96.9	85	115			
L10347-02AS	AS	02/01/13 0:16	MS130108-1	.25025	U	.238	mg/L	95.1	70	130			
L10347-02ASD	ASD	02/01/13 0:19	MS130108-1	.25025	U	.2458	mg/L	98.2	70	130	3.22	20	

Chromium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338469													
WG338469ICV	ICV	02/05/13 18:54	MS130102-2	.05		.05249	mg/L	105	90	110			
WG338469ICB	ICB	02/05/13 18:57				U	mg/L		-0.0015	0.0015			
WG338365LRB	LRB	02/05/13 19:01				U	mg/L		-0.0011	0.0011			
WG338365LFB	LFB	02/05/13 19:04	MS130108-1	.05005		.04788	mg/L	95.7	85	115			
L10262-04LFM	LFM	02/05/13 19:45	MS130108-1	.05005	.004	.057	mg/L	105.9	70	130			
L10262-04LFMD	LFMD	02/05/13 19:48	MS130108-1	.05005	.004	.0554	mg/L	102.7	70	130	2.85	20	
L10425-02LFM	LFM	02/05/13 20:35	MS130108-1	.05005	.0005	.05168	mg/L	102.3	70	130			
L10425-02LFMD	LFMD	02/05/13 20:39	MS130108-1	.05005	.0005	.05357	mg/L	106	70	130	3.59	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG337980													
WG337980LCSW1	LCSW	01/25/13 15:29	PCN40828	1408.8		1427.3	µmhos/crr	101.3	90	110			
L10356-03DUP	DUP	01/25/13 16:40			1270	1268	µmhos/crr				0.2	20	
WG337980LCSW4	LCSW	01/25/13 17:33	PCN40828	1408.8		1293.7	µmhos/crr	91.8	90	110			

Caldera Mineral Resources

ACZ Project ID: **L10356**

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338270													
WG338270ICV	ICV	01/31/13 23:52	MS130102-2	.05		.05083	mg/L	101.7	90	110			
WG338270ICB	ICB	01/31/13 23:56				U	mg/L		-0.0015	0.0015			
WG338270LFB	LFB	01/31/13 23:59	MS130108-1	.05005		.0474	mg/L	94.7	85	115			
L10347-02AS	AS	02/01/13 0:16	MS130108-1	.25025	.004	.2403	mg/L	94.4	70	130			
L10347-02ASD	ASD	02/01/13 0:19	MS130108-1	.25025	.004	.2485	mg/L	97.7	70	130	3.36	20	

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338469													
WG338469ICV	ICV	02/05/13 18:54	MS130102-2	.05		.0537	mg/L	107.4	90	110			
WG338469ICB	ICB	02/05/13 18:57				U	mg/L		-0.0015	0.0015			
WG338365LRB	LRB	02/05/13 19:01				U	mg/L		-0.0011	0.0011			
WG338365LFB	LFB	02/05/13 19:04	MS130108-1	.05005		.04903	mg/L	98	85	115			
L10262-04LFM	LFM	02/05/13 19:45	MS130108-1	.05005	.03	.0802	mg/L	100.3	70	130			
L10262-04LFMD	LFMD	02/05/13 19:48	MS130108-1	.05005	.03	.0785	mg/L	96.9	70	130	2.14	20	
L10425-02LFM	LFM	02/05/13 20:35	MS130108-1	.05005	.003	.05168	mg/L	97.3	70	130			
L10425-02LFMD	LFMD	02/05/13 20:39	MS130108-1	.05005	.003	.0533	mg/L	100.5	70	130	3.09	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338352													
WG338352ICV	ICV	02/01/13 16:31	WI130201-7	.3		.2987	mg/L	99.6	90	110			
WG338352ICB	ICB	02/01/13 16:32				U	mg/L		-0.009	0.009			
WG338296LRB	LRB	02/01/13 16:33				U	mg/L		-0.009	0.009			
WG338296LFB	LFB	02/01/13 16:34	WI130201-2	.2		.1897	mg/L	94.9	90	110			
L10356-01DUP	DUP	02/01/13 16:36			U	U	mg/L				0	20	RA
L10356-02LFM	LFM	02/01/13 16:38	WI130201-2	.2	U	.1876	mg/L	93.8	90	110			

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338354													
WG338354ICV	ICV	02/01/13 17:27	WI130201-7	.3		.2972	mg/L	99.1	90	110			
WG338354ICB	ICB	02/01/13 17:28				U	mg/L		-0.009	0.009			
WG338324LRB	LRB	02/01/13 17:29				U	mg/L		-0.009	0.009			
WG338324LFB	LFB	02/01/13 17:29	WI130201-4	.2		.1946	mg/L	97.3	90	110			
L10356-01DUP	DUP	02/01/13 17:31			U	U	mg/L				0	20	RA
L10356-02LFM	LFM	02/01/13 17:33	WI130201-4	.2	U	.1901	mg/L	95.1	90	110			

Dissolved Chromium, Hexavalent

SM3500Cr-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG337965													
WG337965ICV	ICV	01/25/13 11:05	WC121108-2	.05		.0456	mg/L	91.2	90	110			
WG337965ICB	ICB	01/25/13 11:07				U	mg/L		-0.015	0.015			
WG337965LFB	LFB	01/25/13 11:09	WC121009-4	.05		.0484	mg/L	96.8	90	110			
L10356-01AS	AS	01/25/13 11:14	WC121009-4	.05	U	.0463	mg/L	92.6	90	110			
L10356-01DUP	DUP	01/25/13 11:16			U	U	mg/L				0	20	RA

Caldera Mineral Resources

ACZ Project ID: **L10356**

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338145													
WG338145ICV	ICV	01/31/13 9:52	II130114-3	2		1.957	mg/L	97.9	95	105			
WG338145ICB	ICB	01/31/13 9:58				U	mg/L		-0.06	0.06			
WG338145LFB	LFB	01/31/13 10:10	II121231-2	1		1.02	mg/L	102	85	115			
L10356-01AS	AS	01/31/13 10:16	II121231-2	1	U	1.047	mg/L	104.7	85	115			
L10356-01ASD	ASD	01/31/13 10:19	II121231-2	1	U	1.031	mg/L	103.1	85	115	1.54	20	

Iron, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338260													
WG338260ICV	ICV	01/31/13 23:32	II130114-4	2		2.022	mg/L	101.1	95	105			
WG338260ICB	ICB	01/31/13 23:38				U	mg/L		-0.06	0.06			
WG338226LRB	LRB	01/31/13 23:50				U	mg/L		-0.044	0.044			
WG338226LFB	LFB	01/31/13 23:53	II121231-2	1		1.047	mg/L	104.7	85	115			
L10261-01LFM	LFM	01/31/13 23:59	II121231-2	1	23.3	24.06	mg/L	76	70	130			
L10261-01LFMD	LFMD	02/01/13 0:02	II121231-2	1	23.3	24.34	mg/L	104	70	130	1.16	20	
L10356-02LFM	LFM	02/01/13 0:43	II121231-2	1	.19	1.204	mg/L	101.4	70	130			
L10356-02LFMD	LFMD	02/01/13 0:46	II121231-2	1	.19	1.229	mg/L	103.9	70	130	2.06	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338270													
WG338270ICV	ICV	01/31/13 23:52	MS130102-2	.05		.05383	mg/L	107.7	90	110			
WG338270ICB	ICB	01/31/13 23:56				U	mg/L		-0.0003	0.0003			
WG338270LFB	LFB	01/31/13 23:59	MS130108-1	.05005		.05047	mg/L	100.8	85	115			
L10347-02AS	AS	02/01/13 0:16	MS130108-1	.25025	U	.24985	mg/L	99.8	70	130			
L10347-02ASD	ASD	02/01/13 0:19	MS130108-1	.25025	U	.2577	mg/L	103	70	130	3.09	20	

Lead, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338469													
WG338469ICV	ICV	02/05/13 18:54	MS130102-2	.05		.05119	mg/L	102.4	90	110			
WG338469ICB	ICB	02/05/13 18:57				U	mg/L		-0.0003	0.0003			
WG338365LRB	LRB	02/05/13 19:01				U	mg/L		-0.00022	0.00022			
WG338365LFB	LFB	02/05/13 19:04	MS130108-1	.05005		.04651	mg/L	92.9	85	115			
L10262-04LFM	LFM	02/05/13 19:45	MS130108-1	.05005	.0002	.04886	mg/L	97.2	70	130			
L10262-04LFMD	LFMD	02/05/13 19:48	MS130108-1	.05005	.0002	.04904	mg/L	97.6	70	130	0.37	20	
L10425-02LFM	LFM	02/05/13 20:35	MS130108-1	.05005	.001	.04814	mg/L	94.2	70	130			
L10425-02LFMD	LFMD	02/05/13 20:39	MS130108-1	.05005	.001	.04809	mg/L	94.1	70	130	0.1	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338145													
WG338145ICV	ICV	01/31/13 9:52	II130114-3	100		100.8	mg/L	100.8	95	105			
WG338145ICB	ICB	01/31/13 9:58				U	mg/L		-0.6	0.6			
WG338145LFB	LFB	01/31/13 10:10	II121231-2	50.00131		50.21	mg/L	100.4	85	115			
L10356-01AS	AS	01/31/13 10:16	II121231-2	50.00131	3.4	54.71	mg/L	102.6	85	115			
L10356-01ASD	ASD	01/31/13 10:19	II121231-2	50.00131	3.4	54.39	mg/L	102	85	115	0.59	20	

Caldera Mineral Resources

ACZ Project ID: **L10356**

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338145													
WG338145ICV	ICV	01/31/13 9:52	II130114-3	2		1.9735	mg/L	98.7	95	105			
WG338145ICB	ICB	01/31/13 9:58				U	mg/L		-0.015	0.015			
WG338145LFB	LFB	01/31/13 10:10	II121231-2	.5		.5183	mg/L	103.7	85	115			
L10356-01AS	AS	01/31/13 10:16	II121231-2	.5	.033	.554	mg/L	104.2	85	115			
L10356-01ASD	ASD	01/31/13 10:19	II121231-2	.5	.033	.5551	mg/L	104.4	85	115	0.2	20	

Manganese, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338260													
WG338260ICV	ICV	01/31/13 23:32	II130114-4	2		1.9555	mg/L	97.8	95	105			
WG338260ICB	ICB	01/31/13 23:38				U	mg/L		-0.015	0.015			
WG338226LRB	LRB	01/31/13 23:50				U	mg/L		-0.011	0.011			
WG338226LFB	LFB	01/31/13 23:53	II121231-2	.5		.5046	mg/L	100.9	85	115			
L10261-01LFM	LFM	01/31/13 23:59	II121231-2	.5	3.36	3.858	mg/L	99.6	70	130			
L10261-01LFMD	LFMD	02/01/13 0:02	II121231-2	.5	3.36	3.914	mg/L	110.8	70	130	1.44	20	
L10356-02LFM	LFM	02/01/13 0:43	II121231-2	.5	.245	.7331	mg/L	97.6	70	130			
L10356-02LFMD	LFMD	02/01/13 0:46	II121231-2	.5	.245	.7541	mg/L	101.8	70	130	2.82	20	

Mercury, total

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338123													
WG338123ICV	ICV	01/31/13 12:25	II130117-1	.005025		.00476	mg/L	94.7	95	105			
WG338123ICB	ICB	01/31/13 12:27				U	mg/L		-0.0002	0.0002			
WG338123LRB	LRB	01/31/13 12:29				U	mg/L		-0.00044	0.00044			
WG338123LFB	LFB	01/31/13 12:31	II130109-7	.002002		.00186	mg/L	92.9	85	115			
L10241-03LFM	LFM	01/31/13 12:41	II130109-7	.002002	U	.00178	mg/L	88.9	85	115			
L10241-03LFMD	LFMD	01/31/13 12:43	II130109-7	.002002	U	.00182	mg/L	90.9	85	115	2.22	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338145													
WG338145ICV	ICV	01/31/13 9:52	II130114-3	2		1.96	mg/L	98	95	105			
WG338145ICB	ICB	01/31/13 9:58				U	mg/L		-0.03	0.03			
WG338145LFB	LFB	01/31/13 10:10	II121231-2	.5		.49	mg/L	98	85	115			
L10356-01AS	AS	01/31/13 10:16	II121231-2	.5	U	.491	mg/L	98.2	85	115			
L10356-01ASD	ASD	01/31/13 10:19	II121231-2	.5	U	.505	mg/L	101	85	115	2.81	20	

Caldera Mineral Resources

ACZ Project ID: **L10356**

Nickel, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338260													
WG338260ICV	ICV	01/31/13 23:32	II130114-4	2		2.004	mg/L	100.2	95	105			
WG338260ICB	ICB	01/31/13 23:38				U	mg/L		-0.03	0.03			
WG338226LRB	LRB	01/31/13 23:50				U	mg/L		-0.022	0.022			
WG338226LFB	LFB	01/31/13 23:53	II121231-2	.5		.509	mg/L	101.8	85	115			
L10261-01LFM	LFM	01/31/13 23:59	II121231-2	.5	.02	.51	mg/L	98	70	130			
L10261-01LFMD	LFMD	02/01/13 0:02	II121231-2	.5	.02	.498	mg/L	95.6	70	130	2.38	20	
L10356-02LFM	LFM	02/01/13 0:43	II121231-2	.5	U	.485	mg/L	97	70	130			
L10356-02LFMD	LFMD	02/01/13 0:46	II121231-2	.5	U	.501	mg/L	100.2	70	130	3.25	20	

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG337921													
WG337921ICV	ICV	01/24/13 22:51	WI130110-1	2.416		2.414	mg/L	99.9	90	110			
WG337921ICB	ICB	01/24/13 22:52				U	mg/L		-0.06	0.06			
WG337921LFB	LFB	01/24/13 22:56	WI120814-9	2		2.025	mg/L	101.3	90	110			
L10356-01AS	AS	01/24/13 22:59	WI120814-9	2	.18	2.228	mg/L	102.4	90	110			
L10356-02DUP	DUP	01/24/13 23:01			U	.03	mg/L				200	20	RA

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG337921													
WG337921ICV	ICV	01/24/13 22:51	WI130110-1	.609		.606	mg/L	99.5	90	110			
WG337921ICB	ICB	01/24/13 22:52				U	mg/L		-0.03	0.03			
WG337921LFB	LFB	01/24/13 22:56	WI120814-9	1		1.006	mg/L	100.6	90	110			
L10356-01AS	AS	01/24/13 22:59	WI120814-9	1	U	1.012	mg/L	101.2	90	110			
L10356-02DUP	DUP	01/24/13 23:01			U	U	mg/L				0	20	RA

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338410													
WG338410ICV	ICV	02/04/13 17:31	WI121105-5	1.003		.987	mg/L	98.4	90	110			
WG338410ICB	ICB	02/04/13 17:32				U	mg/L		-0.15	0.15			
WG338410LFB1	LFB	02/04/13 17:33	WI121218-3	1		1.023	mg/L	102.3	90	110			
L10241-01AS	AS	02/04/13 17:35	WI121218-3	1	U	.997	mg/L	99.7	90	110			
L10241-02DUP	DUP	02/04/13 17:37			U	U	mg/L				0	20	RA
L10356-03AS	AS	02/04/13 17:51	WI121218-3	1	U	.99	mg/L	99	90	110			
L10362-01DUP	DUP	02/04/13 17:53			.05	.058	mg/L				14.8	20	RA
WG338410LFB2	LFB	02/04/13 18:05	WI121218-3	1		1.015	mg/L	101.5	90	110			

Caldera Mineral Resources

ACZ Project ID: **L10356**

pH (lab) SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG337980													
WG337980LCSW3	LCSW	01/25/13 15:43	PCN40853	6		6.01	units	100.2	98	102			
L10356-03DUP	DUP	01/25/13 16:40			8	7.99	units				0.1	20	
WG337980LCSW6	LCSW	01/25/13 17:47	PCN40853	6		6.02	units	100.3	98	102			
WG337980LCSW9	LCSW	01/25/13 20:59	PCN40853	6		6.03	units	100.5	98	102			
WG337980LCSW12	LCSW	01/26/13 0:21	PCN40853	6		6.02	units	100.3	98	102			
WG337980LCSW15	LCSW	01/26/13 2:49	PCN40853	6		6.02	units	100.3	98	102			

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG337988													
WG337988PBW	PBW	01/25/13 16:30				U	mg/L		-20	20			
WG337988LCSW	LCSW	01/25/13 16:30	PCN41148	260		256	mg/L	98.5	80	120			
L10367-02DUP	DUP	01/25/13 16:40			430	418	mg/L				2.8	20	

Residue, Non-Filterable (TSS) @105C SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338047													
WG338047PBW	PBW	01/28/13 14:20				U	mg/L		-15	15			
WG338047LCSW	LCSW	01/28/13 14:21	PCN41148	160		154	mg/L	96.3	80	120			
L10373-01DUP	DUP	01/28/13 14:35			U	U	mg/L				0	20	RA

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338270													
WG338270ICV	ICV	01/31/13 23:52	MS130102-2	.05		.05222	mg/L	104.4	90	110			
WG338270ICB	ICB	01/31/13 23:56				U	mg/L		-0.0003	0.0003			
WG338270LFB	LFB	01/31/13 23:59	MS130108-1	.05005		.04818	mg/L	96.3	85	115			
L10347-02AS	AS	02/01/13 0:16	MS130108-1	.25025	U	.24165	mg/L	96.6	70	130			
L10347-02ASD	ASD	02/01/13 0:19	MS130108-1	.25025	U	.2504	mg/L	100.1	70	130	3.56	20	

Silver, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338270													
WG338270ICV	ICV	01/31/13 23:52	MS130102-2	.02006		.02089	mg/L	104.1	90	110			
WG338270ICB	ICB	01/31/13 23:56				U	mg/L		-0.00015	0.00015			
WG338270LFB	LFB	01/31/13 23:59	MS130108-1	.01001		.00976	mg/L	97.5	85	115			
L10347-02AS	AS	02/01/13 0:16	MS130108-1	.05005	U	.04665	mg/L	93.2	70	130			
L10347-02ASD	ASD	02/01/13 0:19	MS130108-1	.05005	U	.04813	mg/L	96.2	70	130	3.12	20	

Caldera Mineral Resources

ACZ Project ID: **L10356**

Silver, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338469													
WG338469ICV	ICV	02/05/13 18:54	MS130102-2	.02006		.02067	mg/L	103	90	110			
WG338469ICB	ICB	02/05/13 18:57				U	mg/L		-0.00015	0.00015			
WG338365LRB	LRB	02/05/13 19:01				U	mg/L		-0.00011	0.00011			
WG338365LFB	LFB	02/05/13 19:04	MS130108-1	.01001		.009502	mg/L	94.9	85	115			
L10262-04LFM	LFM	02/05/13 19:45	MS130108-1	.01001	U	.00899	mg/L	89.8	70	130			
L10262-04LFMD	LFMD	02/05/13 19:48	MS130108-1	.01001	U	.00905	mg/L	90.4	70	130	0.67	20	
L10425-02LFM	LFM	02/05/13 20:35	MS130108-1	.01001	U	.009037	mg/L	90.3	70	130			
L10425-02LFMD	LFMD	02/05/13 20:39	MS130108-1	.01001	U	.0091	mg/L	90.9	70	130	0.69	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338396													
WG338396ICB	ICB	02/04/13 11:57				U	mg/L		-3	3			
WG338396ICV	ICV	02/04/13 11:57	WI130130-2	20		20.8	mg/L	104	90	110			
WG338396LFB	LFB	02/04/13 14:03	WI121025-3	10		9.5	mg/L	95	90	110			
L10244-01DUP	DUP	02/04/13 14:10			39	39.8	mg/L				2	20	RA
L10244-02AS	AS	02/04/13 14:10	SO4TURB5X	10	120	128.8	mg/L	88	90	110			M3

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338037													
WG338037ICV	ICV	01/28/13 12:00	WC130128-1	.36		.387	mg/L	107.5	90	110			
WG338037ICB	ICB	01/28/13 12:06				U	mg/L		-0.06	0.06			
WG338037LFB	LFB	01/28/13 12:12	WC130128-1	.2453333		.279	mg/L	113.7	80	120			
L10405-04AS	AS	01/28/13 14:58	WC130128-1	.2453333	U	.322	mg/L	131.3	75	125			M1
L10405-04DUP	DUP	01/28/13 15:04			U	U	mg/L				0	20	RA

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338270													
WG338270ICV	ICV	01/31/13 23:52	MS130102-2	.05		.05259	mg/L	105.2	90	110			
WG338270ICB	ICB	01/31/13 23:56				U	mg/L		-0.0003	0.0003			
WG338270LFB	LFB	01/31/13 23:59	MS130108-1	.05		.04941	mg/L	98.8	85	115			
L10347-02AS	AS	02/01/13 0:16	MS130108-1	.25	U	.2409	mg/L	96.4	70	130			
L10347-02ASD	ASD	02/01/13 0:19	MS130108-1	.25	U	.24865	mg/L	99.5	70	130	3.17	20	

Uranium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338469													
WG338469ICV	ICV	02/05/13 18:54	MS130102-2	.05		.05398	mg/L	108	90	110			
WG338469ICB	ICB	02/05/13 18:57				U	mg/L		-0.0003	0.0003			
WG338365LRB	LRB	02/05/13 19:01				U	mg/L		-0.00022	0.00022			
WG338365LFB	LFB	02/05/13 19:04	MS130108-1	.05		.04938	mg/L	98.8	85	115			
L10262-04LFM	LFM	02/05/13 19:45	MS130108-1	.05	.0009	.05222	mg/L	102.6	70	130			
L10262-04LFMD	LFMD	02/05/13 19:48	MS130108-1	.05	.0009	.05262	mg/L	103.4	70	130	0.76	20	
L10425-02LFM	LFM	02/05/13 20:35	MS130108-1	.05	U	.05076	mg/L	101.5	70	130			
L10425-02LFMD	LFMD	02/05/13 20:39	MS130108-1	.05	U	.05025	mg/L	100.5	70	130	1.01	20	

Caldera Mineral Resources

ACZ Project ID: **L10356**

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338145													
WG338145ICV	ICV	01/31/13 9:52	II130114-3	2		1.996	mg/L	99.8	95	105			
WG338145ICB	ICB	01/31/13 9:58				U	mg/L		-0.03	0.03			
WG338145LFB	LFB	01/31/13 10:10	II121231-2	.5		.516	mg/L	103.2	85	115			
L10356-01AS	AS	01/31/13 10:16	II121231-2	.5	.17	.691	mg/L	104.2	85	115			
L10356-01ASD	ASD	01/31/13 10:19	II121231-2	.5	.17	.694	mg/L	104.8	85	115	0.43	20	

Zinc, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG338260													
WG338260ICV	ICV	01/31/13 23:32	II130114-4	2		1.966	mg/L	98.3	95	105			
WG338260ICB	ICB	01/31/13 23:38				U	mg/L		-0.03	0.03			
WG338226LRB	LRB	01/31/13 23:50				U	mg/L		-0.022	0.022			
WG338226LFB	LFB	01/31/13 23:53	II121231-2	.5		.511	mg/L	102.2	85	115			
L10261-01LFM	LFM	01/31/13 23:59	II121231-2	.5	.11	.602	mg/L	100.4	70	130			
L10261-01LFMD	LFMD	02/01/13 0:02	II121231-2	.5	.11	.596	mg/L	99.2	70	130	1	20	
L10356-02LFM	LFM	02/01/13 0:43	II121231-2	.5	.34	.819	mg/L	99.8	70	130			
L10356-02LFMD	LFMD	02/01/13 0:46	II121231-2	.5	.34	.829	mg/L	101.8	70	130	1.21	20	

Caldera Mineral Resources

ACZ Project ID: **L10356**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L10356-01	WG338451	Aluminum, total recoverable	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG338281	Chloride	SM4500CI-E	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.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338352	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338354	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG337965	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG337921	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338410	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338047	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338396	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338037	Sulfide as S	SM4500S2-D	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources

ACZ Project ID: **L10356**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L10356-02	WG338365	Total Hot Plate Digestion	M200.2 ICP-MS	DJ	Sample dilution required due to insufficient sample.
	WG338366	Total Recoverable Digestion	M200.2 ICP-MS	DJ	Sample dilution required due to insufficient sample.
	WG338451	Aluminum, total recoverable	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG338281	Chloride	SM4500CI-E	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.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338352	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338354	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG337965	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG337921	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338410	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338047	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338396	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338037	Sulfide as S	SM4500S2-D	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources

ACZ Project ID: **L10356**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L10356-03	WG338451	Aluminum, total recoverable	M200.8 ICP-MS	MA	Recovery for either the spike or spike duplicate was outside of the acceptance limits; the RPD was within the acceptance limits.
	WG338281	Chloride	SM4500CI-E	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.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338352	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338354	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG337965	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG337921	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338410	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338047	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338396	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG338037	Sulfide as S	SM4500S2-D	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources

ACZ Project ID: **L10356**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Caldera Mineral Resources

ACZ Project ID: L10356

Date Received: 01/24/2013 10:15

Received By: ksj

Date Printed: 1/24/2013

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples? A change was made in the # of containers section prior to ACZ custody.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Are all labels on containers and are they intact and legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) For preserved bottle types, was the pH checked and within limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12) Is there sufficient sample volume to perform all requested work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) Is the custody seal intact on all containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14) Are samples that require zero headspace acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15) Are all sample containers appropriate for analytical requirements? L10356-01 : A orange container was not received and the associated analysis could not be run. L10356-02 : A orange container was not received and the associated analysis could not be run. L10356-03 : A orange container was not received and the associated analysis could not be run.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16) Is there an Hg-1631 trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17) Is there a VOA trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18) Were all samples received within hold time? Some parameters were received past hold time.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
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Caldera Mineral Resources

ACZ Project ID: L10356

Date Received: 01/24/2013 10:15

Received By: ksj

Date Printed: 1/24/2013

2690 2.8 15 Yes

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



100

• *Chlorophyll a* (Chl a) and *Chlorophyll b* (Chl b) are the primary photosynthetic pigments in green algae. They are responsible for capturing light energy and converting it into chemical energy through the process of photosynthesis. Chl a is the most abundant pigment, while Chl b is present in smaller amounts.

1. 3. 1. 1.

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.

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

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

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

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April 19, 2013

Report to:

Mike Thompson
Caldera Mineral Resources
PO Box 297
Silverton, CO 81433

Bill to:

Lauren Nuyens
Caldera Mineral Resources
8439 Sunset Blvd. Suite 402
West Hollywood, CA 90069

cc: John Bryan

Project ID:

ACZ Project ID: L11281

Mike Thompson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 26, 2013. This project has been assigned to ACZ's project number, L11281. 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 L11281. 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 May 19, 2013. 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.



Tony Antalek has reviewed and
approved this report.



Caldera Mineral Resources

April 19, 2013

Project ID:

ACZ Project ID: L11281

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 1 miscellaneous sample from Caldera Mineral Resources on March 26, 2013. The sample was received in good condition. Upon receipt, the sample custodian removed the sample from the cooler, inspected the contents, and logged the sample into ACZ's computerized Laboratory Information Management System (LIMS). The sample was assigned ACZ LIMS project number L11281. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses except those qualified with an ACZ 'H' flag were performed within EPA recommended holding times.

Sample Analysis

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

1. The total versus dissolved disparity involving Cadmium (sample -01) was reanalyzed for confirmation.

Caldera Mineral Resources

Project ID:

Sample ID: CB-03-032513

ACZ Sample ID: **L11281-01**

Date Sampled: 03/25/13 00:00

Date Received: 03/26/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							04/02/13 15:34	lhb
Cyanide, WAD	SM4500-CN I- distillation							04/01/13 14:17	bsu
Total Hot Plate Digestion	M200.2 ICP-MS			*				04/16/13 11:44	las
Total Hot Plate Digestion	M200.2 ICP							04/03/13 13:43	aeb
Total Recoverable Digestion	M200.2 ICP-MS							03/28/13 13:13	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.042			mg/L	0.001	0.005	03/30/13 1:14	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0006	B		mg/L	0.0002	0.001	04/02/13 23:12	msh
Arsenic, total recoverable	M200.8 ICP-MS	0.0012			mg/L	0.0002	0.001	03/30/13 1:14	pmc
Barium, dissolved	M200.7 ICP	0.019	B		mg/L	0.003	0.02	04/01/13 16:09	jic
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	04/01/13 16:09	jic
Boron, dissolved	M200.7 ICP	0.04	B		mg/L	0.01	0.05	04/01/13 16:09	jic
Cadmium, dissolved	M200.8 ICP-MS	0.0010			mg/L	0.0001	0.0005	04/02/13 23:12	msh
Cadmium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.003	04/04/13 18:52	msh
Calcium, dissolved	M200.7 ICP	336			mg/L	0.2	1	04/01/13 16:09	jic
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	04/02/13 23:12	msh
Chromium, total	M200.8 ICP-MS		U		mg/L	0.003	0.01	04/04/13 18:52	msh
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.003	0.01	04/19/13 0:00	calc
Copper, dissolved	M200.8 ICP-MS	0.0009	B		mg/L	0.0005	0.003	04/02/13 23:12	msh
Copper, total	M200.8 ICP-MS		U		mg/L	0.003	0.01	04/04/13 18:52	msh
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	04/01/13 16:09	jic
Iron, total	M200.7 ICP	0.34			mg/L	0.02	0.05	04/04/13 13:03	aeb
Lead, dissolved	M200.8 ICP-MS	0.0011			mg/L	0.0001	0.0005	04/02/13 23:12	msh
Lead, total	M200.8 ICP-MS	0.0094			mg/L	0.0005	0.003	04/04/13 18:52	msh
Magnesium, dissolved	M200.7 ICP	3.9			mg/L	0.2	1	04/01/13 16:09	jic
Manganese, dissolved	M200.7 ICP	0.229			mg/L	0.005	0.03	04/01/13 16:09	jic
Manganese, total	M200.7 ICP	0.461			mg/L	0.005	0.03	04/04/13 13:03	aeb
Mercury, total	M245.1 CVAA		U		mg/L	0.0002	0.001	04/03/13 16:47	las
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	04/01/13 16:09	jic
Nickel, total	M200.7 ICP		U		mg/L	0.01	0.05	04/04/13 13:03	aeb
Selenium, dissolved	M200.8 ICP-MS	0.0004			mg/L	0.0001	0.0003	04/02/13 23:12	msh
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	04/02/13 23:12	msh
Silver, total	M200.8 ICP-MS		U		mg/L	0.0003	0.001	04/04/13 18:52	msh
Uranium, dissolved	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0005	04/02/13 23:12	msh
Uranium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.003	04/04/13 18:52	msh
Zinc, dissolved	M200.7 ICP	0.22			mg/L	0.01	0.05	04/01/13 16:09	jic
Zinc, total	M200.7 ICP	0.34			mg/L	0.01	0.05	04/04/13 13:03	aeb

Caldera Mineral Resources

Project ID:

Sample ID: CB-03-032513

ACZ Sample ID: **L11281-01**

Date Sampled: 03/25/13 00:00

Date Received: 03/26/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		40			mg/L	2	20	03/29/13 0:00	ljr
Carbonate as CaCO ₃			U		mg/L	2	20	03/29/13 0:00	ljr
Hydroxide as CaCO ₃			U		mg/L	2	20	03/29/13 0:00	ljr
Total Alkalinity		40			mg/L	2	20	03/29/13 0:00	ljr
Chloride	SM4500Cl-E	2	B	*	mg/L	1	5	04/03/13 14:29	bsu
Conductivity @25C	SM2510B	1430			umhos/cm	1	10	03/29/13 2:24	ljr
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	04/02/13 23:43	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	04/01/13 16:28	tcd
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	04/02/13 13:04	ljr
Hardness as CaCO ₃	SM2340B - Calculation	856			mg/L	1	7	04/19/13 0:00	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							03/29/13 10:20	las
Lab Filtration (glass fiber filter)	SOPWC050							03/28/13 14:31	ljr
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		U		mg/L	0.02	0.1	04/19/13 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U		mg/L	0.02	0.1	03/26/13 19:22	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U		mg/L	0.01	0.05	03/26/13 19:22	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U	*	mg/L	0.05	0.5	04/05/13 17:04	bsu
pH (lab)	SM4500H+ B								
pH		7.9	H		units	0.1	0.1	03/29/13 0:00	ljr
pH measured at		21.0			C	0.1	0.1	03/29/13 0:00	ljr
Residue, Filterable (TDS) @180C	SM2540C	1280			mg/L	10	20	03/28/13 14:45	ljr
Residue, Non-Filterable (TSS) @105C	SM2540D		U	*	mg/L	5	20	03/28/13 11:32	khw
Sulfate	D516-02 - Turbidimetric	790		*	mg/L	50	300	04/01/13 14:35	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	03/27/13 16:23	ljr


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources

ACZ Project ID: **L11281**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341252													
WG341252PBW1	PBW	03/28/13 17:52				3.3	mg/L		-20	20			
WG341252LCSW2	LCSW	03/28/13 18:07	WC130328-	820		770.3	mg/L	93.9	90	110			
WG341252LCSW5	LCSW	03/28/13 20:49	WC130328-	820		764.2	mg/L	93.2	90	110			
WG341252PBW2	PBW	03/28/13 20:58				3.4	mg/L		-20	20			
WG341252LCSW8	LCSW	03/29/13 0:51	WC130328-	820		775.7	mg/L	94.6	90	110			
WG341252PBW3	PBW	03/29/13 1:00				2.3	mg/L		-20	20			
L11281-01DUP	DUP	03/29/13 2:32			40	40.5	mg/L				1.2	20	
WG341252LCSW11	LCSW	03/29/13 4:32	WC130328-	820		794.4	mg/L	96.9	90	110			
WG341252PBW4	PBW	03/29/13 4:41				U	mg/L		-20	20			
WG341252LCSW14	LCSW	03/29/13 8:25	WC130328-	820		796.3	mg/L	97.1	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341266													
WG341266ICV	ICV	03/30/13 0:07	MS130102-2	.1		.1009	mg/L	100.9	90	110			
WG341266ICB	ICB	03/30/13 0:11				U	mg/L		-0.003	0.003			
WG341213LRB	LRB	03/30/13 0:14				.0015	mg/L		-0.0022	0.0022			
WG341213LFB	LFB	03/30/13 0:17	MS130220-1	.050055		.0497	mg/L	99.3	85	115			
L11302-01LFM	LFM	03/30/13 1:40	MS130220-1	.050055	.811	.8729	mg/L	123.7	70	130			
L11302-01LFMD	LFMD	03/30/13 1:43	MS130220-1	.050055	.811	.8685	mg/L	114.9	70	130	0.51	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341440													
WG341440ICV	ICV	04/02/13 22:42	MS130402-2	.05		.05187	mg/L	103.7	90	110			
WG341440ICB	ICB	04/02/13 22:46				U	mg/L		-0.0006	0.0006			
WG341440LFB	LFB	04/02/13 22:49	MS130329-1	.05005		.04976	mg/L	99.4	85	115			
L11222-03AS	AS	04/02/13 23:05	MS130329-1	.05005	.0015	.05649	mg/L	109.9	70	130			
L11222-03ASD	ASD	04/02/13 23:08	MS130329-1	.05005	.0015	.05618	mg/L	109.3	70	130	0.55	20	

Arsenic, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341266													
WG341266ICV	ICV	03/30/13 0:07	MS130102-2	.05		.05277	mg/L	105.5	90	110			
WG341266ICB	ICB	03/30/13 0:11				U	mg/L		-0.0006	0.0006			
WG341213LRB	LRB	03/30/13 0:14				U	mg/L		-0.00044	0.00044			
WG341213LFB	LFB	03/30/13 0:17	MS130220-1	.05005		.05204	mg/L	104	85	115			
L11302-01LFM	LFM	03/30/13 1:40	MS130220-1	.05005	.001	.05037	mg/L	98.6	70	130			
L11302-01LFMD	LFMD	03/30/13 1:43	MS130220-1	.05005	.001	.05039	mg/L	98.7	70	130	0.04	20	

Caldera Mineral Resources

ACZ Project ID: **L11281**

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.967	mg/L	98.4	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.009	0.009			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5		.498	mg/L	99.6	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5	.124	.6167	mg/L	98.5	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5	.124	.6203	mg/L	99.3	85	115	0.58	20	

Beryllium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.952	mg/L	97.6	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.03	0.03			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5		.506	mg/L	101.2	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5	U	.489	mg/L	97.8	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5	U	.493	mg/L	98.6	85	115	0.81	20	

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		2.017	mg/L	100.9	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.03	0.03			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5005		.522	mg/L	104.3	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5005	U	.508	mg/L	101.5	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5005	U	.519	mg/L	103.7	85	115	2.14	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341440													
WG341440ICV	ICV	04/02/13 22:42	MS130402-2	.05		.05151	mg/L	103	90	110			
WG341440ICB	ICB	04/02/13 22:46				U	mg/L		-0.0003	0.0003			
WG341440LFB	LFB	04/02/13 22:49	MS130329-1	.0501		.05087	mg/L	101.5	85	115			
L11222-03AS	AS	04/02/13 23:05	MS130329-1	.0501	U	.05199	mg/L	103.8	70	130			
L11222-03ASD	ASD	04/02/13 23:08	MS130329-1	.0501	U	.05016	mg/L	100.1	70	130	3.58	20	

Cadmium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.05		.05001	mg/L	100	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.0003	0.0003			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.00022	0.00022			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.0501		.04916	mg/L	98.1	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.0501	U	.04657	mg/L	93	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.0501	U	.04657	mg/L	93	70	130	0	20	

Caldera Mineral Resources

ACZ Project ID: **L11281**

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	100		97.64	mg/L	97.6	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.6	0.6			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	67.95918		70.17	mg/L	103.3	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	67.95918	36.8	105.5	mg/L	101.1	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	67.95918	36.8	105.9	mg/L	101.7	85	115	0.38	20	

Chloride

SM4500CI-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341510													
WG341510ICB	ICB	04/03/13 12:59				U	mg/L		-3	3			
WG341510ICV	ICV	04/03/13 12:59	WI130131-1	54.945		58.3	mg/L	106.1	90	110			
WG341510LFB1	LFB	04/03/13 14:28	WI130201-8	30		31.2	mg/L	104	90	110			
L11281-01AS	AS	04/03/13 14:45	WI130201-8	30	2	33.7	mg/L	105.7	90	110			
L11286-01DUP	DUP	04/03/13 14:46			1	1.1	mg/L				9.5	20	RA
WG341510LFB2	LFB	04/03/13 14:48	WI130201-8	30		31.6	mg/L	105.3	90	110			

Chromium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341440													
WG341440ICV	ICV	04/02/13 22:42	MS130402-2	.05		.04957	mg/L	99.1	90	110			
WG341440ICB	ICB	04/02/13 22:46				U	mg/L		-0.0015	0.0015			
WG341440LFB	LFB	04/02/13 22:49	MS130329-1	.05005		.04801	mg/L	95.9	85	115			
L11222-03AS	AS	04/02/13 23:05	MS130329-1	.05005	U	.0485	mg/L	96.9	70	130			
L11222-03ASD	ASD	04/02/13 23:08	MS130329-1	.05005	U	.04836	mg/L	96.6	70	130	0.29	20	

Chromium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.05		.04817	mg/L	96.3	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.0015	0.0015			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.0011	0.0011			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.05005		.04514	mg/L	90.2	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.05005	U	.04602	mg/L	91.9	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.05005	U	.04781	mg/L	95.5	70	130	3.82	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341252													
WG341252LCSW1	LCSW	03/28/13 17:54	PCN41037	1408.8		1450.6	µmhos/crr	103	90	110			
WG341252LCSW4	LCSW	03/28/13 20:38	PCN41037	1408.8		1429.3	µmhos/crr	101.5	90	110			
WG341252LCSW7	LCSW	03/29/13 0:40	PCN41037	1408.8		1423.2	µmhos/crr	101	90	110			
L11281-01DUP	DUP	03/29/13 2:32			1430	1429	µmhos/crr				0.1	20	
WG341252LCSW10	LCSW	03/29/13 4:19	PCN41037	1408.8		1419.1	µmhos/crr	100.7	90	110			
WG341252LCSW13	LCSW	03/29/13 8:13	PCN41037	1408.8		1412	µmhos/crr	100.2	90	110			

Caldera Mineral Resources

ACZ Project ID: **L11281**

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341440													
WG341440ICV	ICV	04/02/13 22:42	MS130402-2	.05		.04994	mg/L	99.9	90	110			
WG341440ICB	ICB	04/02/13 22:46				U	mg/L		-0.0015	0.0015			
WG341440LFB	LFB	04/02/13 22:49	MS130329-1	.05005		.04745	mg/L	94.8	85	115			
L11222-03AS	AS	04/02/13 23:05	MS130329-1	.05005	.0011	.04683	mg/L	91.4	70	130			
L11222-03ASD	ASD	04/02/13 23:08	MS130329-1	.05005	.0011	.04731	mg/L	92.3	70	130	1.02	20	

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.05		.04859	mg/L	97.2	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.0015	0.0015			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.0011	0.0011			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.05005		.04551	mg/L	90.9	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.05005	U	.04576	mg/L	91.4	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.05005	U	.04719	mg/L	94.3	70	130	3.08	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341468													
WG341468ICV	ICV	04/02/13 23:12	WI130321-7	.3		.2873	mg/L	95.8	90	110			
WG341468ICB	ICB	04/02/13 23:12				U	mg/L		-0.003	0.003			
WG341471													
WG341447LRB	LRB	04/02/13 23:36				U	mg/L		-0.003	0.003			
WG341447LFB	LFB	04/02/13 23:37	WI130321-3	.2		.1917	mg/L	95.9	90	110			
L11244-01DUP	DUP	04/02/13 23:40			U	U	mg/L				0	20	RA
L11278-01LFM	LFM	04/02/13 23:42	WI130321-3	.2	.009	.1703	mg/L	80.7	90	110			M2

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341366													
WG341366ICV	ICV	04/01/13 15:37	WI130321-7	.3		.295	mg/L	98.3	90	110			
WG341366ICB	ICB	04/01/13 15:38				U	mg/L		-0.003	0.003			
WG341371													
WG341351LRB	LRB	04/01/13 16:14				U	mg/L		-0.003	0.003			
WG341351LFB	LFB	04/01/13 16:15	WI130321-5	.2		.1917	mg/L	95.9	90	110			
L11281-01DUP	DUP	04/01/13 16:28			U	U	mg/L				0	20	RA
L11290-01LFM	LFM	04/01/13 16:30	WI130321-5	.2	U	.1847	mg/L	92.4	90	110			

Dissolved Chromium, Hexavalent

SM3500Cr-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341427													
WG341427ICV	ICV	04/02/13 12:55	WC121108-	.05		.0489	mg/L	97.8	90	110			
WG341427ICB	ICB	04/02/13 12:58				U	mg/L		-0.015	0.015			
WG341427LFB	LFB	04/02/13 13:01	WC121009-	.05		.0519	mg/L	103.8	90	110			
L11304-02AS	AS	04/02/13 13:13	WC121009-	.05	U	.05	mg/L	100	90	110			
L11304-02DUP	DUP	04/02/13 13:16			U	U	mg/L				0	20	RA

Caldera Mineral Resources

ACZ Project ID: **L11281**

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.99	mg/L	99.5	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.06	0.06			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	1		1.041	mg/L	104.1	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	1	.05	1.073	mg/L	102.3	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	1	.05	1.072	mg/L	102.2	85	115	0.09	20	

Iron, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341550													
WG341550ICV	ICV	04/04/13 12:41	II130114-4	2		2.02	mg/L	101	95	105			
WG341550ICB	ICB	04/04/13 12:45				U	mg/L		-0.06	0.06			
WG341487LRB	LRB	04/04/13 12:57				U	mg/L		-0.044	0.044			
WG341487LFB	LFB	04/04/13 13:00	II130326-2	1		1	mg/L	100	85	115			
L11281-01LFM	LFM	04/04/13 13:07	II130326-2	1	.34	1.365	mg/L	102.5	70	130			
L11281-01LFMD	LFMD	04/04/13 13:10	II130326-2	1	.34	1.376	mg/L	103.6	70	130	0.8	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341440													
WG341440ICV	ICV	04/02/13 22:42	MS130402-2	.05		.05114	mg/L	102.3	90	110			
WG341440ICB	ICB	04/02/13 22:46				U	mg/L		-0.0003	0.0003			
WG341440LFB	LFB	04/02/13 22:49	MS130329-1	.05005		.04961	mg/L	99.1	85	115			
L11222-03AS	AS	04/02/13 23:05	MS130329-1	.05005	.0001	.05029	mg/L	100.3	70	130			
L11222-03ASD	ASD	04/02/13 23:08	MS130329-1	.05005	.0001	.04922	mg/L	98.1	70	130	2.15	20	

Lead, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.05		.04976	mg/L	99.5	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.0003	0.0003			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.00022	0.00022			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.05005		.04581	mg/L	91.5	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.05005	.0001	.04609	mg/L	91.9	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.05005	.0001	.04624	mg/L	92.2	70	130	0.32	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	100		100.7	mg/L	100.7	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.6	0.6			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	49.99941		51.1	mg/L	102.2	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	49.99941	5.7	56.9	mg/L	102.4	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	49.99941	5.7	57.1	mg/L	102.8	85	115	0.35	20	

Caldera Mineral Resources

ACZ Project ID: **L11281**

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.939	mg/L	97	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.015	0.015			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5		.5098	mg/L	102	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5	U	.4977	mg/L	99.5	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5	U	.5011	mg/L	100.2	85	115	0.68	20	

Manganese, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341550													
WG341550ICV	ICV	04/04/13 12:41	II130114-4	2		1.9515	mg/L	97.6	95	105			
WG341550ICB	ICB	04/04/13 12:45				U	mg/L		-0.015	0.015			
WG341487LRB	LRB	04/04/13 12:57				U	mg/L		-0.011	0.011			
WG341487LFB	LFB	04/04/13 13:00	II130326-2	.5		.4917	mg/L	98.3	85	115			
L11281-01LFM	LFM	04/04/13 13:07	II130326-2	.5	.461	.9625	mg/L	100.3	70	130			
L11281-01LFMD	LFMD	04/04/13 13:10	II130326-2	.5	.461	.9809	mg/L	104	70	130	1.89	20	

Mercury, total

M245.1 CVA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341478													
WG341478ICV	ICV	04/03/13 16:35	II130325-2	.005025		.00498	mg/L	99.1	95	105			
WG341478ICB	ICB	04/03/13 16:39				U	mg/L		-0.0002	0.0002			
WG341478LRB	LRB	04/03/13 16:41				U	mg/L		-0.00044	0.00044			
WG341478LFB	LFB	04/03/13 16:43	II130320-2	.002002		.00187	mg/L	93.4	85	115			
L11343-05LFM	LFM	04/03/13 17:14	II130320-2	.002002	U	.00185	mg/L	92.4	85	115			
L11343-05LFMD	LFMD	04/03/13 17:16	II130320-2	.002002	U	.00187	mg/L	93.4	85	115	1.08	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.986	mg/L	99.3	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.03	0.03			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5		.514	mg/L	102.8	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5	U	.495	mg/L	99	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5	U	.499	mg/L	99.8	85	115	0.8	20	

Nickel, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341550													
WG341550ICV	ICV	04/04/13 12:41	II130114-4	2		1.985	mg/L	99.3	95	105			
WG341550ICB	ICB	04/04/13 12:45				U	mg/L		-0.03	0.03			
WG341487LRB	LRB	04/04/13 12:57				U	mg/L		-0.022	0.022			
WG341487LFB	LFB	04/04/13 13:00	II130326-2	.5		.505	mg/L	101	85	115			
L11281-01LFM	LFM	04/04/13 13:07	II130326-2	.5	U	.532	mg/L	106.4	70	130			
L11281-01LFMD	LFMD	04/04/13 13:10	II130326-2	.5	U	.531	mg/L	106.2	70	130	0.19	20	

Caldera Mineral Resources

ACZ Project ID: **L11281**

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341115													
WG341115ICV	ICV	03/26/13 18:50	WI130110-1	2.416		2.481	mg/L	102.7	90	110			
WG341115ICB	ICB	03/26/13 18:51				U	mg/L		-0.06	0.06			
WG341115LFB	LFB	03/26/13 18:56	WI130215-3	2		1.912	mg/L	95.6	90	110			
L11277-03AS	AS	03/26/13 19:15	WI130215-3	2	.15	2.117	mg/L	98.4	90	110			
L11279-01DUP	DUP	03/26/13 19:17			3.6	3.576	mg/L				0.7	20	

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341115													
WG341115ICV	ICV	03/26/13 18:50	WI130110-1	.609		.602	mg/L	98.9	90	110			
WG341115ICB	ICB	03/26/13 18:51				U	mg/L		-0.03	0.03			
WG341115LFB	LFB	03/26/13 18:56	WI130215-3	1		.99	mg/L	99	90	110			
L11277-03AS	AS	03/26/13 19:15	WI130215-3	1	U	.958	mg/L	95.8	90	110			
L11279-01DUP	DUP	03/26/13 19:17			.15	.142	mg/L				5.5	20	

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341615													
WG341615ICV	ICV	04/05/13 14:09	WI121105-5	1.003		1.036	mg/L	103.3	90	110			
WG341615ICB	ICB	04/05/13 14:12				U	mg/L		-0.15	0.15			
WG341645													
WG341645LFB	LFB	04/05/13 16:56	WI121218-3	1		1.04	mg/L	104	90	110			
L11215-01AS	AS	04/05/13 16:59	WI121218-3	1	U	1.058	mg/L	105.8	90	110			
L11222-01DUP	DUP	04/05/13 17:01			.18	.166	mg/L				8.1	20	RA

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341252													
WG341252LCSW3	LCSW	03/28/13 18:10	PCN40853	6		6	units	100	98	102			
WG341252LCSW6	LCSW	03/28/13 20:53	PCN40853	6		6.01	units	100.2	98	102			
WG341252LCSW9	LCSW	03/29/13 0:55	PCN40853	6		6.01	units	100.2	98	102			
L11281-01DUP	DUP	03/29/13 2:32			7.9	7.92	units				0.3	20	
WG341252LCSW12	LCSW	03/29/13 4:35	PCN40853	6		6.01	units	100.2	98	102			
WG341252LCSW15	LCSW	03/29/13 8:29	PCN40853	6		6	units	100	98	102			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341242													
WG341242PBW	PBW	03/28/13 14:40				U	mg/L		-20	20			
WG341242LCSW	LCSW	03/28/13 14:40	PCN40253	260		250	mg/L	96.2	80	120			
L11288-04DUP	DUP	03/28/13 14:51			1430	1430	mg/L				0	20	

Caldera Mineral Resources

ACZ Project ID: **L11281**

Residue, Non-Filterable (TSS) @105C SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341228													
WG341228PBW	PBW	03/28/13 11:15				U	mg/L		-15	15			
WG341228LCSW	LCSW	03/28/13 11:16	PCN40253	160		150	mg/L	93.8	80	120			
L11290-02DUP	DUP	03/28/13 11:38			U	U	mg/L				0	20	RA

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341440													
WG341440ICV	ICV	04/02/13 22:42	MS130402-2	.05		.05207	mg/L	104.1	90	110			
WG341440ICB	ICB	04/02/13 22:46				U	mg/L		-0.0003	0.0003			
WG341440LFB	LFB	04/02/13 22:49	MS130329-1	.05005		.04939	mg/L	98.7	85	115			
L11222-03AS	AS	04/02/13 23:05	MS130329-1	.05005	.0009	.0535	mg/L	105.1	70	130			
L11222-03ASD	ASD	04/02/13 23:08	MS130329-1	.05005	.0009	.05404	mg/L	106.2	70	130	1	20	

Silver, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341440													
WG341440ICV	ICV	04/02/13 22:42	MS130402-2	.02006		.02077	mg/L	103.5	90	110			
WG341440ICB	ICB	04/02/13 22:46				U	mg/L		-0.00015	0.00015			
WG341440LFB	LFB	04/02/13 22:49	MS130329-1	.01001		.01026	mg/L	102.5	85	115			
L11222-03AS	AS	04/02/13 23:05	MS130329-1	.01001	U	.009727	mg/L	97.2	70	130			
L11222-03ASD	ASD	04/02/13 23:08	MS130329-1	.01001	U	.009531	mg/L	95.2	70	130	2.04	20	

Silver, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.02006		.02065	mg/L	102.9	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.00015	0.00015			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.00011	0.00011			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.01001		.009613	mg/L	96	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.01001	U	.009206	mg/L	92	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.01001	U	.00917	mg/L	91.6	70	130	0.39	20	

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341359													
WG341359ICB	ICB	04/01/13 11:04				U	mg/L		-3	3			
WG341359ICV	ICV	04/01/13 11:04	WI130401-1	20		19.8	mg/L	99	90	110			
WG341359LFB	LFB	04/01/13 14:11	WI121025-3	10		10.2	mg/L	102	90	110			
L11218-01DUP	DUP	04/01/13 14:27			2700	2530	mg/L				6.5	20	
L11218-03AS	AS	04/01/13 14:28	SO4TURB40	49.95	5800	5900	mg/L	200.2	90	110			M3

Caldera Mineral Resources

ACZ Project ID: **L11281**

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341169													
WG341169ICV	ICV	03/27/13 15:00	WC130326-	.364		.396	mg/L	108.8	90	110			
WG341169ICB	ICB	03/27/13 15:02				U	mg/L		-0.06	0.06			
WG341169LFB1	LFB	03/27/13 15:05	WC130326-	.2391067		.284	mg/L	118.8	80	120			
WG341169LFB2	LFB	03/27/13 16:18	WC130326-	.2391067		.281	mg/L	117.5	80	120			
L11295-01AS	AS	03/27/13 16:48	WC130326-	.2391067	U	.256	mg/L	107.1	75	125			
L11295-01DUP	DUP	03/27/13 16:50			U	U	mg/L				0	20	RA

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341440													
WG341440ICV	ICV	04/02/13 22:42	MS130402-2	.05		.05357	mg/L	107.1	90	110			
WG341440ICB	ICB	04/02/13 22:46				U	mg/L		-0.0003	0.0003			
WG341440LFB	LFB	04/02/13 22:49	MS130329-1	.05		.05245	mg/L	104.9	85	115			
L11222-03AS	AS	04/02/13 23:05	MS130329-1	.05	.0014	.05572	mg/L	108.6	70	130			
L11222-03ASD	ASD	04/02/13 23:08	MS130329-1	.05	.0014	.05445	mg/L	106.1	70	130	2.31	20	

Uranium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.05		.05255	mg/L	105.1	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.0003	0.0003			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.00022	0.00022			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.05		.04864	mg/L	97.3	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.05	U	.04962	mg/L	99.2	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.05	U	.04971	mg/L	99.4	70	130	0.18	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.924	mg/L	96.2	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.03	0.03			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5		.495	mg/L	99	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5	U	.484	mg/L	96.8	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5	U	.49	mg/L	98	85	115	1.23	20	

Zinc, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341550													
WG341550ICV	ICV	04/04/13 12:41	II130114-4	2		1.989	mg/L	99.5	95	105			
WG341550ICB	ICB	04/04/13 12:45				U	mg/L		-0.03	0.03			
WG341487LRB	LRB	04/04/13 12:57				U	mg/L		-0.022	0.022			
WG341487LFB	LFB	04/04/13 13:00	II130326-2	.5		.503	mg/L	100.6	85	115			
L11281-01LFM	LFM	04/04/13 13:07	II130326-2	.5	.34	.856	mg/L	103.2	70	130			
L11281-01LFMD	LFMD	04/04/13 13:10	II130326-2	.5	.34	.84	mg/L	100	70	130	1.89	20	

Caldera Mineral Resources

ACZ Project ID: **L11281**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11281-01	WG342091	Total Hot Plate Digestion	M200.2 ICP-MS	DJ	Sample dilution required due to insufficient sample.
	WG341510	Chloride	SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341471	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341371	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341427	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341645	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341228	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341359	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG341169	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources

ACZ Project ID: **L11281**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Caldera Mineral Resources

ACZ Project ID: L11281

Date Received: 03/26/2013 13:32

Received By: ksj

Date Printed: 3/26/2013

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Are all labels on containers and are they intact and legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) For preserved bottle types, was the pH checked and within limits?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12) Is there sufficient sample volume to perform all requested work?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13) Is the custody seal intact on all containers?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
14) Are samples that require zero headspace acceptable?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
15) Are all sample containers appropriate for analytical requirements? L11281-01 : A orange container was not received and the associated analysis could not be run.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
16) Is there an Hg-1631 trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17) Is there a VOA trip blank present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18) Were all samples received within hold time? Some parameters were received past hold time.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3666	2.7	13	N/A

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



Laboratories, Inc. **C11281**

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

CHAIN OF CUSTODY

Name: **Mike Thompson**
Company: **Reardon Steel LLC**
E-mail: **mt@reardonsteel.us**

Address: **4 River St**
Silverton CO 81433
Telephone: **970-426-2924**

Name: **John Bryan**
Company: **Caldera Mineral Resources**

E-mail: **j.bryan@watley.com**
Telephone: **310-777-8889**

Name: **Laurens Noyens**
Company: **Caldera Mineral Resources**
E-mail: **Laurens@watley.com**

Address: **8439 Sunset Blvd. Suite 402**
West Hollywood, CA 90069
Telephone: **310-777-8889**

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

YES ☒
NO ☐

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

Are samples for SDWA Compliance Monitoring?

Yes ☐ No ☒

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

Sampler's Name: **[Signature]** Sampler's site Information State **CO** Zip code **81433** Time Zone **MST**

Quote #: **Camp Bird short**

Project/PO #:

Reporting state for compliance testing:

Check box if samples include NRC licensed material? ☐

of Containers

please refer
to quote

LB-03-032513

3/25/13

SW

7

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

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

[Signature] **3/25/13** **[Signature]** **3-26-13** **13.32**



April 15, 2013

Report to:

Mike Thompson
Caldera Mineral Resources
PO Box 297
Silverton, CO 81433

Bill to:

Lauren Nuyens
Caldera Mineral Resources
8439 Sunset Blvd. Suite 402
West Hollywood, CA 90069

cc: John Bryan

Project ID:

ACZ Project ID: L11295

Mike Thompson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on March 27, 2013. This project has been assigned to ACZ's project number, L11295. 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 L11295. 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 May 15, 2013. 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.



Tony Antalek has reviewed and
approved this report.



Caldera Mineral Resources

April 15, 2013

Project ID:

ACZ Project ID: L11295

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 1 miscellaneous sample from Caldera Mineral Resources on March 27, 2013. The sample was received in good condition. Upon receipt, the sample custodian removed the sample from the cooler, inspected the contents, and logged the sample into ACZ's computerized Laboratory Information Management System (LIMS). The sample was assigned ACZ LIMS project number L11295. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses except those qualified with an ACZ 'H' flag were performed within EPA recommended holding times.

Sample Analysis

This sample was analyzed for inorganic parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports.

Caldera Mineral Resources

Project ID:

Sample ID: CB-04-032613

ACZ Sample ID: **L11295-01**

Date Sampled: 03/26/13 00:00

Date Received: 03/27/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation							04/02/13 16:41	lhb
Cyanide, WAD	SM4500-CN I- distillation							04/01/13 15:16	bsu
Total Hot Plate Digestion	M200.2 ICP-MS							04/03/13 14:56	las
Total Hot Plate Digestion	M200.2 ICP							04/02/13 17:31	jjc
Total Recoverable Digestion	M200.2 ICP-MS							03/28/13 13:22	las

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	0.270			mg/L	0.001	0.005	03/30/13 1:52	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0002	0.001	04/15/13 13:34	msh
Arsenic, total recoverable	M200.8 ICP-MS	0.0017			mg/L	0.0002	0.001	03/30/13 1:52	pmc
Barium, dissolved	M200.7 ICP	0.019	B		mg/L	0.003	0.02	04/01/13 16:28	jjc
Beryllium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	04/01/13 16:28	jjc
Boron, dissolved	M200.7 ICP	0.04	B		mg/L	0.01	0.05	04/01/13 16:28	jjc
Cadmium, dissolved	M200.8 ICP-MS	0.0013			mg/L	0.0001	0.0005	04/15/13 13:34	msh
Cadmium, total	M200.8 ICP-MS	0.0022			mg/L	0.0001	0.0005	04/04/13 18:55	msh
Calcium, dissolved	M200.7 ICP	297			mg/L	0.2	1	04/01/13 16:28	jjc
Chromium, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	04/15/13 13:34	msh
Chromium, total	M200.8 ICP-MS		U		mg/L	0.0005	0.002	04/04/13 18:55	msh
Chromium, Trivalent	Calculation (Total - Hexavalent)		U		mg/L	0.0005	0.002	04/15/13 0:00	calc
Copper, dissolved	M200.8 ICP-MS	0.0011	B		mg/L	0.0005	0.003	04/15/13 13:34	msh
Copper, total	M200.8 ICP-MS	0.0239			mg/L	0.0005	0.003	04/04/13 18:55	msh
Iron, dissolved	M200.7 ICP		U		mg/L	0.02	0.05	04/01/13 16:28	jjc
Iron, total	M200.7 ICP	1.31			mg/L	0.02	0.05	04/04/13 17:52	jjc
Lead, dissolved	M200.8 ICP-MS	0.0063			mg/L	0.0001	0.0005	04/15/13 13:34	msh
Lead, total	M200.8 ICP-MS	0.1528			mg/L	0.0001	0.0005	04/04/13 18:55	msh
Magnesium, dissolved	M200.7 ICP	3.7			mg/L	0.2	1	04/01/13 16:28	jjc
Manganese, dissolved	M200.7 ICP	0.099			mg/L	0.005	0.03	04/01/13 16:28	jjc
Manganese, total	M200.7 ICP	0.549			mg/L	0.005	0.03	04/04/13 17:52	jjc
Mercury, total	M245.1 CVAA		U		mg/L	0.0002	0.001	03/28/13 15:50	mfm
Nickel, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	04/01/13 16:28	jjc
Nickel, total	M200.7 ICP		U		mg/L	0.01	0.05	04/04/13 17:52	jjc
Selenium, dissolved	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0003	04/15/13 13:34	msh
Silver, dissolved	M200.8 ICP-MS		U		mg/L	0.00005	0.0003	04/15/13 13:34	msh
Silver, total	M200.8 ICP-MS	0.00060			mg/L	0.00005	0.0003	04/04/13 18:55	msh
Uranium, dissolved	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0005	04/15/13 13:34	msh
Uranium, total	M200.8 ICP-MS	0.0005			mg/L	0.0001	0.0005	04/04/13 18:55	msh
Zinc, dissolved	M200.7 ICP	0.21			mg/L	0.01	0.05	04/01/13 16:28	jjc
Zinc, total	M200.7 ICP	0.52			mg/L	0.01	0.05	04/04/13 17:52	jjc

Caldera Mineral Resources

Project ID:

Sample ID: CB-04-032613

ACZ Sample ID: **L11295-01**

Date Sampled: 03/26/13 00:00

Date Received: 03/27/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration								
Bicarbonate as CaCO ₃		43			mg/L	2	20	03/30/13 0:00	ljr
Carbonate as CaCO ₃			U		mg/L	2	20	03/30/13 0:00	ljr
Hydroxide as CaCO ₃			U		mg/L	2	20	03/30/13 0:00	ljr
Total Alkalinity		43			mg/L	2	20	03/30/13 0:00	ljr
Chloride	SM4500Cl-E	2	B	*	mg/L	1	5	04/03/13 13:40	bsu
Conductivity @25C	SM2510B	1330			umhos/cm	1	10	03/30/13 14:25	ljr
Cyanide, total	M335.4 - Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	04/02/13 23:54	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation		U	*	mg/L	0.003	0.01	04/01/13 16:37	tcd
Dissolved Chromium, Hexavalent	SM3500Cr-D		UH	*	mg/L	0.005	0.02	04/02/13 13:07	ljr
Hardness as CaCO ₃	SM2340B - Calculation	758			mg/L	1	7	04/15/13 0:00	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8							03/29/13 11:02	las
Lab Filtration (glass fiber filter)	SOPWC050							03/29/13 14:37	khw
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂	0.03	B		mg/L	0.02	0.1	04/15/13 0:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	0.03	B	*	mg/L	0.02	0.1	03/27/13 23:18	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction		U	*	mg/L	0.01	0.05	03/27/13 22:58	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate		U		mg/L	0.05	0.5	04/05/13 14:52	bsu
pH (lab)	SM4500H+ B								
pH		7.9	H		units	0.1	0.1	03/30/13 0:00	ljr
pH measured at		22.0			C	0.1	0.1	03/30/13 0:00	ljr
Residue, Filterable (TDS) @180C	SM2540C	1170			mg/L	10	20	03/29/13 16:19	khw
Residue, Non- Filterable (TSS) @105C	SM2540D	10	B	*	mg/L	5	20	03/30/13 16:55	khw
Sulfate	D516-02 - Turbidimetric	760		*	mg/L	20	100	04/01/13 14:26	mpb
Sulfide as S	SM4500S2-D		U	*	mg/L	0.02	0.1	03/27/13 16:45	ljr


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources

ACZ Project ID: **L11295**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341320													
WG341320PBW1	PBW	03/30/13 13:43				2.9	mg/L		-20	20			
WG341320LCSW2	LCSW	03/30/13 13:57	WC130328-	820		776.6	mg/L	94.7	90	110			
L11300-01DUP	DUP	03/30/13 15:19			92	96.3	mg/L				4.6	20	
WG341320LCSW5	LCSW	03/30/13 17:10	WC130328-	820		766.7	mg/L	93.5	90	110			
WG341320PBW2	PBW	03/30/13 17:19				3.1	mg/L		-20	20			
WG341320LCSW8	LCSW	03/30/13 20:37	WC130328-	820		764.8	mg/L	93.3	90	110			
WG341320PBW3	PBW	03/30/13 20:46				3.3	mg/L		-20	20			
WG341320LCSW11	LCSW	03/31/13 1:21	WC130328-	820		791.1	mg/L	96.5	90	110			
WG341320PBW4	PBW	03/31/13 1:30				U	mg/L		-20	20			
WG341320LCSW14	LCSW	03/31/13 4:34	WC130328-	820		796.9	mg/L	97.2	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341266													
WG341266ICV	ICV	03/30/13 0:07	MS130102-2	.1		.1009	mg/L	100.9	90	110			
WG341266ICB	ICB	03/30/13 0:11				U	mg/L		-0.003	0.003			
WG341213LRB	LRB	03/30/13 0:14				.0015	mg/L		-0.0022	0.0022			
WG341213LFB	LFB	03/30/13 0:17	MS130220-1	.050055		.0497	mg/L	99.3	85	115			
L11302-01LFM	LFM	03/30/13 1:40	MS130220-1	.050055	.811	.8729	mg/L	123.7	70	130			
L11302-01LFMD	LFMD	03/30/13 1:43	MS130220-1	.050055	.811	.8685	mg/L	114.9	70	130	0.51	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341439													
WG341439ICV	ICV	04/15/13 12:13	MS130402-2	.05		.05173	mg/L	103.5	90	110			
WG341439ICB	ICB	04/15/13 12:16				U	mg/L		-0.0006	0.0006			
WG341439LFB	LFB	04/15/13 12:19	MS130329-1	.05005		.04615	mg/L	92.2	85	115			
L11289-05AS	AS	04/15/13 13:12	MS130329-1	.05005	.0018	.0551	mg/L	106.5	70	130			
L11289-05ASD	ASD	04/15/13 13:15	MS130329-1	.05005	.0018	.05513	mg/L	106.6	70	130	0.05	20	

Arsenic, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341266													
WG341266ICV	ICV	03/30/13 0:07	MS130102-2	.05		.05277	mg/L	105.5	90	110			
WG341266ICB	ICB	03/30/13 0:11				U	mg/L		-0.0006	0.0006			
WG341213LRB	LRB	03/30/13 0:14				U	mg/L		-0.00044	0.00044			
WG341213LFB	LFB	03/30/13 0:17	MS130220-1	.05005		.05204	mg/L	104	85	115			
L11302-01LFM	LFM	03/30/13 1:40	MS130220-1	.05005	.001	.05037	mg/L	98.6	70	130			
L11302-01LFMD	LFMD	03/30/13 1:43	MS130220-1	.05005	.001	.05039	mg/L	98.7	70	130	0.04	20	

Caldera Mineral Resources

ACZ Project ID: **L11295**

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.967	mg/L	98.4	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.009	0.009			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5		.498	mg/L	99.6	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5	.124	.6167	mg/L	98.5	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5	.124	.6203	mg/L	99.3	85	115	0.58	20	

Beryllium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.952	mg/L	97.6	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.03	0.03			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5		.506	mg/L	101.2	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5	U	.489	mg/L	97.8	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5	U	.493	mg/L	98.6	85	115	0.81	20	

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		2.017	mg/L	100.9	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.03	0.03			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5005		.522	mg/L	104.3	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5005	U	.508	mg/L	101.5	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5005	U	.519	mg/L	103.7	85	115	2.14	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341439													
WG341439ICV	ICV	04/15/13 12:13	MS130402-2	.05		.05122	mg/L	102.4	90	110			
WG341439ICB	ICB	04/15/13 12:16				U	mg/L		-0.0003	0.0003			
WG341439LFB	LFB	04/15/13 12:19	MS130329-1	.0501		.04678	mg/L	93.4	85	115			
L11289-05AS	AS	04/15/13 13:12	MS130329-1	.0501	.0003	.04844	mg/L	96.1	70	130			
L11289-05ASD	ASD	04/15/13 13:15	MS130329-1	.0501	.0003	.04885	mg/L	96.9	70	130	0.84	20	

Cadmium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.05		.05001	mg/L	100	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.0003	0.0003			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.00022	0.00022			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.0501		.04916	mg/L	98.1	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.0501	U	.04657	mg/L	93	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.0501	U	.04657	mg/L	93	70	130	0	20	

Caldera Mineral Resources

ACZ Project ID: **L11295**

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	100		97.64	mg/L	97.6	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.6	0.6			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	67.95918		70.17	mg/L	103.3	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	67.95918	36.8	105.5	mg/L	101.1	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	67.95918	36.8	105.9	mg/L	101.7	85	115	0.38	20	

Chloride

SM4500CI-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341507													
WG341507ICB	ICB	04/03/13 12:59				U	mg/L		-3	3			
WG341507ICV	ICV	04/03/13 12:59	WI130131-1	54.945		58.3	mg/L	106.1	90	110			
WG341507LFB1	LFB	04/03/13 13:22	WI130201-8	30		31.1	mg/L	103.7	90	110			
WG341507LFB2	LFB	04/03/13 13:39	WI130201-8	30		30.9	mg/L	103	90	110			
L11289-08AS	AS	04/03/13 13:39	WI130201-8	30	73	96.9	mg/L	79.7	90	110			M2
L11290-01DUP	DUP	04/03/13 13:39			24	23.5	mg/L				2.1	20	

Chromium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341439													
WG341439ICV	ICV	04/15/13 12:13	MS130402-2	.05		.0475	mg/L	95	90	110			
WG341439ICB	ICB	04/15/13 12:16				U	mg/L		-0.0015	0.0015			
WG341439LFB	LFB	04/15/13 12:19	MS130329-1	.05005		.04593	mg/L	91.8	85	115			
L11289-05AS	AS	04/15/13 13:12	MS130329-1	.05005	U	.04412	mg/L	88.2	70	130			
L11289-05ASD	ASD	04/15/13 13:15	MS130329-1	.05005	U	.0446	mg/L	89.1	70	130	1.08	20	

Chromium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.05		.04817	mg/L	96.3	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.0015	0.0015			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.0011	0.0011			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.05005		.04514	mg/L	90.2	85	115			
L11316-03LFB	LFB	04/04/13 19:31	MS130329-1	.05005	U	.04602	mg/L	91.9	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.05005	U	.04781	mg/L	95.5	70	130	3.82	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341320													
WG341320LCSW1	LCSW	03/30/13 13:45	PCN41037	1408.8		1445.5	µmhos/crr	102.6	90	110			
L11300-01DUP	DUP	03/30/13 15:19			417	417	µmhos/crr				0	20	
WG341320LCSW4	LCSW	03/30/13 16:59	PCN41037	1408.8		1421.1	µmhos/crr	100.9	90	110			
WG341320LCSW7	LCSW	03/30/13 20:25	PCN41037	1408.8		1414	µmhos/crr	100.4	90	110			
WG341320LCSW10	LCSW	03/31/13 1:09	PCN41037	1408.8		1405.9	µmhos/crr	99.8	90	110			
WG341320LCSW13	LCSW	03/31/13 4:21	PCN41037	1408.8		1395.8	µmhos/crr	99.1	90	110			

Caldera Mineral Resources

ACZ Project ID: **L11295**

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341439													
WG341439ICV	ICV	04/15/13 12:13	MS130402-2	.05		.04633	mg/L	92.7	90	110			
WG341439ICB	ICB	04/15/13 12:16				U	mg/L		-0.0015	0.0015			
WG341439LFB	LFB	04/15/13 12:19	MS130329-1	.05005		.04439	mg/L	88.7	85	115			
L11289-05AS	AS	04/15/13 13:12	MS130329-1	.05005	.0012	.04054	mg/L	78.6	70	130			
L11289-05ASD	ASD	04/15/13 13:15	MS130329-1	.05005	.0012	.04116	mg/L	79.8	70	130	1.52	20	

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.05		.04859	mg/L	97.2	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.0015	0.0015			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.0011	0.0011			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.05005		.04551	mg/L	90.9	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.05005	U	.04576	mg/L	91.4	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.05005	U	.04719	mg/L	94.3	70	130	3.08	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341468													
WG341468ICV	ICV	04/02/13 23:12	WI130321-7	.3		.2873	mg/L	95.8	90	110			
WG341468ICB	ICB	04/02/13 23:12				U	mg/L		-0.003	0.003			
WG341471													
WG341447LRB	LRB	04/02/13 23:36				U	mg/L		-0.003	0.003			
WG341447LFB	LFB	04/02/13 23:37	WI130321-3	.2		.1917	mg/L	95.9	90	110			
L11292-02DUP	DUP	04/02/13 23:52			U	U	mg/L				0	20	RA
L11292-03LFM	LFM	04/02/13 23:53	WI130321-3	.2	U	.1771	mg/L	88.6	90	110			M2

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341366													
WG341366ICV	ICV	04/01/13 15:37	WI130321-7	.3		.295	mg/L	98.3	90	110			
WG341366ICB	ICB	04/01/13 15:38				U	mg/L		-0.003	0.003			
WG341371													
WG341351LRB	LRB	04/01/13 16:14				U	mg/L		-0.003	0.003			
WG341351LFB	LFB	04/01/13 16:15	WI130321-5	.2		.1917	mg/L	95.9	90	110			
L11281-01DUP	DUP	04/01/13 16:28			U	U	mg/L				0	20	RA
L11290-01LFM	LFM	04/01/13 16:30	WI130321-5	.2	U	.1847	mg/L	92.4	90	110			

Dissolved Chromium, Hexavalent

SM3500Cr-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341427													
WG341427ICV	ICV	04/02/13 12:55	WC121108-	.05		.0489	mg/L	97.8	90	110			
WG341427ICB	ICB	04/02/13 12:58				U	mg/L		-0.015	0.015			
WG341427LFB	LFB	04/02/13 13:01	WC121009-	.05		.0519	mg/L	103.8	90	110			
L11304-02AS	AS	04/02/13 13:13	WC121009-	.05	U	.05	mg/L	100	90	110			
L11304-02DUP	DUP	04/02/13 13:16			U	U	mg/L				0	20	RA

Caldera Mineral Resources

ACZ Project ID: **L11295**

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.99	mg/L	99.5	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.06	0.06			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	1		1.041	mg/L	104.1	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	1	.05	1.073	mg/L	102.3	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	1	.05	1.072	mg/L	102.2	85	115	0.09	20	

Iron, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341535													
WG341535ICV	ICV	04/04/13 16:30	II130107-3	2		2.054	mg/L	102.7	95	105			
WG341535ICB	ICB	04/04/13 16:34				U	mg/L		-0.06	0.06			
WG341429LRB	LRB	04/04/13 16:46				U	mg/L		-0.044	0.044			
WG341429LFB	LFB	04/04/13 16:49	II130314-1	1		1.055	mg/L	105.5	85	115			
L11286-01LFM	LFM	04/04/13 17:39	II130314-1	1	.03	1.066	mg/L	103.6	70	130			
L11286-01LFMD	LFMD	04/04/13 17:42	II130314-1	1	.03	1.064	mg/L	103.4	70	130	0.19	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341439													
WG341439ICV	ICV	04/15/13 12:13	MS130402-2	.05		.04744	mg/L	94.9	90	110			
WG341439ICB	ICB	04/15/13 12:16				U	mg/L		-0.0003	0.0003			
WG341439LFB	LFB	04/15/13 12:19	MS130329-1	.05005		.04304	mg/L	86	85	115			
L11289-05AS	AS	04/15/13 13:12	MS130329-1	.05005	U	.04593	mg/L	91.8	70	130			
L11289-05ASD	ASD	04/15/13 13:15	MS130329-1	.05005	U	.0462	mg/L	92.3	70	130	0.59	20	

Lead, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.05		.04976	mg/L	99.5	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.0003	0.0003			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.00022	0.00022			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.05005		.04581	mg/L	91.5	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.05005	.0001	.04609	mg/L	91.9	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.05005	.0001	.04624	mg/L	92.2	70	130	0.32	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	100		100.7	mg/L	100.7	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.6	0.6			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	49.99941		51.1	mg/L	102.2	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	49.99941	5.7	56.9	mg/L	102.4	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	49.99941	5.7	57.1	mg/L	102.8	85	115	0.35	20	

Caldera Mineral Resources

ACZ Project ID: **L11295**

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.939	mg/L	97	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.015	0.015			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5		.5098	mg/L	102	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5	U	.4977	mg/L	99.5	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5	U	.5011	mg/L	100.2	85	115	0.68	20	

Manganese, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341535													
WG341535ICV	ICV	04/04/13 16:30	II130107-3	2		1.9689	mg/L	98.4	95	105			
WG341535ICB	ICB	04/04/13 16:34				U	mg/L		-0.015	0.015			
WG341429LRB	LRB	04/04/13 16:46				.0054	mg/L		-0.011	0.011			
WG341429LFB	LFB	04/04/13 16:49	II130314-1	.5		.5152	mg/L	103	85	115			
L11286-01LFM	LFM	04/04/13 17:39	II130314-1	.5	U	.5175	mg/L	103.5	70	130			
L11286-01LFMD	LFMD	04/04/13 17:42	II130314-1	.5	U	.5145	mg/L	102.9	70	130	0.58	20	

Mercury, total

M245.1 CVA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341164													
WG341164ICV	ICV	03/28/13 13:05	II130325-2	.005025		.00493	mg/L	98.1	95	105			
WG341164ICB	ICB	03/28/13 13:07				U	mg/L		-0.0002	0.0002			
WG341207													
WG341207LRB	LRB	03/28/13 14:49				U	mg/L		-0.00044	0.00044			
WG341207LFB	LFB	03/28/13 14:51	II130320-2	.002002		.00184	mg/L	91.9	85	115			
L11290-01LFM	LFM	03/28/13 15:33	II130320-2	.002002	U	.00185	mg/L	92.4	85	115			
L11290-01LFMD	LFMD	03/28/13 15:35	II130320-2	.002002	U	.00188	mg/L	93.9	85	115	1.61	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.986	mg/L	99.3	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.03	0.03			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5		.514	mg/L	102.8	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5	U	.495	mg/L	99	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5	U	.499	mg/L	99.8	85	115	0.8	20	

Nickel, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341535													
WG341535ICV	ICV	04/04/13 16:30	II130107-3	2		1.977	mg/L	98.9	95	105			
WG341535ICB	ICB	04/04/13 16:34				U	mg/L		-0.03	0.03			
WG341429LRB	LRB	04/04/13 16:46				U	mg/L		-0.022	0.022			
WG341429LFB	LFB	04/04/13 16:49	II130314-1	.5		.513	mg/L	102.6	85	115			
L11286-01LFM	LFM	04/04/13 17:39	II130314-1	.5	U	.523	mg/L	104.6	70	130			
L11286-01LFMD	LFMD	04/04/13 17:42	II130314-1	.5	U	.523	mg/L	104.6	70	130	0	20	

Caldera Mineral Resources

ACZ Project ID: **L11295**

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341193													
WG341193ICV	ICV	03/27/13 22:33	WI130110-1	2.416		2.46	mg/L	101.8	90	110			
WG341193ICB	ICB	03/27/13 22:35				U	mg/L		-0.06	0.06			
WG341193LFB	LFB	03/27/13 22:38	WI130215-3	2		1.966	mg/L	98.3	90	110			
L11289-08AS	AS	03/27/13 23:15	WI130215-3	10	6.3	16.21	mg/L	99.1	90	110			
L11295-01DUP	DUP	03/27/13 23:19			.03	.021	mg/L				35.3	20	RA

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341193													
WG341193ICV	ICV	03/27/13 22:33	WI130110-1	.609		.608	mg/L	99.8	90	110			
WG341193ICB	ICB	03/27/13 22:35				U	mg/L		-0.03	0.03			
WG341193LFB	LFB	03/27/13 22:38	WI130215-3	1		1.003	mg/L	100.3	90	110			
L11289-08AS	AS	03/27/13 22:57	WI130215-3	1	U	.998	mg/L	99.8	90	110			
L11295-01DUP	DUP	03/27/13 22:59			U	U	mg/L				0	20	RA

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341615													
WG341615ICV	ICV	04/05/13 14:09	WI121105-5	1.003		1.036	mg/L	103.3	90	110			
WG341615ICB	ICB	04/05/13 14:12				U	mg/L		-0.15	0.15			
WG341615LFB1	LFB	04/05/13 14:13	WI121218-3	1		1.013	mg/L	101.3	90	110			
WG341615LFB2	LFB	04/05/13 15:01	WI121218-3	1		1.006	mg/L	100.6	90	110			
L11294-01AS	AS	04/05/13 15:14	WI121218-3	10	26.1	36.13	mg/L	100.3	90	110			
L11294-02DUP	DUP	04/05/13 15:16			23.3	23.81	mg/L				2.2	20	

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341320													
WG341320LCSW3	LCSW	03/30/13 14:01	PCN40853	6		6	units	100	98	102			
L11300-01DUP	DUP	03/30/13 15:19			8.2	8.32	units				1.5	20	
WG341320LCSW6	LCSW	03/30/13 17:13	PCN40853	6		6.01	units	100.2	98	102			
WG341320LCSW9	LCSW	03/30/13 20:40	PCN40853	6		6	units	100	98	102			
WG341320LCSW12	LCSW	03/31/13 1:25	PCN40853	6		6	units	100	98	102			
WG341320LCSW15	LCSW	03/31/13 4:37	PCN40853	6		6	units	100	98	102			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341305													
WG341305PBW	PBW	03/29/13 16:00				U	mg/L		-20	20			
WG341305LCSW	LCSW	03/29/13 16:01	PCN40253	260		240	mg/L	92.3	80	120			
L11340-06DUP	DUP	03/29/13 16:29			3350	3370	mg/L				0.6	20	

Caldera Mineral Resources

ACZ Project ID: **L11295**

Residue, Non-Filterable (TSS) @105C SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341323													
WG341323PBW	PBW	03/30/13 16:45				U	mg/L		-15	15			
WG341323LCSW	LCSW	03/30/13 16:46	PCN40254	160		149	mg/L	93.1	80	120			
L11314-04DUP	DUP	03/30/13 17:05			7	8	mg/L				13.3	20	RA

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341439													
WG341439ICV	ICV	04/15/13 12:13	MS130402-2	.05		.05011	mg/L	100.2	90	110			
WG341439ICB	ICB	04/15/13 12:16				U	mg/L		-0.0003	0.0003			
WG341439LFB	LFB	04/15/13 12:19	MS130329-1	.05005		.04673	mg/L	93.4	85	115			
L11289-05AS	AS	04/15/13 13:12	MS130329-1	.05005	.0029	.05669	mg/L	107.5	70	130			
L11289-05ASD	ASD	04/15/13 13:15	MS130329-1	.05005	.0029	.05807	mg/L	110.2	70	130	2.41	20	

Silver, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341439													
WG341439ICV	ICV	04/15/13 12:13	MS130402-2	.02006		.0207	mg/L	103.2	90	110			
WG341439ICB	ICB	04/15/13 12:16				U	mg/L		-0.00015	0.00015			
WG341439LFB	LFB	04/15/13 12:19	MS130329-1	.01001		.009387	mg/L	93.8	85	115			
L11289-05AS	AS	04/15/13 13:12	MS130329-1	.01001	U	.007906	mg/L	79	70	130			
L11289-05ASD	ASD	04/15/13 13:15	MS130329-1	.01001	U	.008586	mg/L	85.8	70	130	8.25	20	

Silver, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.02006		.02065	mg/L	102.9	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.00015	0.00015			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.00011	0.00011			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.01001		.009613	mg/L	96	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.01001	U	.009206	mg/L	92	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.01001	U	.00917	mg/L	91.6	70	130	0.39	20	

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341359													
WG341359ICB	ICB	04/01/13 11:04				U	mg/L		-3	3			
WG341359ICV	ICV	04/01/13 11:04	WI130401-1	20		19.8	mg/L	99	90	110			
WG341359LFB	LFB	04/01/13 14:11	WI121025-3	10		10.2	mg/L	102	90	110			
L11292-01AS	AS	04/01/13 14:14	WI121025-3	10	25	34.7	mg/L	97	90	110			
L11289-08DUP	DUP	04/01/13 14:30			330	329	mg/L				0.3	20	RA

Caldera Mineral Resources

ACZ Project ID: **L11295**

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341169													
WG341169ICV	ICV	03/27/13 15:00	WC130326-	.364		.396	mg/L	108.8	90	110			
WG341169ICB	ICB	03/27/13 15:02				U	mg/L		-0.06	0.06			
WG341169LFB1	LFB	03/27/13 15:05	WC130326-	.2391067		.284	mg/L	118.8	80	120			
WG341169LFB2	LFB	03/27/13 16:18	WC130326-	.2391067		.281	mg/L	117.5	80	120			
L11295-01AS	AS	03/27/13 16:48	WC130326-	.2391067	U	.256	mg/L	107.1	75	125			
L11295-01DUP	DUP	03/27/13 16:50			U	U	mg/L				0	20	RA

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341439													
WG341439ICV	ICV	04/15/13 12:13	MS130402-2	.05		.0474	mg/L	94.8	90	110			
WG341439ICB	ICB	04/15/13 12:16				U	mg/L		-0.0003	0.0003			
WG341439LFB	LFB	04/15/13 12:19	MS130329-1	.05		.04337	mg/L	86.7	85	115			
L11289-05AS	AS	04/15/13 13:12	MS130329-1	.05	.0215	.07837	mg/L	113.7	70	130			
L11289-05ASD	ASD	04/15/13 13:15	MS130329-1	.05	.0215	.07839	mg/L	113.8	70	130	0.03	20	

Uranium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341585													
WG341585ICV	ICV	04/04/13 18:39	MS130402-2	.05		.05255	mg/L	105.1	90	110			
WG341585ICB	ICB	04/04/13 18:42				U	mg/L		-0.0003	0.0003			
WG341499LRB	LRB	04/04/13 18:45				U	mg/L		-0.00022	0.00022			
WG341499LFB	LFB	04/04/13 18:49	MS130329-1	.05		.04864	mg/L	97.3	85	115			
L11316-03LFM	LFM	04/04/13 19:31	MS130329-1	.05	U	.04962	mg/L	99.2	70	130			
L11316-03LFMD	LFMD	04/04/13 19:34	MS130329-1	.05	U	.04971	mg/L	99.4	70	130	0.18	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341341													
WG341341ICV	ICV	04/01/13 15:48	II130114-3	2		1.924	mg/L	96.2	95	105			
WG341341ICB	ICB	04/01/13 15:54				U	mg/L		-0.03	0.03			
WG341341LFB	LFB	04/01/13 16:06	II130326-2	.5		.495	mg/L	99	85	115			
L11286-01AS	AS	04/01/13 16:15	II130326-2	.5	U	.484	mg/L	96.8	85	115			
L11286-01ASD	ASD	04/01/13 16:19	II130326-2	.5	U	.49	mg/L	98	85	115	1.23	20	

Zinc, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG341535													
WG341535ICV	ICV	04/04/13 16:30	II130107-3	2		2.001	mg/L	100.1	95	105			
WG341535ICB	ICB	04/04/13 16:34				U	mg/L		-0.03	0.03			
WG341429LRB	LRB	04/04/13 16:46				U	mg/L		-0.022	0.022			
WG341429LFB	LFB	04/04/13 16:49	II130314-1	.5		.518	mg/L	103.6	85	115			
L11286-01LFM	LFM	04/04/13 17:39	II130314-1	.5	U	.523	mg/L	104.6	70	130			
L11286-01LFMD	LFMD	04/04/13 17:42	II130314-1	.5	U	.522	mg/L	104.4	70	130	0.19	20	

Caldera Mineral Resources

ACZ Project ID: **L11295**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L11295-01	WG341507	Chloride	SM4500CI-E	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG341471	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341371	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341427	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341193	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341323	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341359	Sulfate	D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG341169	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources

ACZ Project ID: **L11295**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Caldera Mineral Resources

ACZ Project ID: L11295

Date Received: 03/27/2013 10:11

Received By: ksj

Date Printed: 3/27/2013

Receipt Verification

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

Samples/Containers

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

Some parameters were received past hold time.

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3687	4.3	12	N/A

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



Laboratories, Inc.

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

CHAIN OF CUSTODY

Name: Mike Thompson
 Company: Reardon Steel LLC
 E-mail: mt@reardonsteel.us

Address: 4 River St.
Silverton, CO 81433
 Telephone: 970-426-2924

Name: John Bryan
 Company: Caldera Mineral Resources

E-mail: j.bryan@watboy.com
 Telephone: 310-777-8889

Name: Laurens Nuyens
 Company: Caldera Mineral Resources
 E-mail: Laurens@watboy.com

Address: 8439 Sunset Blvd. Suite 402
West Hollywood, CA 90069
 Telephone: 310-777-8889

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

YES ☒
 NO ☐

If "NO" then ACZ will contact client for further instruction. If neither "YES" nor "NO"

is indicated, ACZ will proceed with the requested analyses, even if HT is expired, and data will be qualified.

Are samples for SDWA Compliance Monitoring?

Yes ☐ No ☒

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

Sampler's Name: MM Sampler's site Information State CO Zip code 81433 Time Zone MST

Quote #: Camp Bird Short

Project/PO #:

Reporting state for compliance testing:

Check box if samples include NRC licensed material? ☐

of Containers

please refer
to quote

CB-04-032413

3/26/13

SW 7

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

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

[Signature] 3/26/13 [Signature] 3/27/13 10:11

11295 Chain of Custody

June 04, 2013

Report to:

Mike Thompson
Caldera Mineral Resources
PO Box 297
Silverton, CO 81433

Bill to:

Lauren Nuyens
Caldera Mineral Resources
8439 Sunset Blvd. Suite 402
West Hollywood, CA 90069

cc: John Bryan

Project ID:

ACZ Project ID: L12162

Mike Thompson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 21, 2013. This project has been assigned to ACZ's project number, L12162. 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 L12162. 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 04, 2013. 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.



Tony Antalek has reviewed and
approved this report.



Caldera Mineral Resources

June 04, 2013

Project ID:

ACZ Project ID: L12162

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 5 miscellaneous samples from Caldera Mineral Resources on May 21, 2013. The samples were received in good condition. Upon receipt, the sample custodian removed the samples from the cooler, inspected the contents, and logged the samples into ACZ's computerized Laboratory Information Management System (LIMS). The samples were assigned ACZ LIMS project number L12162. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses except those qualified with an ACZ 'H' flag were performed within EPA recommended holding times.

Sample Analysis

These samples were analyzed for inorganic and organic parameters. The individual methods are referenced on both the ACZ invoice and the analytical reports.

Caldera Mineral Resources

Project ID:

Sample ID: A-052013

ACZ Sample ID: **L12162-01**

Date Sampled: 05/20/13 00:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								05/30/13 13:54	mpb
Cyanide, WAD	SM4500-CN I- distillation								05/30/13 12:01	tcd
Total Hot Plate Digestion	M200.2 ICP-MS								05/24/13 13:01	las
Total Hot Plate Digestion	M200.2 ICP								05/28/13 14:38	aeb
Total Recoverable Digestion	M200.2 ICP-MS								05/28/13 11:24	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.162			mg/L	0.001	0.005	05/31/13 1:02	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	05/29/13 23:08	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0009	B		mg/L	0.0002	0.001	05/31/13 1:02	pmc
Barium, dissolved	M200.7 ICP	1	0.038			mg/L	0.003	0.02	05/28/13 19:50	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 19:50	aeb
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 19:50	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0007			mg/L	0.0001	0.0005	05/29/13 23:08	msh
Cadmium, total	M200.8 ICP-MS	1	0.0008			mg/L	0.0001	0.0005	05/24/13 21:24	pmc
Calcium, dissolved	M200.7 ICP	1	28.5			mg/L	0.2	1	05/28/13 19:50	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	05/29/13 23:08	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	05/24/13 21:24	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	06/04/13 9:34	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0042			mg/L	0.0005	0.003	05/29/13 23:08	msh
Copper, total	M200.8 ICP-MS	1	0.0066			mg/L	0.0005	0.003	05/24/13 21:24	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	05/28/13 19:50	aeb
Iron, total	M200.7 ICP	1	0.19			mg/L	0.02	0.05	05/29/13 11:32	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0010			mg/L	0.0001	0.0005	05/29/13 23:08	msh
Lead, total	M200.8 ICP-MS	1	0.0097			mg/L	0.0001	0.0005	05/24/13 21:24	pmc
Magnesium, dissolved	M200.7 ICP	1	1.4			mg/L	0.2	1	05/28/13 19:50	aeb
Manganese, dissolved	M200.7 ICP	1	0.058			mg/L	0.005	0.03	05/28/13 19:50	aeb
Manganese, total	M200.7 ICP	1	0.087			mg/L	0.005	0.03	05/29/13 11:32	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	05/28/13 14:38	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 19:50	aeb
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	05/29/13 11:32	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0003	05/29/13 23:08	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/29/13 23:08	msh
Silver, total	M200.8 ICP-MS	1	0.00007	B		mg/L	0.00005	0.0003	05/24/13 21:24	pmc
Uranium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/29/13 23:08	msh
Uranium, total	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	05/24/13 21:24	pmc
Zinc, dissolved	M200.7 ICP	1	0.21			mg/L	0.01	0.05	05/28/13 19:50	aeb
Zinc, total	M200.7 ICP	1	0.25			mg/L	0.01	0.05	05/29/13 11:32	aeb

Caldera Mineral Resources

Project ID:

Sample ID: A-052013

ACZ Sample ID: **L12162-01**

Date Sampled: 05/20/13 00:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	31			mg/L	2	20	05/24/13 0:00	abm
Carbonate as CaCO ₃		1		U		mg/L	2	20	05/24/13 0:00	abm
Hydroxide as CaCO ₃		1		U		mg/L	2	20	05/24/13 0:00	abm
Total Alkalinity		1	31			mg/L	2	20	05/24/13 0:00	abm
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	05/30/13 12:39	jlf
Conductivity @25C	SM2510B	1	188			umhos/cm	1	10	05/24/13 3:51	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	05/31/13 17:11	mpb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	05/30/13 16:13	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	05/22/13 14:26	abm
Hardness as CaCO ₃	SM2340B - Calculation		77			mg/L	1	7	06/04/13 9:34	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							05/23/13 15:55	las
Lab Filtration (glass fiber filter)	SOPWC050	1							05/21/13 14:59	dcw
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.38			mg/L	0.02	0.1	06/04/13 9:34	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.38			mg/L	0.02	0.1	05/21/13 22:30	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	05/21/13 22:30	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	05/29/13 17:27	mpb
pH (lab)	SM4500H+ B									
pH		1	8.0	H		units	0.1	0.1	05/24/13 0:00	abm
pH measured at		1	22.0			C	0.1	0.1	05/24/13 0:00	abm
Residue, Filterable (TDS) @180C	SM2540C	1	120			mg/L	10	20	05/22/13 16:09	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	05/23/13 13:41	mss3
Sulfate	D516-02 - Turbidimetric	5	44		*	mg/L	5	30	05/31/13 11:30	lhb
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	05/21/13 14:01	abm

Caldera Mineral Resources

Project ID:

Sample ID: B-052013

ACZ Sample ID: **L12162-02**

Date Sampled: 05/20/13 00:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								05/30/13 14:06	mpb
Cyanide, WAD	SM4500-CN I- distillation								05/30/13 12:01	tcd
Total Hot Plate Digestion	M200.2 ICP-MS								05/24/13 13:13	las
Total Hot Plate Digestion	M200.2 ICP				*				05/28/13 14:50	aeb
Total Recoverable Digestion	M200.2 ICP-MS								05/28/13 11:36	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.153			mg/L	0.001	0.005	05/31/13 1:06	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0008	B		mg/L	0.0002	0.001	05/29/13 23:11	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0014			mg/L	0.0002	0.001	05/31/13 1:06	pmc
Barium, dissolved	M200.7 ICP	1	0.032			mg/L	0.003	0.02	05/28/13 19:59	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 19:59	aeb
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 19:59	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	05/29/13 23:11	msh
Cadmium, total	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	05/24/13 21:27	pmc
Calcium, dissolved	M200.7 ICP	1	20.9			mg/L	0.2	1	05/28/13 19:59	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	05/29/13 23:11	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	05/24/13 21:27	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	06/04/13 9:34	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0010	B		mg/L	0.0005	0.003	05/29/13 23:11	msh
Copper, total	M200.8 ICP-MS	1	0.0016	B		mg/L	0.0005	0.003	05/24/13 21:27	pmc
Iron, dissolved	M200.7 ICP	1	0.09			mg/L	0.02	0.05	05/28/13 19:59	aeb
Iron, total	M200.7 ICP	2	0.15			mg/L	0.04	0.1	05/29/13 11:36	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0007			mg/L	0.0001	0.0005	05/29/13 23:11	msh
Lead, total	M200.8 ICP-MS	1	0.0060			mg/L	0.0001	0.0005	05/24/13 21:27	pmc
Magnesium, dissolved	M200.7 ICP	1	1.6			mg/L	0.2	1	05/28/13 19:59	aeb
Manganese, dissolved	M200.7 ICP	1	0.024	B		mg/L	0.005	0.03	05/28/13 19:59	aeb
Manganese, total	M200.7 ICP	2	0.05			mg/L	0.01	0.05	05/29/13 11:36	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	05/28/13 14:40	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 19:59	aeb
Nickel, total	M200.7 ICP	2		U		mg/L	0.02	0.1	05/29/13 11:36	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0003	05/29/13 23:11	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/29/13 23:11	msh
Silver, total	M200.8 ICP-MS	1	0.00008	B		mg/L	0.00005	0.0003	05/24/13 21:27	pmc
Uranium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/29/13 23:11	msh
Uranium, total	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/24/13 21:27	pmc
Zinc, dissolved	M200.7 ICP	1	0.11			mg/L	0.01	0.05	05/28/13 19:59	aeb
Zinc, total	M200.7 ICP	2	0.13			mg/L	0.02	0.1	05/29/13 11:36	aeb

Caldera Mineral Resources

Project ID:

Sample ID: B-052013

ACZ Sample ID: **L12162-02**

Date Sampled: 05/20/13 00:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	31			mg/L	2	20	05/24/13 0:00	abm
Carbonate as CaCO ₃		1		U		mg/L	2	20	05/24/13 0:00	abm
Hydroxide as CaCO ₃		1		U		mg/L	2	20	05/24/13 0:00	abm
Total Alkalinity		1	31			mg/L	2	20	05/24/13 0:00	abm
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	05/30/13 12:39	jlf
Conductivity @25C	SM2510B	1	143			umhos/cm	1	10	05/24/13 3:59	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	05/31/13 17:13	mpb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	05/30/13 16:14	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	05/22/13 14:28	abm
Hardness as CaCO ₃	SM2340B - Calculation		59			mg/L	1	7	06/04/13 9:34	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							05/23/13 15:59	las
Lab Filtration (glass fiber filter)	SOPWC050	1							05/21/13 15:01	dcw
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.46			mg/L	0.02	0.1	06/04/13 9:34	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.46			mg/L	0.02	0.1	05/21/13 22:32	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	05/21/13 22:32	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	05/29/13 17:28	mpb
pH (lab)	SM4500H+ B									
pH		1	8.0	H		units	0.1	0.1	05/24/13 0:00	abm
pH measured at		1	22.0			C	0.1	0.1	05/24/13 0:00	abm
Residue, Filterable (TDS) @180C	SM2540C	1	80			mg/L	10	20	05/22/13 16:12	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	05/23/13 13:43	mss3
Sulfate	D516-02 - Turbidimetric	1	32		*	mg/L	1	5	05/31/13 11:26	lhb
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	05/21/13 14:03	abm

Caldera Mineral Resources

Project ID:

Sample ID: C-052013

ACZ Sample ID: **L12162-03**

Date Sampled: 05/20/13 00:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								05/30/13 14:18	mpb
Cyanide, WAD	SM4500-CN I- distillation								05/30/13 12:01	tcd
Total Hot Plate Digestion	M200.2 ICP-MS								05/24/13 13:25	las
Total Hot Plate Digestion	M200.2 ICP								05/28/13 15:25	aeb
Total Recoverable Digestion	M200.2 ICP-MS								05/28/13 11:48	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.158			mg/L	0.001	0.005	05/31/13 1:09	pmc
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	05/29/13 23:15	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0002	0.001	05/31/13 1:09	pmc
Barium, dissolved	M200.7 ICP	1	0.020			mg/L	0.003	0.02	05/28/13 20:02	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 20:02	aeb
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 20:02	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0011			mg/L	0.0001	0.0005	05/29/13 23:15	msh
Cadmium, total	M200.8 ICP-MS	1	0.0012			mg/L	0.0001	0.0005	05/24/13 21:30	pmc
Calcium, dissolved	M200.7 ICP	1	13.9			mg/L	0.2	1	05/28/13 20:02	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	05/29/13 23:15	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	05/24/13 21:30	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	06/04/13 9:34	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0085			mg/L	0.0005	0.003	05/29/13 23:15	msh
Copper, total	M200.8 ICP-MS	1	0.0114			mg/L	0.0005	0.003	05/24/13 21:30	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	05/28/13 20:02	aeb
Iron, total	M200.7 ICP	1	0.17			mg/L	0.02	0.05	05/29/13 11:45	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0011			mg/L	0.0001	0.0005	05/29/13 23:15	msh
Lead, total	M200.8 ICP-MS	1	0.0091			mg/L	0.0001	0.0005	05/24/13 21:30	pmc
Magnesium, dissolved	M200.7 ICP	1	0.7	B		mg/L	0.2	1	05/28/13 20:02	aeb
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	05/28/13 20:02	aeb
Manganese, total	M200.7 ICP	1	0.022	B		mg/L	0.005	0.03	05/29/13 11:45	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	05/28/13 14:47	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 20:02	aeb
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	05/29/13 11:45	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0003	05/29/13 23:15	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/29/13 23:15	msh
Silver, total	M200.8 ICP-MS	1	0.00008	B		mg/L	0.00005	0.0003	05/24/13 21:30	pmc
Uranium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/29/13 23:15	msh
Uranium, total	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	05/24/13 21:30	pmc
Zinc, dissolved	M200.7 ICP	1	0.29			mg/L	0.01	0.05	05/28/13 20:02	aeb
Zinc, total	M200.7 ICP	1	0.33			mg/L	0.01	0.05	05/29/13 11:45	aeb

Caldera Mineral Resources

Project ID:

Sample ID: C-052013

ACZ Sample ID: **L12162-03**

Date Sampled: 05/20/13 00:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	26			mg/L	2	20	05/24/13 0:00	abm
Carbonate as CaCO ₃		1		U		mg/L	2	20	05/24/13 0:00	abm
Hydroxide as CaCO ₃		1		U		mg/L	2	20	05/24/13 0:00	abm
Total Alkalinity		1	26			mg/L	2	20	05/24/13 0:00	abm
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	05/30/13 12:40	jlf
Conductivity @25C	SM2510B	1	89			umhos/cm	1	10	05/24/13 4:05	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	05/31/13 17:14	mpb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	05/30/13 16:15	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	05/22/13 14:30	abm
Hardness as CaCO ₃	SM2340B - Calculation		38			mg/L	1	7	06/04/13 9:34	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							05/23/13 16:03	las
Lab Filtration (glass fiber filter)	SOPWC050	1							05/21/13 15:03	dcw
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.22			mg/L	0.02	0.1	06/04/13 9:34	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.22			mg/L	0.02	0.1	05/21/13 22:34	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	05/21/13 22:34	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	05/29/13 17:31	mpb
pH (lab)	SM4500H+ B									
pH		1	7.9	H		units	0.1	0.1	05/24/13 0:00	abm
pH measured at		1	22.0			C	0.1	0.1	05/24/13 0:00	abm
Residue, Filterable (TDS) @180C	SM2540C	1	50			mg/L	10	20	05/22/13 16:15	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	05/23/13 13:45	mss3
Sulfate	D516-02 - Turbidimetric	1	17		*	mg/L	1	5	05/31/13 11:26	lhb
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	05/21/13 14:06	abm

Caldera Mineral Resources

Project ID:

Sample ID: D-052013

ACZ Sample ID: **L12162-04**

Date Sampled: 05/20/13 00:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								05/30/13 14:24	mpb
Cyanide, WAD	SM4500-CN I- distillation								05/30/13 12:01	tcd
Total Hot Plate Digestion	M200.2 ICP								05/28/13 15:37	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								05/24/13 13:37	las
Total Recoverable Digestion	M200.2 ICP-MS								05/28/13 12:00	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.049			mg/L	0.001	0.005	05/31/13 1:12	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	05/29/13 23:25	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0008	B		mg/L	0.0002	0.001	05/31/13 1:12	pmc
Barium, dissolved	M200.7 ICP	1	0.015	B		mg/L	0.003	0.02	05/28/13 20:05	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 20:05	aeb
Boron, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	05/28/13 20:05	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0014			mg/L	0.0001	0.0005	05/29/13 23:25	msh
Cadmium, total	M200.8 ICP-MS	1	0.0017			mg/L	0.0001	0.0005	05/24/13 21:33	pmc
Calcium, dissolved	M200.7 ICP	1	263			mg/L	0.2	1	05/28/13 20:05	aeb
Chromium, dissolved	M200.8 ICP-MS	1	0.0011	B		mg/L	0.0005	0.002	05/29/13 23:25	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	05/24/13 21:33	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	06/04/13 9:35	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0013	B		mg/L	0.0005	0.003	05/29/13 23:25	msh
Copper, total	M200.8 ICP-MS	1	0.0064			mg/L	0.0005	0.003	05/24/13 21:33	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	05/28/13 20:05	aeb
Iron, total	M200.7 ICP	1	0.30			mg/L	0.02	0.05	05/29/13 11:48	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0114			mg/L	0.0001	0.0005	05/29/13 23:25	msh
Lead, total	M200.8 ICP-MS	1	0.0757			mg/L	0.0001	0.0005	05/24/13 21:33	pmc
Magnesium, dissolved	M200.7 ICP	1	3.4			mg/L	0.2	1	05/28/13 20:05	aeb
Manganese, dissolved	M200.7 ICP	1	0.159			mg/L	0.005	0.03	05/28/13 20:05	aeb
Manganese, total	M200.7 ICP	1	0.276			mg/L	0.005	0.03	05/29/13 11:48	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	05/28/13 14:49	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 20:05	aeb
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	05/29/13 11:48	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0003	05/29/13 23:25	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/29/13 23:25	msh
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/24/13 21:33	pmc
Uranium, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0001	0.0005	05/29/13 23:25	msh
Uranium, total	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	05/24/13 21:33	pmc
Zinc, dissolved	M200.7 ICP	1	0.30			mg/L	0.01	0.05	05/28/13 20:05	aeb
Zinc, total	M200.7 ICP	1	0.40			mg/L	0.01	0.05	05/29/13 11:48	aeb

Caldera Mineral Resources

Project ID:

Sample ID: D-052013

ACZ Sample ID: **L12162-04**

Date Sampled: 05/20/13 00:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	45			mg/L	2	20	05/24/13 0:00	abm
Carbonate as CaCO ₃		1		U		mg/L	2	20	05/24/13 0:00	abm
Hydroxide as CaCO ₃		1		U		mg/L	2	20	05/24/13 0:00	abm
Total Alkalinity		1	45			mg/L	2	20	05/24/13 0:00	abm
Chloride	SM4500Cl-E	1	1	B	*	mg/L	1	5	05/30/13 12:40	jlf
Conductivity @25C	SM2510B	1	1200			umhos/cm	1	10	05/24/13 4:21	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	05/31/13 17:15	mpb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	05/30/13 16:16	lhb
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	05/22/13 14:32	abm
Hardness as CaCO ₃	SM2340B - Calculation		671			mg/L	1	7	06/04/13 9:35	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							05/23/13 16:08	las
Lab Filtration (glass fiber filter)	SOPWC050	1							05/21/13 15:05	dcw
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.05	B		mg/L	0.02	0.1	06/04/13 9:35	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.05	B		mg/L	0.02	0.1	05/21/13 22:35	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	05/21/13 22:35	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	05/29/13 17:32	mpb
pH (lab)	SM4500H+ B									
pH		1	8.1	H		units	0.1	0.1	05/24/13 0:00	abm
pH measured at		1	22.0			C	0.1	0.1	05/24/13 0:00	abm
Residue, Filterable (TDS) @180C	SM2540C	1	1000			mg/L	10	20	05/22/13 16:17	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	05/23/13 13:47	mss3
Sulfate	D516-02 - Turbidimetric	50	570		*	mg/L	50	300	05/31/13 11:38	lhb
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	05/21/13 14:09	abm

Caldera Mineral Resources

Project ID:

Sample ID: E-052013

ACZ Sample ID: **L12162-05**

Date Sampled: 05/20/13 00:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								05/30/13 14:30	mpb
Cyanide, WAD	SM4500-CN I- distillation								05/30/13 17:12	mpb
Total Hot Plate Digestion	M200.2 ICP-MS								05/24/13 13:49	las
Total Hot Plate Digestion	M200.2 ICP				*				05/28/13 15:49	aeb
Total Recoverable Digestion	M200.2 ICP-MS								05/28/13 12:12	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.086			mg/L	0.001	0.005	05/31/13 1:15	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	05/29/13 23:34	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0010			mg/L	0.0002	0.001	05/31/13 1:15	pmc
Barium, dissolved	M200.7 ICP	1	0.014	B		mg/L	0.003	0.02	05/28/13 20:08	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 20:08	aeb
Boron, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	05/28/13 20:08	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0011			mg/L	0.0001	0.0005	05/29/13 23:34	msh
Cadmium, total	M200.8 ICP-MS	1	0.0023			mg/L	0.0001	0.0005	05/24/13 21:37	pmc
Calcium, dissolved	M200.7 ICP	1	261			mg/L	0.2	1	05/28/13 20:08	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	05/29/13 23:34	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	05/24/13 21:37	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	06/04/13 9:35	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0010	B		mg/L	0.0005	0.003	05/29/13 23:34	msh
Copper, total	M200.8 ICP-MS	1	0.0204			mg/L	0.0005	0.003	05/24/13 21:37	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	05/28/13 20:08	aeb
Iron, total	M200.7 ICP	2	0.59			mg/L	0.04	0.1	05/29/13 11:51	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0072			mg/L	0.0001	0.0005	05/29/13 23:34	msh
Lead, total	M200.8 ICP-MS	1	0.1597			mg/L	0.0001	0.0005	05/24/13 21:37	pmc
Magnesium, dissolved	M200.7 ICP	1	3.4			mg/L	0.2	1	05/28/13 20:08	aeb
Manganese, dissolved	M200.7 ICP	1	0.140			mg/L	0.005	0.03	05/28/13 20:08	aeb
Manganese, total	M200.7 ICP	2	0.93			mg/L	0.01	0.05	05/29/13 11:51	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	05/28/13 14:51	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	05/28/13 20:08	aeb
Nickel, total	M200.7 ICP	2		U		mg/L	0.02	0.1	05/29/13 11:51	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0003	05/29/13 23:34	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	05/29/13 23:34	msh
Silver, total	M200.8 ICP-MS	1	0.00017	B		mg/L	0.00005	0.0003	05/24/13 21:37	pmc
Uranium, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0001	0.0005	05/29/13 23:34	msh
Uranium, total	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	05/24/13 21:37	pmc
Zinc, dissolved	M200.7 ICP	1	0.21			mg/L	0.01	0.05	05/28/13 20:08	aeb
Zinc, total	M200.7 ICP	2	0.59			mg/L	0.02	0.1	05/29/13 11:51	aeb

Caldera Mineral Resources

Project ID:

Sample ID: E-052013

ACZ Sample ID: **L12162-05**

Date Sampled: 05/20/13 00:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	46			mg/L	2	20	05/24/13 0:00	abm
Carbonate as CaCO ₃		1		U		mg/L	2	20	05/24/13 0:00	abm
Hydroxide as CaCO ₃		1		U		mg/L	2	20	05/24/13 0:00	abm
Total Alkalinity		1	46			mg/L	2	20	05/24/13 0:00	abm
Chloride	SM4500Cl-E	1	1	B	*	mg/L	1	5	05/30/13 12:40	jlf
Conductivity @25C	SM2510B	1	1200			umhos/cm	1	10	05/24/13 4:29	abm
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	05/31/13 17:18	mpb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	05/31/13 15:54	mpb
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	05/22/13 14:35	abm
Hardness as CaCO ₃	SM2340B - Calculation		666			mg/L	1	7	06/04/13 9:35	calc
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							05/23/13 16:12	las
Lab Filtration (glass fiber filter)	SOPWC050	1							05/21/13 15:07	dcw
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.04	B		mg/L	0.02	0.1	06/04/13 9:35	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.04	B		mg/L	0.02	0.1	05/21/13 22:37	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	05/21/13 22:37	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	05/29/13 17:33	mpb
pH (lab)	SM4500H+ B									
pH		1	8.1	H		units	0.1	0.1	05/24/13 0:00	abm
pH measured at		1	22.0			C	0.1	0.1	05/24/13 0:00	abm
Residue, Filterable (TDS) @180C	SM2540C	1	1000			mg/L	10	20	05/22/13 16:20	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1	6	B	*	mg/L	5	20	05/23/13 13:49	mss3
Sulfate	D516-02 - Turbidimetric	50	560			mg/L	50	300	05/31/13 11:38	lhb
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	05/21/13 14:12	abm


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources

ACZ Project ID: **L12162**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344253													
WG344253PBW1	PBW	05/23/13 16:22				U	mg/L		-20	20			
WG344253LCSW2	LCSW	05/23/13 16:35	WC130514-	820.0001		755.4	mg/L	92.1	90	110			
WG344253LCSW5	LCSW	05/23/13 19:55	WC130514-	820.0001		770	mg/L	93.9	90	110			
WG344253PBW2	PBW	05/23/13 20:03				2.2	mg/L		-20	20			
WG344253LCSW8	LCSW	05/23/13 23:19	WC130514-	820.0001		781.9	mg/L	95.4	90	110			
WG344253PBW3	PBW	05/23/13 23:27				U	mg/L		-20	20			
WG344253LCSW11	LCSW	05/24/13 2:36	WC130514-	820.0001		777.3	mg/L	94.8	90	110			
WG344253PBW4	PBW	05/24/13 2:45				U	mg/L		-20	20			
L12162-03DUP	DUP	05/24/13 4:13			26	23.9	mg/L				8.4	20	
L12167-01DUP	DUP	05/24/13 5:52			30	29.9	mg/L				0.3	20	
WG344253LCSW14	LCSW	05/24/13 6:06	WC130514-	820.0001		793.9	mg/L	96.8	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344558													
WG344558ICV	ICV	05/31/13 0:50	MS130416-2	.1		.1008	mg/L	100.8	90	110			
WG344558ICB	ICB	05/31/13 0:53				U	mg/L		-0.003	0.003			
WG344383LRB	LRB	05/31/13 0:56				.002	mg/L		-0.0022	0.0022			
WG344383LFB	LFB	05/31/13 0:59	MS130508-1	.050055		.0506	mg/L	101.1	85	115			
L12163-06LFM	LFM	05/31/13 1:22	MS130508-1	.050055	.024	.0715	mg/L	94.9	70	130			
L12163-06LFMD	LFMD	05/31/13 1:31	MS130508-1	.050055	.024	.0757	mg/L	103.3	70	130	5.71	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344534													
WG344534ICV	ICV	05/29/13 22:51	MS130416-2	.05		.05307	mg/L	106.1	90	110			
WG344534ICB	ICB	05/29/13 22:55				U	mg/L		-0.0006	0.0006			
WG344534LFB	LFB	05/29/13 22:58	MS130508-1	.05005		.0497	mg/L	99.3	85	115			
L12162-03AS	AS	05/29/13 23:18	MS130508-1	.05005	U	.05262	mg/L	105.1	70	130			
L12162-03ASD	ASD	05/29/13 23:21	MS130508-1	.05005	U	.05388	mg/L	107.7	70	130	2.37	20	

Arsenic, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344558													
WG344558ICV	ICV	05/31/13 0:50	MS130416-2	.05		.052	mg/L	104	90	110			
WG344558ICB	ICB	05/31/13 0:53				U	mg/L		-0.0006	0.0006			
WG344383LRB	LRB	05/31/13 0:56				U	mg/L		-0.00044	0.00044			
WG344383LFB	LFB	05/31/13 0:59	MS130508-1	.05005		.05175	mg/L	103.4	85	115			
L12163-06LFM	LFM	05/31/13 1:22	MS130508-1	.05005	.0013	.05272	mg/L	102.7	70	130			
L12163-06LFMD	LFMD	05/31/13 1:31	MS130508-1	.05005	.0013	.05361	mg/L	104.5	70	130	1.67	20	

Caldera Mineral Resources

ACZ Project ID: **L12162**

Barium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344402													
WG344402ICV	ICV	05/28/13 19:28	II130510-1	2		1.983	mg/L	99.2	95	105			
WG344402ICB	ICB	05/28/13 19:34				U	mg/L		-0.009	0.009			
WG344402LFB	LFB	05/28/13 19:47	II130524-3	.5		.5001	mg/L	100	85	115			
L12162-01AS	AS	05/28/13 19:53	II130524-3	.5	.038	.5424	mg/L	100.9	85	115			
L12162-01ASD	ASD	05/28/13 19:56	II130524-3	.5	.038	.5449	mg/L	101.4	85	115	0.46	20	

Beryllium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344402													
WG344402ICV	ICV	05/28/13 19:28	II130510-1	2		1.962	mg/L	98.1	95	105			
WG344402ICB	ICB	05/28/13 19:34				U	mg/L		-0.03	0.03			
WG344402LFB	LFB	05/28/13 19:47	II130524-3	.5		.502	mg/L	100.4	85	115			
L12162-01AS	AS	05/28/13 19:53	II130524-3	.5	U	.494	mg/L	98.8	85	115			
L12162-01ASD	ASD	05/28/13 19:56	II130524-3	.5	U	.493	mg/L	98.6	85	115	0.2	20	

Boron, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344402													
WG344402ICV	ICV	05/28/13 19:28	II130510-1	2		2.063	mg/L	103.2	95	105			
WG344402ICB	ICB	05/28/13 19:34				U	mg/L		-0.03	0.03			
WG344402LFB	LFB	05/28/13 19:47	II130524-3	.5005		.527	mg/L	105.3	85	115			
L12162-01AS	AS	05/28/13 19:53	II130524-3	.5005	U	.532	mg/L	106.3	85	115			
L12162-01ASD	ASD	05/28/13 19:56	II130524-3	.5005	U	.529	mg/L	105.7	85	115	0.57	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344534													
WG344534ICV	ICV	05/29/13 22:51	MS130416-2	.05		.05235	mg/L	104.7	90	110			
WG344534ICB	ICB	05/29/13 22:55				U	mg/L		-0.0003	0.0003			
WG344534LFB	LFB	05/29/13 22:58	MS130508-1	.0501		.04957	mg/L	98.9	85	115			
L12162-03AS	AS	05/29/13 23:18	MS130508-1	.0501	.0011	.05029	mg/L	98.2	70	130			
L12162-03ASD	ASD	05/29/13 23:21	MS130508-1	.0501	.0011	.05115	mg/L	99.9	70	130	1.7	20	

Cadmium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344357													
WG344357ICV	ICV	05/24/13 20:29	MS130416-2	.05		.05191	mg/L	103.8	90	110			
WG344357ICB	ICB	05/24/13 20:32				U	mg/L		-0.0003	0.0003			
WG344293LRB	LRB	05/24/13 20:35				U	mg/L		-0.00022	0.00022			
WG344293LFB	LFB	05/24/13 20:39	MS130508-1	.0501		.04804	mg/L	95.9	85	115			
L12123-06LFM	LFM	05/24/13 21:01	MS130508-1	.0501	U	.0483	mg/L	96.4	70	130			
L12123-06LFMD	LFMD	05/24/13 21:11	MS130508-1	.0501	U	.04808	mg/L	96	70	130	0.46	20	
L12162-05LFM	LFM	05/24/13 21:40	MS130508-1	.0501	.0023	.0498	mg/L	94.8	70	130			
L12162-05LFMD	LFMD	05/24/13 21:49	MS130508-1	.0501	.0023	.05056	mg/L	96.3	70	130	1.51	20	

Caldera Mineral Resources

ACZ Project ID: **L12162**

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344402													
WG344402ICV	ICV	05/28/13 19:28	II130510-1	100		98.41	mg/L	98.4	95	105			
WG344402ICB	ICB	05/28/13 19:34				U	mg/L		-0.6	0.6			
WG344402LFB	LFB	05/28/13 19:47	II130524-3	67.95918		71.55	mg/L	105.3	85	115			
L12162-01AS	AS	05/28/13 19:53	II130524-3	67.95918	28.5	98.99	mg/L	103.7	85	115			
L12162-01ASD	ASD	05/28/13 19:56	II130524-3	67.95918	28.5	98.96	mg/L	103.7	85	115	0.03	20	

Chloride

SM4500CI-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344607													
WG344607ICB	ICB	05/30/13 11:43				U	mg/L		-3	3			
WG344607ICV	ICV	05/30/13 11:43	WI130131-1	54.945		58.9	mg/L	107.2	90	110			
WG344607LFB1	LFB	05/30/13 12:38	WI130201-8	30		31.8	mg/L	106	90	110			
L12046-01AS	AS	05/30/13 12:38	WI130201-8	30	33	59.8	mg/L	89.3	90	110			M2
L12046-02DUP	DUP	05/30/13 12:38			40	40.3	mg/L				0.7	20	
WG344607LFB2	LFB	05/30/13 12:42	WI130201-8	30		32.2	mg/L	107.3	90	110			

Chromium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344534													
WG344534ICV	ICV	05/29/13 22:51	MS130416-2	.05		.05157	mg/L	103.1	90	110			
WG344534ICB	ICB	05/29/13 22:55				U	mg/L		-0.0015	0.0015			
WG344534LFB	LFB	05/29/13 22:58	MS130508-1	.05005		.05089	mg/L	101.7	85	115			
L12162-03AS	AS	05/29/13 23:18	MS130508-1	.05005	U	.04881	mg/L	97.5	70	130			
L12162-03ASD	ASD	05/29/13 23:21	MS130508-1	.05005	U	.05005	mg/L	100	70	130	2.51	20	

Chromium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344357													
WG344357ICV	ICV	05/24/13 20:29	MS130416-2	.05		.05022	mg/L	100.4	90	110			
WG344357ICB	ICB	05/24/13 20:32				U	mg/L		-0.0015	0.0015			
WG344293LRB	LRB	05/24/13 20:35				U	mg/L		-0.0011	0.0011			
WG344293LFB	LFB	05/24/13 20:39	MS130508-1	.05005		.04763	mg/L	95.2	85	115			
L12123-06LFM	LFM	05/24/13 21:01	MS130508-1	.05005	.0015	.04825	mg/L	93.4	70	130			
L12123-06LFMD	LFMD	05/24/13 21:11	MS130508-1	.05005	.0015	.0486	mg/L	94.1	70	130	0.72	20	
L12162-05LFM	LFM	05/24/13 21:40	MS130508-1	.05005	U	.04587	mg/L	91.6	70	130			
L12162-05LFMD	LFMD	05/24/13 21:49	MS130508-1	.05005	U	.04535	mg/L	90.6	70	130	1.14	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344253													
WG344253LCSW1	LCSW	05/23/13 16:24	PCN41036	1408.8		1426.2	µmhos/crr	101.2	90	110			
WG344253LCSW4	LCSW	05/23/13 19:43	PCN41036	1408.8		1402.8	µmhos/crr	99.6	90	110			
WG344253LCSW7	LCSW	05/23/13 23:07	PCN41036	1408.8		1391.6	µmhos/crr	98.8	90	110			
WG344253LCSW10	LCSW	05/24/13 2:25	PCN41036	1408.8		1375.4	µmhos/crr	97.6	90	110			
L12162-03DUP	DUP	05/24/13 4:13			89	89.5	µmhos/crr				0.6	20	
L12167-01DUP	DUP	05/24/13 5:52			83	81.3	µmhos/crr				2.1	20	
WG344253LCSW13	LCSW	05/24/13 5:54	PCN41036	1408.8		1365.2	µmhos/crr	96.9	90	110			

Caldera Mineral Resources

ACZ Project ID: **L12162**

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344534													
WG344534ICV	ICV	05/29/13 22:51	MS130416-2	.05		.05176	mg/L	103.5	90	110			
WG344534ICB	ICB	05/29/13 22:55				U	mg/L		-0.0015	0.0015			
WG344534LFB	LFB	05/29/13 22:58	MS130508-1	.05005		.04951	mg/L	98.9	85	115			
L12162-03AS	AS	05/29/13 23:18	MS130508-1	.05005	.0085	.05582	mg/L	94.5	70	130			
L12162-03ASD	ASD	05/29/13 23:21	MS130508-1	.05005	.0085	.05708	mg/L	97.1	70	130	2.23	20	

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344357													
WG344357ICV	ICV	05/24/13 20:29	MS130416-2	.05		.05188	mg/L	103.8	90	110			
WG344357ICB	ICB	05/24/13 20:32				U	mg/L		-0.0015	0.0015			
WG344293LRB	LRB	05/24/13 20:35				U	mg/L		-0.0011	0.0011			
WG344293LFB	LFB	05/24/13 20:39	MS130508-1	.05005		.0483	mg/L	96.5	85	115			
L12123-06LFM	LFM	05/24/13 21:01	MS130508-1	.05005	.0023	.04893	mg/L	93.2	70	130			
L12123-06LFMD	LFMD	05/24/13 21:11	MS130508-1	.05005	.0023	.04883	mg/L	93	70	130	0.2	20	
L12162-05LFM	LFM	05/24/13 21:40	MS130508-1	.05005	.0204	.06379	mg/L	86.7	70	130			
L12162-05LFMD	LFMD	05/24/13 21:49	MS130508-1	.05005	.0204	.06145	mg/L	82	70	130	3.74	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344720													
WG344720ICV1	ICV	05/31/13 15:51	WI130522-6	.3		.2988	mg/L	99.6	90	110			
WG344720ICB1	ICB	05/31/13 15:52				U	mg/L		-0.003	0.003			
WG344740													
WG344609LRB	LRB	05/31/13 17:08				U	mg/L		-0.003	0.003			
WG344609LFB	LFB	05/31/13 17:09	WI130522-2	.2		.1818	mg/L	90.9	90	110			
L12162-01DUP	DUP	05/31/13 17:12			U	U	mg/L				0	20	RA
L12162-02LFM	LFM	05/31/13 17:14	WI130522-2	.2	U	.1977	mg/L	98.9	90	110			

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344626													
WG344626ICV	ICV	05/30/13 16:06	WI130522-6	.3		.2894	mg/L	96.5	90	110			
WG344626ICB	ICB	05/30/13 16:07				U	mg/L		-0.003	0.003			
WG344598LRB	LRB	05/30/13 16:08				U	mg/L		-0.003	0.003			
WG344598LFB	LFB	05/30/13 16:09	WI130522-4	.2		.2019	mg/L	101	90	110			
L12159-01DUP	DUP	05/30/13 16:11			U	U	mg/L				0	20	RA
L12159-02LFM	LFM	05/30/13 16:12	WI130522-4	.2	U	.1969	mg/L	98.5	90	110			
WG344720													
WG344720ICV1	ICV	05/31/13 15:51	WI130522-6	.3		.2988	mg/L	99.6	90	110			
WG344720ICB1	ICB	05/31/13 15:52				U	mg/L		-0.003	0.003			
WG344635LRB	LRB	05/31/13 15:53				U	mg/L		-0.003	0.003			
WG344635LFB	LFB	05/31/13 15:54	WI130522-4	.2		.1938	mg/L	96.9	90	110			
L12162-05DUP	DUP	05/31/13 15:55			U	U	mg/L				0	20	RA
L12196-04LFM	LFM	05/31/13 15:57	WI130522-4	.2	U	.1966	mg/L	98.3	90	110			

Caldera Mineral Resources

ACZ Project ID: **L12162**

Dissolved Chromium, Hexavalent

SM3500Cr-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344175													
WG344175ICV	ICV	05/22/13 14:20	WC130409-	.05		.0515	mg/L	103	90	110			
WG344175ICB	ICB	05/22/13 14:22				U	mg/L		-0.015	0.015			
WG344175LFB	LFB	05/22/13 14:24	WC130409-	.05		.0514	mg/L	102.8	90	110			
L12178-02AS	AS	05/22/13 14:41	WC130409-	.05	U	.0467	mg/L	93.4	90	110			
L12178-02DUP	DUP	05/22/13 14:43			U	U	mg/L				0	20	RA

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344402													
WG344402ICV	ICV	05/28/13 19:28	II130510-1	2		2.002	mg/L	100.1	95	105			
WG344402ICB	ICB	05/28/13 19:34				U	mg/L		-0.06	0.06			
WG344402LFB	LFB	05/28/13 19:47	II130524-3	1		1.043	mg/L	104.3	85	115			
L12162-01AS	AS	05/28/13 19:53	II130524-3	1	U	1.052	mg/L	105.2	85	115			
L12162-01ASD	ASD	05/28/13 19:56	II130524-3	1	U	1.043	mg/L	104.3	85	115	0.86	20	

Iron, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344479													
WG344479ICV	ICV	05/29/13 11:08	II130514-1	2		2.001	mg/L	100.1	95	105			
WG344479ICB	ICB	05/29/13 11:14				U	mg/L		-0.06	0.06			
WG344416LRB	LRB	05/29/13 11:26				U	mg/L		-0.044	0.044			
WG344416LFB	LFB	05/29/13 11:29	II130524-3	1		.998	mg/L	99.8	85	115			
L12162-02LFM	LFM	05/29/13 11:39	II2XWATER	2	.16	2.128	mg/L	98.9	70	130			
L12162-02LFMD	LFMD	05/29/13 11:42	II2XWATER	2	.16	2.13	mg/L	99	70	130	0.09	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344534													
WG344534ICV	ICV	05/29/13 22:51	MS130416-2	.05		.05289	mg/L	105.8	90	110			
WG344534ICB	ICB	05/29/13 22:55				U	mg/L		-0.0003	0.0003			
WG344534LFB	LFB	05/29/13 22:58	MS130508-1	.05005		.04973	mg/L	99.4	85	115			
L12162-03AS	AS	05/29/13 23:18	MS130508-1	.05005	.0011	.04909	mg/L	95.9	70	130			
L12162-03ASD	ASD	05/29/13 23:21	MS130508-1	.05005	.0011	.0501	mg/L	97.9	70	130	2.04	20	

Lead, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344357													
WG344357ICV	ICV	05/24/13 20:29	MS130416-2	.05		.05384	mg/L	107.7	90	110			
WG344357ICB	ICB	05/24/13 20:32				U	mg/L		-0.0003	0.0003			
WG344293LRB	LRB	05/24/13 20:35				U	mg/L		-0.00022	0.00022			
WG344293LFB	LFB	05/24/13 20:39	MS130508-1	.05005		.04839	mg/L	96.7	85	115			
L12123-06LFM	LFM	05/24/13 21:01	MS130508-1	.05005	.0006	.04883	mg/L	96.4	70	130			
L12123-06LFMD	LFMD	05/24/13 21:11	MS130508-1	.05005	.0006	.04905	mg/L	96.8	70	130	0.45	20	
L12162-05LFM	LFM	05/24/13 21:40	MS130508-1	.05005	.1597	.2049	mg/L	90.3	70	130			
L12162-05LFMD	LFMD	05/24/13 21:49	MS130508-1	.05005	.1597	.209	mg/L	98.5	70	130	1.98	20	

Caldera Mineral Resources

ACZ Project ID: **L12162**

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344402													
WG344402ICV	ICV	05/28/13 19:28	II130510-1	100		100.33	mg/L	100.3	95	105			
WG344402ICB	ICB	05/28/13 19:34				U	mg/L		-0.6	0.6			
WG344402LFB	LFB	05/28/13 19:47	II130524-3	49.99941		52.03	mg/L	104.1	85	115			
L12162-01AS	AS	05/28/13 19:53	II130524-3	49.99941	1.4	53.48	mg/L	104.2	85	115			
L12162-01ASD	ASD	05/28/13 19:56	II130524-3	49.99941	1.4	53.42	mg/L	104	85	115	0.11	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344402													
WG344402ICV	ICV	05/28/13 19:28	II130510-1	2		1.941	mg/L	97.1	95	105			
WG344402ICB	ICB	05/28/13 19:34				U	mg/L		-0.015	0.015			
WG344402LFB	LFB	05/28/13 19:47	II130524-3	.5		.5108	mg/L	102.2	85	115			
L12162-01AS	AS	05/28/13 19:53	II130524-3	.5	.058	.5681	mg/L	102	85	115			
L12162-01ASD	ASD	05/28/13 19:56	II130524-3	.5	.058	.5679	mg/L	102	85	115	0.04	20	

Manganese, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344479													
WG344479ICV	ICV	05/29/13 11:08	II130514-1	2		1.9305	mg/L	96.5	95	105			
WG344479ICB	ICB	05/29/13 11:14				U	mg/L		-0.015	0.015			
WG344416LRB	LRB	05/29/13 11:26				U	mg/L		-0.011	0.011			
WG344416LFB	LFB	05/29/13 11:29	II130524-3	.5		.4827	mg/L	96.5	85	115			
L12162-02LFM	LFM	05/29/13 11:39	II2XWATER	1	.05	1.025	mg/L	97.5	70	130			
L12162-02LFMD	LFMD	05/29/13 11:42	II2XWATER	1	.05	1.032	mg/L	98.2	70	130	0.68	20	

Mercury, total

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344271													
WG344271ICV	ICV	05/28/13 10:17	II130522-4	.005025		.0052	mg/L	103.5	95	105			
WG344271ICB	ICB	05/28/13 10:19				U	mg/L		-0.0002	0.0002			
WG344314													
WG344314LRB	LRB	05/28/13 14:21				U	mg/L		-0.00044	0.00044			
WG344314LFB	LFB	05/28/13 14:23	II130515-2	.002002		.00193	mg/L	96.4	85	115			
L12161-01LFM	LFM	05/28/13 14:30	II130515-2	.002002	U	.00205	mg/L	102.4	85	115			
L12161-01LFMD	LFMD	05/28/13 14:32	II130515-2	.002002	U	.00196	mg/L	97.9	85	115	4.49	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344402													
WG344402ICV	ICV	05/28/13 19:28	II130510-1	2		1.97	mg/L	98.5	95	105			
WG344402ICB	ICB	05/28/13 19:34				U	mg/L		-0.03	0.03			
WG344402LFB	LFB	05/28/13 19:47	II130524-3	.5		.508	mg/L	101.6	85	115			
L12162-01AS	AS	05/28/13 19:53	II130524-3	.5	U	.511	mg/L	102.2	85	115			
L12162-01ASD	ASD	05/28/13 19:56	II130524-3	.5	U	.511	mg/L	102.2	85	115	0	20	

Caldera Mineral Resources

ACZ Project ID: **L12162**

Nickel, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344479													
WG344479ICV	ICV	05/29/13 11:08	II130514-1	2		1.976	mg/L	98.8	95	105			
WG344479ICB	ICB	05/29/13 11:14				U	mg/L		-0.03	0.03			
WG344416LRB	LRB	05/29/13 11:26				U	mg/L		-0.022	0.022			
WG344416LFB	LFB	05/29/13 11:29	II130524-3	.5		.48	mg/L	96	85	115			
L12162-02LFM	LFM	05/29/13 11:39	II2XWATER	1	U	.97	mg/L	97	70	130			
L12162-02LFMD	LFMD	05/29/13 11:42	II2XWATER	1	U	.971	mg/L	97.1	70	130	0.1	20	

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344110													
WG344110ICV	ICV	05/21/13 22:26	WI130411-3	2.416		2.536	mg/L	105	90	110			
WG344110ICB	ICB	05/21/13 22:27				U	mg/L		-0.06	0.06			
WG344110LFB	LFB	05/21/13 22:28	WI130215-3	2		2.021	mg/L	101.1	90	110			
L12162-01AS	AS	05/21/13 22:31	WI130215-3	2	.38	2.333	mg/L	97.7	90	110			
L12162-02DUP	DUP	05/21/13 22:33			.46	.462	mg/L				0.4	20	

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344110													
WG344110ICV	ICV	05/21/13 22:26	WI130411-3	.609		.614	mg/L	100.8	90	110			
WG344110ICB	ICB	05/21/13 22:27				U	mg/L		-0.03	0.03			
WG344110LFB	LFB	05/21/13 22:28	WI130215-3	1		1.017	mg/L	101.7	90	110			
L12162-01AS	AS	05/21/13 22:31	WI130215-3	1	U	.971	mg/L	97.1	90	110			
L12162-02DUP	DUP	05/21/13 22:33			U	U	mg/L				0	20	RA

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344510													
WG344510ICV	ICV	05/29/13 14:51	WI121105-5	1.003		1.065	mg/L	106.2	90	110			
WG344510ICB	ICB	05/29/13 14:52				U	mg/L		-0.15	0.15			
WG344540													
WG344540LFB	LFB	05/29/13 17:04	WI121218-3	1		.94	mg/L	94	90	110			
L12161-01AS	AS	05/29/13 17:22	WI121218-3	1	U	.974	mg/L	97.4	90	110			
L12161-02DUP	DUP	05/29/13 17:24			U	U	mg/L				0	20	RA

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344253													
WG344253LCSW3	LCSW	05/23/13 16:38	PCN40853	6		6	units	100	98	102			
WG344253LCSW6	LCSW	05/23/13 19:58	PCN40853	6		6.02	units	100.3	98	102			
WG344253LCSW9	LCSW	05/23/13 23:22	PCN40853	6		6.02	units	100.3	98	102			
WG344253LCSW12	LCSW	05/24/13 2:40	PCN40853	6		6.02	units	100.3	98	102			
L12162-03DUP	DUP	05/24/13 4:13			7.9	7.87	units				0.4	20	
L12167-01DUP	DUP	05/24/13 5:52			8	7.94	units				0.8	20	
WG344253LCSW15	LCSW	05/24/13 6:09	PCN40853	6		6.01	units	100.2	98	102			

Caldera Mineral Resources

ACZ Project ID: **L12162**

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344189													
WG344189PBW	PBW	05/22/13 16:02				U	mg/L		-20	20			
WG344189LCSW	LCSW	05/22/13 16:04	PCN42164	260		252	mg/L	96.9	80	120			
L12168-01DUP	DUP	05/22/13 16:33			830	840	mg/L				1.2	10	

Residue, Non-Filterable (TSS) @105C SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344244													
WG344244PBW	PBW	05/23/13 13:30				U	mg/L		-15	15			
WG344244LCSW	LCSW	05/23/13 13:31	PCN42164	160		148	mg/L	92.5	80	120			
L12163-02DUP	DUP	05/23/13 13:53			U	U	mg/L				0	10	RA

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344534													
WG344534ICV	ICV	05/29/13 22:51	MS130416-2	.05		.05281	mg/L	105.6	90	110			
WG344534ICB	ICB	05/29/13 22:55				.00013	mg/L		-0.0003	0.0003			
WG344534LFB	LFB	05/29/13 22:58	MS130508-1	.05005		.04901	mg/L	97.9	85	115			
L12162-03AS	AS	05/29/13 23:18	MS130508-1	.05005	.0002	.05122	mg/L	101.9	70	130			
L12162-03ASD	ASD	05/29/13 23:21	MS130508-1	.05005	.0002	.05211	mg/L	103.7	70	130	1.72	20	

Silver, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344534													
WG344534ICV	ICV	05/29/13 22:51	MS130416-2	.02002		.02058	mg/L	102.8	90	110			
WG344534ICB	ICB	05/29/13 22:55				U	mg/L		-0.00015	0.00015			
WG344534LFB	LFB	05/29/13 22:58	MS130508-1	.01001		.01014	mg/L	101.3	85	115			
L12162-03AS	AS	05/29/13 23:18	MS130508-1	.01001	U	.009733	mg/L	97.2	70	130			
L12162-03ASD	ASD	05/29/13 23:21	MS130508-1	.01001	U	.009885	mg/L	98.8	70	130	1.55	20	

Silver, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344357													
WG344357ICV	ICV	05/24/13 20:29	MS130416-2	.02002		.02094	mg/L	104.6	90	110			
WG344357ICB	ICB	05/24/13 20:32				U	mg/L		-0.00015	0.00015			
WG344293LRB	LRB	05/24/13 20:35				U	mg/L		-0.00011	0.00011			
WG344293LFB	LFB	05/24/13 20:39	MS130508-1	.01001		.01003	mg/L	100.2	85	115			
L12123-06LFM	LFM	05/24/13 21:01	MS130508-1	.01001	U	.009983	mg/L	99.7	70	130			
L12123-06LFMD	LFMD	05/24/13 21:11	MS130508-1	.01001	U	.009924	mg/L	99.1	70	130	0.59	20	
L12162-05LFM	LFM	05/24/13 21:40	MS130508-1	.01001	.00017	.009713	mg/L	95.3	70	130			
L12162-05LFMD	LFMD	05/24/13 21:49	MS130508-1	.01001	.00017	.009847	mg/L	96.7	70	130	1.37	20	

Caldera Mineral Resources

ACZ Project ID: **L12162**

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344685													
WG344685ICB	ICB	05/31/13 10:43				U	mg/L		-3	3			
WG344685ICV	ICV	05/31/13 10:43	WI130520-7	20		20.4	mg/L	102	90	110			
WG344685LFB	LFB	05/31/13 11:24	WI130416-3	9.99		9.5	mg/L	95.1	90	110			
L12164-01AS	AS	05/31/13 11:33	SO4TURB5	10	161	171.4	mg/L	104	90	110			
L12040-01DUP	DUP	05/31/13 11:35			2300	2320	mg/L				0.9	20	
L12040-03AS	AS	05/31/13 11:35	SO4TURB20	50	3600	3580	mg/L	-40	90	110			M3
L12162-05DUP	DUP	05/31/13 11:38			560	602	mg/L				7.2	20	

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344069													
WG344069ICV	ICV	05/21/13 12:15	WC130520-	.35734		.386	mg/L	108	90	110			
WG344069ICB	ICB	05/21/13 12:18				U	mg/L		-0.06	0.06			
WG344085													
WG344085ICV	ICV	05/21/13 13:50	WC130520-	.35734		.379	mg/L	106.1	90	110			
WG344085ICB	ICB	05/21/13 13:52				U	mg/L		-0.06	0.06			
WG344085LFB	LFB	05/21/13 13:55	WC130520-	.2346667		.252	mg/L	107.4	80	120			
L12162-05AS	AS	05/21/13 14:14	WC130520-	.2346667	U	.261	mg/L	111.2	75	125			
L12162-05DUP	DUP	05/21/13 14:17			U	U	mg/L				0	20	RA

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344534													
WG344534ICV	ICV	05/29/13 22:51	MS130416-2	.05		.05301	mg/L	106	90	110			
WG344534ICB	ICB	05/29/13 22:55				U	mg/L		-0.0003	0.0003			
WG344534LFB	LFB	05/29/13 22:58	MS130508-1	.05		.05074	mg/L	101.5	85	115			
L12162-03AS	AS	05/29/13 23:18	MS130508-1	.05	U	.04929	mg/L	98.6	70	130			
L12162-03ASD	ASD	05/29/13 23:21	MS130508-1	.05	U	.05028	mg/L	100.6	70	130	1.99	20	

Uranium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344357													
WG344357ICV	ICV	05/24/13 20:29	MS130416-2	.05		.05239	mg/L	104.8	90	110			
WG344357ICB	ICB	05/24/13 20:32				U	mg/L		-0.0003	0.0003			
WG344293LRB	LRB	05/24/13 20:35				U	mg/L		-0.00022	0.00022			
WG344293LFB	LFB	05/24/13 20:39	MS130508-1	.05		.04766	mg/L	95.3	85	115			
L12123-06LFM	LFM	05/24/13 21:01	MS130508-1	.05	.0001	.04759	mg/L	95	70	130			
L12123-06LFMD	LFMD	05/24/13 21:11	MS130508-1	.05	.0001	.04793	mg/L	95.7	70	130	0.71	20	
L12162-05LFM	LFM	05/24/13 21:40	MS130508-1	.05	.0005	.05029	mg/L	99.6	70	130			
L12162-05LFMD	LFMD	05/24/13 21:49	MS130508-1	.05	.0005	.05097	mg/L	100.9	70	130	1.34	20	

Caldera Mineral Resources

ACZ Project ID: **L12162**

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344402													
WG344402ICV	ICV	05/28/13 19:28	II130510-1	2		1.984	mg/L	99.2	95	105			
WG344402ICB	ICB	05/28/13 19:34				U	mg/L		-0.03	0.03			
WG344402LFB	LFB	05/28/13 19:47	II130524-3	.5		.525	mg/L	105	85	115			
L12162-01AS	AS	05/28/13 19:53	II130524-3	.5	.21	.734	mg/L	104.8	85	115			
L12162-01ASD	ASD	05/28/13 19:56	II130524-3	.5	.21	.736	mg/L	105.2	85	115	0.27	20	

Zinc, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG344479													
WG344479ICV	ICV	05/29/13 11:08	II130514-1	2		1.957	mg/L	97.9	95	105			
WG344479ICB	ICB	05/29/13 11:14				U	mg/L		-0.03	0.03			
WG344416LRB	LRB	05/29/13 11:26				U	mg/L		-0.022	0.022			
WG344416LFB	LFB	05/29/13 11:29	II130524-3	.5		.488	mg/L	97.6	85	115			
L12162-02LFM	LFM	05/29/13 11:39	II2XWATER	1	.14	1.118	mg/L	98.8	70	130			
L12162-02LFMD	LFMD	05/29/13 11:42	II2XWATER	1	.14	1.119	mg/L	98.9	70	130	0.09	20	

Caldera Mineral Resources

ACZ Project ID: **L12162**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L12162-01	WG344607	Chloride	SM4500CI-E	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG344740	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344626	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344175	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344110	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344540	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344244	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344685	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG344085	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L12162-02	WG344416	Total Hot Plate Digestion	M200.2 ICP	DJ	Sample dilution required due to insufficient sample.
	WG344607	Chloride	SM4500CI-E	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG344740	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344626	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344175	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344110	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344540	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344244	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344685	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG344085	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources

ACZ Project ID: **L12162**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L12162-03	WG344607	Chloride	SM4500CI-E	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG344740	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344626	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344175	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344110	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344540	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344244	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344685	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L12162-04	WG344085	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344607	Chloride	SM4500CI-E	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG344740	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344626	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344175	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344110	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344540	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344244	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L12162-05	WG344685	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG344085	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources

ACZ Project ID: **L12162**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L12162-05	WG344416	Total Hot Plate Digestion	M200.2 ICP	DJ	Sample dilution required due to insufficient sample.
	WG344607	Chloride	SM4500CI-E	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG344740	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344720	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344175	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344110	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344540	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344244	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG344085	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources

Project ID:

Sample ID: A-052013

ACZ Sample ID: **L12162-01**

Date Sampled: 05/20/13 0:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG344472**

Analyst: dsg

Extract Date:

Analysis Date: 05/29/13 11:01

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.064	*	mg/L	2.128	10.64

Caldera Mineral Resources

Project ID:

Sample ID: B-052013

ACZ Sample ID: **L12162-02**

Date Sampled: 05/20/13 0:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG344472**

Analyst: dsg

Extract Date:

Analysis Date: 05/29/13 11:02

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.064	*	mg/L	2.128	10.64

Caldera Mineral Resources

Project ID:

Sample ID: C-052013

ACZ Sample ID: **L12162-03**

Date Sampled: 05/20/13 0:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG344472**

Analyst: dsg

Extract Date:

Analysis Date: 05/29/13 11:03

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.064	*	mg/L	2.128	10.64

Caldera Mineral Resources

Project ID:

Sample ID: D-052013

ACZ Sample ID: **L12162-04**

Date Sampled: 05/20/13 0:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG344472**

Analyst: dsg

Extract Date:

Analysis Date: 05/29/13 11:04

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.064	*	mg/L	2.128	10.64

Caldera Mineral Resources

Project ID:

Sample ID: E-052013

ACZ Sample ID: **L12162-05**

Date Sampled: 05/20/13 0:00

Date Received: 05/21/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG344472**

Analyst: dsg

Extract Date:

Analysis Date: 05/29/13 11:05

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.064	*	mg/L	2.128	10.64



Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
- (3) EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Excluding Oil & Grease, solid & biological matrices for organic analyses are reported on a wet weight basis.
- (3) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (4) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources

ACZ Project ID: **L12162**

Oil & Grease, Total Recoverable

1664A - Gravimetric

WG344472

LCSW		Sample ID: WG344472LCSW		PCN/SCN: OP130517-2			Analyzed: 05/29/13 11:13			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		34.4	mg/L	86.0	78	114			

LCSWD		Sample ID: WG344472LCSWD		PCN/SCN: OP130517-2			Analyzed: 05/29/13 11:14			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		34	mg/L	85.0	78	114	1.2	18	

PBW		Sample ID: WG344472PBW					Analyzed: 05/29/13 11:00			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE			U	mg/L		-5	5			

Caldera Mineral Resources

ACZ Project ID: **L12162**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L12162-01	WG344472	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L12162-02	WG344472	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L12162-03	WG344472	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L12162-04	WG344472	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L12162-05	WG344472	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.

Caldera Mineral Resources

ACZ Project ID: **L12162**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Caldera Mineral Resources

ACZ Project ID: L12162

Date Received: 05/21/2013 10:31

Received By: ksj

Date Printed: 5/21/2013

Receipt Verification

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

Samples/Containers

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

Some parameters were received past hold time.

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
3589	3.8	13	Yes
3994	4.8	14	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

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

Name: Mike Thompson	Address: 4 River St.
Company: Reardon Steel LLC	Silverton CO 81433
E-mail: mt@reardonsteel.us	Telephone: 970-426-2924

Name: John Bryan	E-mail: j.bryan@watley.com
Company: Caldera Mineral Resources	Telephone: 310-777-8889

Name: Laurens Nuyens	Address: 8439 Sunset Blvd. Suite 402
Company: Caldora Mineral Resources	West Hollywood, CA 90069
E-mail: Laurens@watby.com	Telephone: 310-777-8889

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

YES

NO

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

Are samples for SDWA Compliance Monitoring?

Yes

No

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

Sampler's Name: <u>nn</u>	Sampler's site information	State <u>CO</u>	Zip code <u>81433</u>	Time Zone <u>MST</u>
---------------------------	----------------------------	-----------------	-----------------------	----------------------

[illegible]

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

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

✓✓	5/20/13 2:01	LB	52113103

August 13, 2013

Report to:

Mike Thompson
Caldera Mineral Resources
PO Box 297
Silverton, CO 81433

Bill to:

Lauren Nuyens
Caldera Mineral Resources
8439 Sunset Blvd. Suite 402
West Hollywood, CA 90069

cc: John Bryan

Project ID:

ACZ Project ID: L13488

Mike Thompson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 25, 2013. This project has been assigned to ACZ's project number, L13488. 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 L13488. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after September 12, 2013. 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.



Caldera Mineral Resources

Project ID:

Sample ID: CB-A

ACZ Sample ID: **L13488-01**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								08/06/13 12:31	tcd
Cyanide, WAD	SM4500-CN I- distillation								08/05/13 9:16	mia
Total Hot Plate Digestion	M200.2 ICP								08/01/13 14:45	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								08/05/13 19:36	las
Total Recoverable Digestion	M200.2 ICP-MS				*				08/06/13 12:24	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	5	0.048			mg/L	0.005	0.03	08/07/13 18:46	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0008	B		mg/L	0.0002	0.001	08/02/13 18:39	msh
Arsenic, total recoverable	M200.8 ICP-MS	5	0.002	B		mg/L	0.001	0.005	08/07/13 1:15	pmc
Barium, dissolved	M200.7 ICP	1	0.037			mg/L	0.003	0.02	08/01/13 19:11	jjc
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:11	jjc
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:11	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0008			mg/L	0.0001	0.0005	08/02/13 18:39	msh
Cadmium, total	M200.8 ICP-MS	1	0.0010			mg/L	0.0001	0.0005	08/06/13 21:34	las
Calcium, dissolved	M200.7 ICP	1	63.8			mg/L	0.2	1	08/01/13 19:11	jjc
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/02/13 18:39	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/06/13 21:34	las
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	08/09/13 16:00	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0037			mg/L	0.0005	0.003	08/02/13 18:39	msh
Copper, total	M200.8 ICP-MS	1	0.0071			mg/L	0.0005	0.003	08/08/13 23:44	msh
Iron, dissolved	M200.7 ICP	1	0.05			mg/L	0.02	0.05	08/01/13 19:11	jjc
Iron, total	M200.7 ICP	1	0.11			mg/L	0.02	0.05	08/02/13 21:46	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0025			mg/L	0.0001	0.0005	08/02/13 18:39	msh
Lead, total	M200.8 ICP-MS	1	0.0045			mg/L	0.0001	0.0005	08/08/13 23:44	msh
Magnesium, dissolved	M200.7 ICP	1	2.1			mg/L	0.2	1	08/01/13 19:11	jjc
Manganese, dissolved	M200.7 ICP	1	0.190		*	mg/L	0.005	0.03	08/01/13 19:11	jjc
Manganese, total	M200.7 ICP	1	0.188			mg/L	0.005	0.03	08/02/13 21:46	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	08/01/13 11:31	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:11	jjc
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	08/02/13 21:46	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0003			mg/L	0.0001	0.0003	08/02/13 18:39	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	08/02/13 18:39	msh
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	08/06/13 21:34	las
Uranium, dissolved	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	08/02/13 18:39	msh
Uranium, total	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	08/06/13 21:34	las
Zinc, dissolved	M200.7 ICP	1	0.21			mg/L	0.01	0.05	08/01/13 19:11	jjc
Zinc, total	M200.7 ICP	1	0.22			mg/L	0.01	0.05	08/02/13 21:46	aeb

Caldera Mineral Resources

Project ID:

Sample ID: CB-A

ACZ Sample ID: **L13488-01**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	36		*	mg/L	2	20	07/27/13 0:00	khw
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Total Alkalinity		1	36		*	mg/L	2	20	07/27/13 0:00	khw
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	08/05/13 14:29	mpb
Conductivity @25C	SM2510B	1	369		*	umhos/cm	1	10	07/27/13 20:13	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/07/13 20:05	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/05/13 18:34	bsu
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	07/25/13 12:30	khw
Hardness as CaCO ₃	SM2340B - Calculation		168			mg/L	1	7	08/09/13 16:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/30/13 10:03	khw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							07/30/13 18:02	scp
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.26			mg/L	0.02	0.1	08/09/13 16:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.26		*	mg/L	0.02	0.1	07/25/13 19:32	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/25/13 19:32	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	08/05/13 15:32	tcd
pH (lab)	SM4500H+ B									
pH		1	8.0	H	*	units	0.1	0.1	07/27/13 0:00	khw
pH measured at		1	20.0		*	C	0.1	0.1	07/27/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	252		*	mg/L	10	20	07/31/13 13:53	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	07/31/13 11:27	mss3
Sulfate	D516-02 - Turbidimetric	5	129		*	mg/L	5	25	08/08/13 10:46	bsu
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	07/31/13 13:32	abm

Caldera Mineral Resources

Project ID:

Sample ID: CB-B

ACZ Sample ID: **L13488-02**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								08/06/13 12:31	tcd
Cyanide, WAD	SM4500-CN I- distillation								08/05/13 9:33	mla
Total Hot Plate Digestion	M200.2 ICP				*				08/07/13 14:23	jjc
Total Hot Plate Digestion	M200.2 ICP-MS								08/05/13 19:48	las
Total Recoverable Digestion	M200.2 ICP-MS								08/06/13 12:36	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.066			mg/L	0.001	0.005	08/07/13 18:56	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0015			mg/L	0.0002	0.001	08/02/13 18:42	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0017			mg/L	0.0002	0.001	08/07/13 1:18	pmc
Barium, dissolved	M200.7 ICP	1	0.046			mg/L	0.003	0.02	08/01/13 19:14	jjc
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:14	jjc
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:14	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0001	0.0005	08/02/13 18:42	msh
Cadmium, total	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0005	08/06/13 21:44	las
Calcium, dissolved	M200.7 ICP	1	26.0			mg/L	0.2	1	08/01/13 19:14	jjc
Chromium, dissolved	M200.8 ICP-MS	1	0.0006	B		mg/L	0.0005	0.002	08/02/13 18:42	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/06/13 21:44	las
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	08/09/13 16:00	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0040			mg/L	0.0005	0.003	08/02/13 18:42	msh
Copper, total	M200.8 ICP-MS	1	0.0021	B		mg/L	0.0005	0.003	08/08/13 23:47	msh
Iron, dissolved	M200.7 ICP	1	0.12			mg/L	0.02	0.05	08/07/13 12:23	jjc
Iron, total	M200.7 ICP	2	0.09	B		mg/L	0.04	0.1	08/08/13 12:03	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0030			mg/L	0.0001	0.0005	08/02/13 18:42	msh
Lead, total	M200.8 ICP-MS	1	0.0032			mg/L	0.0001	0.0005	08/08/13 23:47	msh
Magnesium, dissolved	M200.7 ICP	1	2.0			mg/L	0.2	1	08/01/13 19:14	jjc
Manganese, dissolved	M200.7 ICP	1	0.215		*	mg/L	0.005	0.03	08/01/13 19:14	jjc
Manganese, total	M200.7 ICP	1	0.241			mg/L	0.005	0.03	08/02/13 21:55	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	08/01/13 11:33	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:14	jjc
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	08/02/13 21:55	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0003	08/02/13 18:42	msh
Silver, dissolved	M200.8 ICP-MS	1	0.00007	B		mg/L	0.00005	0.0003	08/02/13 18:42	msh
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	08/06/13 21:44	las
Uranium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	08/02/13 18:42	msh
Uranium, total	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	08/06/13 21:44	las
Zinc, dissolved	M200.7 ICP	1	0.12			mg/L	0.01	0.05	08/01/13 19:14	jjc
Zinc, total	M200.7 ICP	1	0.13			mg/L	0.01	0.05	08/02/13 21:55	aeb

Caldera Mineral Resources

Project ID:

Sample ID: CB-B

ACZ Sample ID: **L13488-02**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	32		*	mg/L	2	20	07/27/13 0:00	khw
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Total Alkalinity		1	32		*	mg/L	2	20	07/27/13 0:00	khw
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	08/05/13 14:29	mpb
Conductivity @25C	SM2510B	1	167		*	umhos/cm	1	10	07/27/13 20:20	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/07/13 20:06	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/05/13 18:36	bsu
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	07/25/13 12:36	khw
Hardness as CaCO ₃	SM2340B - Calculation		73			mg/L	1	7	08/09/13 16:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/30/13 10:07	khw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							07/30/13 18:04	scp
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.35			mg/L	0.02	0.1	08/09/13 16:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.35		*	mg/L	0.02	0.1	07/25/13 19:33	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/25/13 19:33	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1	0.08	B	*	mg/L	0.05	0.5	08/05/13 15:33	tcd
pH (lab)	SM4500H+ B									
pH		1	8.0	H	*	units	0.1	0.1	07/27/13 0:00	khw
pH measured at		1	19.0		*	C	0.1	0.1	07/27/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	108		*	mg/L	10	20	07/31/13 13:55	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	07/31/13 11:29	mss3
Sulfate	D516-02 - Turbidimetric	5	43.2		*	mg/L	5	25	08/08/13 10:46	bsu
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	07/31/13 13:38	abm

Caldera Mineral Resources

Project ID:

Sample ID: CB-C

ACZ Sample ID: **L13488-03**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								08/06/13 12:32	tcd
Cyanide, WAD	SM4500-CN I- distillation								08/05/13 9:50	mia
Total Hot Plate Digestion	M200.2 ICP								08/01/13 16:14	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								08/05/13 20:00	las
Total Recoverable Digestion	M200.2 ICP-MS								08/06/13 12:48	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.027			mg/L	0.001	0.005	08/07/13 19:00	msh
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	08/02/13 18:46	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0002	0.001	08/07/13 1:21	pmc
Barium, dissolved	M200.7 ICP	1	0.044			mg/L	0.003	0.02	08/01/13 19:17	jjc
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:17	jjc
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:17	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0009			mg/L	0.0001	0.0005	08/02/13 18:46	msh
Cadmium, total	M200.8 ICP-MS	1	0.0011			mg/L	0.0001	0.0005	08/06/13 21:48	las
Calcium, dissolved	M200.7 ICP	1	23.4			mg/L	0.2	1	08/01/13 19:17	jjc
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/02/13 18:46	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/06/13 21:48	las
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	08/09/13 16:00	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0021	B		mg/L	0.0005	0.003	08/02/13 18:46	msh
Copper, total	M200.8 ICP-MS	1	0.0031			mg/L	0.0005	0.003	08/08/13 23:50	msh
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	08/01/13 19:17	jjc
Iron, total	M200.7 ICP	1		U		mg/L	0.02	0.05	08/02/13 21:58	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0011			mg/L	0.0001	0.0005	08/02/13 18:46	msh
Lead, total	M200.8 ICP-MS	1	0.0016			mg/L	0.0001	0.0005	08/08/13 23:50	msh
Magnesium, dissolved	M200.7 ICP	1	1.2			mg/L	0.2	1	08/01/13 19:17	jjc
Manganese, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	08/01/13 19:17	jjc
Manganese, total	M200.7 ICP	1		U		mg/L	0.005	0.03	08/02/13 21:58	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	08/01/13 11:35	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:17	jjc
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	08/02/13 21:58	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0003	08/02/13 18:46	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	08/02/13 18:46	msh
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	08/06/13 21:48	las
Uranium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	08/02/13 18:46	msh
Uranium, total	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	08/06/13 21:48	las
Zinc, dissolved	M200.7 ICP	1	0.21			mg/L	0.01	0.05	08/01/13 19:17	jjc
Zinc, total	M200.7 ICP	1	0.22			mg/L	0.01	0.05	08/02/13 21:58	aeb

Caldera Mineral Resources

Project ID:

Sample ID: CB-C

ACZ Sample ID: **L13488-03**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	27		*	mg/L	2	20	07/27/13 0:00	khw
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Total Alkalinity		1	27		*	mg/L	2	20	07/27/13 0:00	khw
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	08/05/13 14:29	mpb
Conductivity @25C	SM2510B	1	147		*	umhos/cm	1	10	07/27/13 20:27	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/07/13 20:08	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/05/13 18:37	bsu
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	07/25/13 12:41	khw
Hardness as CaCO ₃	SM2340B - Calculation		63			mg/L	1	7	08/09/13 16:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/30/13 10:11	khw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							07/30/13 18:07	scp
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.18			mg/L	0.02	0.1	08/09/13 16:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.18		*	mg/L	0.02	0.1	07/25/13 19:36	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/25/13 19:36	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	08/05/13 15:34	tcd
pH (lab)	SM4500H+ B									
pH		1	7.9	H	*	units	0.1	0.1	07/27/13 0:00	khw
pH measured at		1	19.0		*	C	0.1	0.1	07/27/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	94		*	mg/L	10	20	07/31/13 13:56	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	07/31/13 11:31	mss3
Sulfate	D516-02 - Turbidimetric	1	38.7		*	mg/L	1	5	08/08/13 10:39	bsu
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	07/31/13 13:44	abm

Caldera Mineral Resources

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L13488-04**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								08/06/13 12:32	tcd
Cyanide, WAD	SM4500-CN I- distillation								08/06/13 14:28	tcd
Total Hot Plate Digestion	M200.2 ICP								08/01/13 16:36	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								08/05/13 20:12	las
Total Recoverable Digestion	M200.2 ICP-MS								08/06/13 13:00	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.045			mg/L	0.001	0.005	08/07/13 19:03	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0002	0.001	08/02/13 18:49	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0007	B		mg/L	0.0002	0.001	08/07/13 1:25	pmc
Barium, dissolved	M200.7 ICP	1	0.020			mg/L	0.003	0.02	08/01/13 19:27	jjc
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:27	jjc
Boron, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	08/01/13 19:27	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0017			mg/L	0.0001	0.0005	08/02/13 18:49	msh
Cadmium, total	M200.8 ICP-MS	1	0.0021			mg/L	0.0001	0.0005	08/06/13 21:51	las
Calcium, dissolved	M200.7 ICP	1	213			mg/L	0.2	1	08/01/13 19:27	jjc
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/02/13 18:49	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/06/13 21:51	las
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	08/09/13 16:01	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0052			mg/L	0.0005	0.003	08/02/13 18:49	msh
Copper, total	M200.8 ICP-MS	1	0.0264			mg/L	0.0005	0.003	08/08/13 23:54	msh
Iron, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.02	0.05	08/01/13 19:27	jjc
Iron, total	M200.7 ICP	1	0.34			mg/L	0.02	0.05	08/02/13 22:07	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0016			mg/L	0.0001	0.0005	08/02/13 18:49	msh
Lead, total	M200.8 ICP-MS	1	0.0174			mg/L	0.0001	0.0005	08/08/13 23:54	msh
Magnesium, dissolved	M200.7 ICP	1	3.2			mg/L	0.2	1	08/01/13 19:27	jjc
Manganese, dissolved	M200.7 ICP	1	0.153		*	mg/L	0.005	0.03	08/01/13 19:27	jjc
Manganese, total	M200.7 ICP	1	0.181			mg/L	0.005	0.03	08/02/13 22:07	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	08/01/13 11:41	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:27	jjc
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	08/02/13 22:07	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0003	08/02/13 18:49	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	08/02/13 18:49	msh
Silver, total	M200.8 ICP-MS	1	0.00006	B		mg/L	0.00005	0.0003	08/06/13 21:51	las
Uranium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	08/02/13 18:49	msh
Uranium, total	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	08/06/13 21:51	las
Zinc, dissolved	M200.7 ICP	1	0.40			mg/L	0.01	0.05	08/01/13 19:27	jjc
Zinc, total	M200.7 ICP	1	0.48			mg/L	0.01	0.05	08/02/13 22:07	aeb

Caldera Mineral Resources

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L13488-04**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	46		*	mg/L	2	20	07/27/13 0:00	khw
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Total Alkalinity		1	46		*	mg/L	2	20	07/27/13 0:00	khw
Chloride	SM4500Cl-E	1	1	B	*	mg/L	1	5	08/05/13 15:48	mpb
Conductivity @25C	SM2510B	1	996		*	umhos/cm	1	10	07/27/13 20:35	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/07/13 20:09	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/07/13 20:33	pjb
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	07/25/13 12:46	khw
Hardness as CaCO ₃	SM2340B - Calculation		546			mg/L	1	7	08/09/13 16:01	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/30/13 10:16	khw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							07/30/13 18:09	scp
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.06	B		mg/L	0.02	0.1	08/09/13 16:01	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.06	B	*	mg/L	0.02	0.1	07/25/13 19:38	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/25/13 19:38	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	08/05/13 15:35	tcd
pH (lab)	SM4500H+ B									
pH		1	8.0	H	*	units	0.1	0.1	07/27/13 0:00	khw
pH measured at		1	19.0		*	C	0.1	0.1	07/27/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	816		*	mg/L	10	20	07/31/13 13:58	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	07/31/13 11:33	mss3
Sulfate	D516-02 - Turbidimetric	20	513		*	mg/L	20	100	08/08/13 10:50	bsu
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	07/31/13 13:49	abm

Caldera Mineral Resources

Project ID:

Sample ID: CB-E

ACZ Sample ID: **L13488-05**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-						08/06/13 12:32	tcd
Cyanide, WAD	SM4500-CN I- distillation								08/06/13 14:41	tcd
Total Hot Plate Digestion	M200.2 ICP								08/01/13 16:58	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								08/05/13 20:24	las
Total Recoverable Digestion	M200.2 ICP-MS								08/06/13 13:12	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.052			mg/L	0.001	0.005	08/07/13 19:06	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0002	0.001	08/02/13 18:53	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0010			mg/L	0.0002	0.001	08/07/13 1:28	pmc
Barium, dissolved	M200.7 ICP	1	0.021			mg/L	0.003	0.02	08/01/13 19:30	jjc
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:30	jjc
Boron, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	08/01/13 19:30	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0017			mg/L	0.0001	0.0005	08/02/13 18:53	msh
Cadmium, total	M200.8 ICP-MS	1	0.0021			mg/L	0.0001	0.0005	08/08/13 23:57	msh
Calcium, dissolved	M200.7 ICP	1	216			mg/L	0.2	1	08/01/13 19:30	jjc
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/02/13 18:53	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/08/13 23:57	msh
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	08/09/13 16:01	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0069			mg/L	0.0005	0.003	08/02/13 18:53	msh
Copper, total	M200.8 ICP-MS	1	0.0288			mg/L	0.0005	0.003	08/08/13 23:57	msh
Iron, dissolved	M200.7 ICP	1	0.04	B		mg/L	0.02	0.05	08/01/13 19:30	jjc
Iron, total	M200.7 ICP	1	0.37			mg/L	0.02	0.05	08/02/13 22:10	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0036			mg/L	0.0001	0.0005	08/02/13 18:53	msh
Lead, total	M200.8 ICP-MS	1	0.0252			mg/L	0.0001	0.0005	08/08/13 23:57	msh
Magnesium, dissolved	M200.7 ICP	1	3.3			mg/L	0.2	1	08/01/13 19:30	jjc
Manganese, dissolved	M200.7 ICP	1	0.146		*	mg/L	0.005	0.03	08/01/13 19:30	jjc
Manganese, total	M200.7 ICP	1	0.250			mg/L	0.005	0.03	08/02/13 22:10	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	08/01/13 11:43	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:30	jjc
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	08/02/13 22:10	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0003	08/02/13 18:53	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	08/02/13 18:53	msh
Silver, total	M200.8 ICP-MS	1	0.00007	B		mg/L	0.00005	0.0003	08/08/13 23:57	msh
Uranium, dissolved	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0001	0.0005	08/02/13 18:53	msh
Uranium, total	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	08/08/13 23:57	msh
Zinc, dissolved	M200.7 ICP	1	0.41			mg/L	0.01	0.05	08/01/13 19:30	jjc
Zinc, total	M200.7 ICP	1	0.52			mg/L	0.01	0.05	08/02/13 22:10	aeb

Caldera Mineral Resources

Project ID:

Sample ID: CB-E

ACZ Sample ID: **L13488-05**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	51		*	mg/L	2	20	07/27/13 0:00	khw
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Total Alkalinity		1	51		*	mg/L	2	20	07/27/13 0:00	khw
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	08/05/13 15:48	mpb
Conductivity @25C	SM2510B	1	1000		*	umhos/cm	1	10	07/27/13 20:43	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/07/13 20:10	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/07/13 20:35	pjb
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	07/25/13 12:51	khw
Hardness as CaCO ₃	SM2340B - Calculation		554			mg/L	1	7	08/09/13 16:01	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/30/13 10:20	khw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							07/30/13 18:11	scp
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.07	B		mg/L	0.02	0.1	08/09/13 16:01	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.07	B	*	mg/L	0.02	0.1	07/25/13 19:39	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/25/13 19:39	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	08/05/13 15:36	tcd
pH (lab)	SM4500H+ B									
pH		1	8.0	H	*	units	0.1	0.1	07/27/13 0:00	khw
pH measured at		1	19.0		*	C	0.1	0.1	07/27/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	812		*	mg/L	10	20	07/31/13 14:00	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	07/31/13 11:38	mss3
Sulfate	D516-02 - Turbidimetric	20	487		*	mg/L	20	100	08/08/13 11:29	bsu
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	07/31/13 13:55	abm

Caldera Mineral Resources

Project ID:

Sample ID: CB-F

ACZ Sample ID: **L13488-06**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								08/06/13 12:32	tcd
Cyanide, WAD	SM4500-CN I- distillation								08/06/13 14:54	tcd
Total Hot Plate Digestion	M200.2 ICP								08/01/13 17:20	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								08/05/13 20:36	las
Total Recoverable Digestion	M200.2 ICP-MS				*				08/06/13 13:24	scp

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	5	0.026	B		mg/L	0.005	0.03	08/07/13 19:10	msh
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	08/02/13 18:56	msh
Arsenic, total recoverable	M200.8 ICP-MS	5		U		mg/L	0.001	0.005	08/07/13 1:31	pmc
Barium, dissolved	M200.7 ICP	1	0.028			mg/L	0.003	0.02	08/01/13 19:33	jjc
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:33	jjc
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:33	jjc
Cadmium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	08/02/13 18:56	msh
Cadmium, total	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	08/06/13 21:58	las
Calcium, dissolved	M200.7 ICP	1	18.6			mg/L	0.2	1	08/01/13 19:33	jjc
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/02/13 18:56	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	08/06/13 21:58	las
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	08/09/13 16:01	calc
Copper, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.003	08/02/13 18:56	msh
Copper, total	M200.8 ICP-MS	1	0.0009	B		mg/L	0.0005	0.003	08/09/13 0:00	msh
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	08/01/13 19:33	jjc
Iron, total	M200.7 ICP	1		U		mg/L	0.02	0.05	08/02/13 22:13	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	08/02/13 18:56	msh
Lead, total	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	08/09/13 0:00	msh
Magnesium, dissolved	M200.7 ICP	1	0.6	B		mg/L	0.2	1	08/01/13 19:33	jjc
Manganese, dissolved	M200.7 ICP	1		U	*	mg/L	0.005	0.03	08/01/13 19:33	jjc
Manganese, total	M200.7 ICP	1		U		mg/L	0.005	0.03	08/02/13 22:13	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	08/01/13 11:45	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	08/01/13 19:33	jjc
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	08/02/13 22:13	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0003	08/02/13 18:56	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	08/02/13 18:56	msh
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	08/06/13 21:58	las
Uranium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	08/02/13 18:56	msh
Uranium, total	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	08/06/13 21:58	las
Zinc, dissolved	M200.7 ICP	1	0.03	B		mg/L	0.01	0.05	08/01/13 19:33	jjc
Zinc, total	M200.7 ICP	1	0.03	B		mg/L	0.01	0.05	08/02/13 22:13	aeb

Caldera Mineral Resources

Project ID:

Sample ID: CB-F

ACZ Sample ID: **L13488-06**

Date Sampled: 07/24/13 00:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	27		*	mg/L	2	20	07/27/13 0:00	khw
Carbonate as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Hydroxide as CaCO ₃		1		U	*	mg/L	2	20	07/27/13 0:00	khw
Total Alkalinity		1	27		*	mg/L	2	20	07/27/13 0:00	khw
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	08/05/13 15:50	mpb
Conductivity @25C	SM2510B	1	111		*	umhos/cm	1	10	07/27/13 20:58	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/07/13 20:11	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	08/07/13 20:37	pjb
Dissolved Chromium, Hexavalent	SM3500Cr-D	1		UH	*	mg/L	0.005	0.02	07/25/13 12:57	khw
Hardness as CaCO ₃	SM2340B - Calculation		49			mg/L	1	7	08/09/13 16:01	calc
Lab Filtration (0.45um filter)	SOPWC050	1							07/30/13 10:24	khw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							07/30/13 18:14	scp
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.33			mg/L	0.02	0.1	08/09/13 16:01	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.33		*	mg/L	0.02	0.1	07/25/13 19:40	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	07/25/13 19:40	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	08/05/13 15:38	tcd
pH (lab)	SM4500H+ B									
pH		1	7.9	H	*	units	0.1	0.1	07/27/13 0:00	khw
pH measured at		1	20.0		*	C	0.1	0.1	07/27/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	70		*	mg/L	10	20	07/31/13 14:02	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	07/31/13 11:40	mss3
Sulfate	D516-02 - Turbidimetric	1	25.6		*	mg/L	1	5	08/08/13 11:10	bsu
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	07/31/13 14:01	abm

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources

ACZ Project ID: **L13488**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348361													
WG348361PBW1	PBW	07/27/13 14:21				16.3	mg/L		-20	20			
WG348361LCSW2	LCSW	07/27/13 14:34	WC130724-	820.0001		757.8	mg/L	92.4	90	110			
WG348361LCSW5	LCSW	07/27/13 16:23	WC130724-	820.0001		770.4	mg/L	94	90	110			
WG348361PBW2	PBW	07/27/13 16:32				3.1	mg/L		-20	20			
WG348361LCSW8	LCSW	07/27/13 19:29	WC130724-	820.0001		786.1	mg/L	95.9	90	110			
WG348361PBW3	PBW	07/27/13 19:38				2.8	mg/L		-20	20			
L13488-05DUP	DUP	07/27/13 20:51			51	45.6	mg/L				11.2	20	
L13493-04DUP	DUP	07/27/13 22:51			2280	2268.5	mg/L				0.5	20	
WG348361LCSW11	LCSW	07/27/13 23:04	WC130724-	820.0001		764.5	mg/L	93.2	90	110			
WG348361PBW4	PBW	07/27/13 23:12				3	mg/L		-20	20			
WG348361LCSW14	LCSW	07/28/13 2:19	WC130724-	820.0001		765.6	mg/L	93.4	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG349052													
WG349052ICV	ICV	08/07/13 18:13	MS130717-9	.1		.0983	mg/L	98.3	90	110			
WG349052ICB	ICB	08/07/13 18:17				U	mg/L		-0.003	0.003			
WG348749LRB	LRB	08/07/13 18:20				.0022	mg/L		-0.0022	0.0022			
WG348749LFB	LFB	08/07/13 18:23	MS130717-1	.050055		.0483	mg/L	96.5	85	115			
WG348897LRB	LRB	08/07/13 18:40				.001	mg/L		-0.0022	0.0022			
WG348897LFB	LFB	08/07/13 18:43	MS130717-1	.050055		.0569	mg/L	113.7	85	115			
L13529-02LFM	LFM	08/07/13 19:16	MS130717-1	.050055	.136	.1779	mg/L	83.7	70	130			
L13529-02LFMD	LFMD	08/07/13 19:20	MS130717-1	.050055	.136	.1778	mg/L	83.5	70	130	0.06	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348694													
WG348694ICV	ICV	08/02/13 17:16	MS130717-9	.05		.05333	mg/L	106.7	90	110			
WG348694ICB	ICB	08/02/13 17:19				U	mg/L		-0.0006	0.0006			
WG348694LFB	LFB	08/02/13 17:22	MS130717-1	.05005		.04897	mg/L	97.8	85	115			
L13459-03AS	AS	08/02/13 18:19	MS130717-1	25.025	U	24.74	mg/L	98.9	70	130			
L13459-03ASD	ASD	08/02/13 18:22	MS130717-1	25.025	U	25.2	mg/L	100.7	70	130	1.84	20	

Arsenic, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348967													
WG348967ICV	ICV	08/07/13 1:02	MS130717-9	.05		.05234	mg/L	104.7	90	110			
WG348967ICB	ICB	08/07/13 1:05				U	mg/L		-0.0006	0.0006			
WG348897LRB	LRB	08/07/13 1:09				U	mg/L		-0.00044	0.00044			
WG348897LFB	LFB	08/07/13 1:12	MS130717-1	.05005		.05237	mg/L	104.6	85	115			
L13529-02LFM	LFM	08/07/13 1:47	MS130717-1	.05005	.0002	.04789	mg/L	95.3	70	130			
L13529-02LFMD	LFMD	08/07/13 1:50	MS130717-1	.05005	.0002	.0483	mg/L	96.1	70	130	0.85	20	

Caldera Mineral Resources

ACZ Project ID: **L13488**

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348699													
WG348699ICV	ICV	08/01/13 17:54	II130729-1	2		1.9865	mg/L	99.3	95	105			
WG348699ICB	ICB	08/01/13 18:00				U	mg/L		-0.009	0.009			
WG348699LFB	LFB	08/01/13 18:13	II130716-5	.5		.4952	mg/L	99	85	115			
L13483-03AS	AS	08/01/13 19:02	II130716-5	.5	.015	.5106	mg/L	99.1	85	115			
L13483-03ASD	ASD	08/01/13 19:05	II130716-5	.5	.015	.5083	mg/L	98.7	85	115	0.45	20	

Beryllium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348699													
WG348699ICV	ICV	08/01/13 17:54	II130729-1	2		1.975	mg/L	98.8	95	105			
WG348699ICB	ICB	08/01/13 18:00				U	mg/L		-0.03	0.03			
WG348699LFB	LFB	08/01/13 18:13	II130716-5	.5		.507	mg/L	101.4	85	115			
L13483-03AS	AS	08/01/13 19:02	II130716-5	.5	U	.5	mg/L	100	85	115			
L13483-03ASD	ASD	08/01/13 19:05	II130716-5	.5	U	.498	mg/L	99.6	85	115	0.4	20	

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348699													
WG348699ICV	ICV	08/01/13 17:54	II130729-1	2		2.03	mg/L	101.5	95	105			
WG348699ICB	ICB	08/01/13 18:00				U	mg/L		-0.03	0.03			
WG348699LFB	LFB	08/01/13 18:13	II130716-5	.5005		.52	mg/L	103.9	85	115			
L13483-03AS	AS	08/01/13 19:02	II130716-5	.5005	.01	.525	mg/L	102.9	85	115			
L13483-03ASD	ASD	08/01/13 19:05	II130716-5	.5005	.01	.526	mg/L	103.1	85	115	0.19	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348694													
WG348694ICV	ICV	08/02/13 17:16	MS130717-9	.05		.04725	mg/L	94.5	90	110			
WG348694ICB	ICB	08/02/13 17:19				U	mg/L		-0.0003	0.0003			
WG348694LFB	LFB	08/02/13 17:22	MS130717-1	.0501		.04417	mg/L	88.2	85	115			
L13459-03AS	AS	08/02/13 18:19	MS130717-1	25.05	.24	22.295	mg/L	88	70	130			
L13459-03ASD	ASD	08/02/13 18:22	MS130717-1	25.05	.24	22.335	mg/L	88.2	70	130	0.18	20	

Caldera Mineral Resources

ACZ Project ID: **L13488**

Cadmium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348943													
WG348943ICV	ICV	08/06/13 20:21	MS130717-9	.05		.04798	mg/L	96	90	110			
WG348943ICB	ICB	08/06/13 20:24				U	mg/L		-0.0003	0.0003			
WG348811LRB	LRB	08/06/13 20:27				U	mg/L		-0.00022	0.00022			
WG348811LFB	LFB	08/06/13 20:31	MS130717-1	.0501		.05232	mg/L	104.4	85	115			
L13488-06LFM	LFM	08/06/13 22:01	MS130717-1	.0501	.0003	.05158	mg/L	102.4	70	130			
L13488-06LFMD	LFMD	08/06/13 22:04	MS130717-1	.0501	.0003	.04821	mg/L	95.6	70	130	6.75	20	

WG349149

WG349149ICV	ICV	08/08/13 23:01	MS130717-9	.05		.05027	mg/L	100.5	90	110			
WG349149ICB	ICB	08/08/13 23:04				U	mg/L		-0.0003	0.0003			
WG348811LRB	LRB	08/08/13 23:07				U	mg/L		-0.00022	0.00022			
WG348811LFB	LFB	08/08/13 23:11	MS130717-1	.0501		.04812	mg/L	96	85	115			
L13488-06LFM	LFM	08/09/13 0:04	MS130717-1	.0501	U	.04605	mg/L	91.9	70	130			
L13488-06LFMD	LFMD	08/09/13 0:07	MS130717-1	.0501	U	.04604	mg/L	91.9	70	130	0.02	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348699													
WG348699ICV	ICV	08/01/13 17:54	II130729-1	100		100.21	mg/L	100.2	95	105			
WG348699ICB	ICB	08/01/13 18:00				U	mg/L		-0.6	0.6			
WG348699LFB	LFB	08/01/13 18:13	II130716-5	68.0028		71.24	mg/L	104.8	85	115			
L13483-03AS	AS	08/01/13 19:02	II130716-5	68.0028	48.5	116.8	mg/L	100.4	85	115			
L13483-03ASD	ASD	08/01/13 19:05	II130716-5	68.0028	48.5	116.6	mg/L	100.1	85	115	0.17	20	

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348826													
WG348826ICB	ICB	08/05/13 10:25				U	mg/L		-3	3			
WG348826ICV	ICV	08/05/13 10:25	WI130722-5	54.945		57.3	mg/L	104.3	90	110			
WG348826LFB1	LFB	08/05/13 14:27	WI130201-8	30		31.9	mg/L	106.3	90	110			
L13479-01DUP	DUP	08/05/13 14:27			22	22.5	mg/L				2.2	20	
L13482-01AS	AS	08/05/13 14:27	WI130201-8	30	2	34.6	mg/L	108.7	90	110			
L13488-03AS	AS	08/05/13 14:29	WI130201-8	30	U	33.2	mg/L	110.7	90	110			M1
L13505-14DUP	DUP	08/05/13 14:29			14	13.9	mg/L				0.7	20	
WG348826LFB2	LFB	08/05/13 14:31	WI130201-8	30		32.4	mg/L	108	90	110			
WG348858													
WG348858ICB	ICB	08/05/13 10:25				U	mg/L		-3	3			
WG348858ICV	ICV	08/05/13 10:25	WI130722-5	54.945		57.3	mg/L	104.3	90	110			
WG348858LFB	LFB	08/05/13 15:48	WI130201-8	30		32.6	mg/L	108.7	90	110			
L13376-01AS	AS	08/05/13 15:48	WI130201-8	30	30	60	mg/L	100	90	110			
L13376-02DUP	DUP	08/05/13 15:48			U	U	mg/L				0	20	RA

Caldera Mineral Resources

ACZ Project ID: **L13488**

Chromium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348694													
WG348694ICV	ICV	08/02/13 17:16	MS130717-9	.05		.04821	mg/L	96.4	90	110			
WG348694ICB	ICB	08/02/13 17:19				U	mg/L		-0.0015	0.0015			
WG348694LFB	LFB	08/02/13 17:22	MS130717-1	.05005		.04564	mg/L	91.2	85	115			
L13459-03AS	AS	08/02/13 18:19	MS130717-1	25.025	U	22.97	mg/L	91.8	70	130			
L13459-03ASD	ASD	08/02/13 18:22	MS130717-1	25.025	U	23.2	mg/L	92.7	70	130	1	20	

Chromium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348943													
WG348943ICV	ICV	08/06/13 20:21	MS130717-9	.05		.04723	mg/L	94.5	90	110			
WG348943ICB	ICB	08/06/13 20:24				U	mg/L		-0.0015	0.0015			
WG348811LRB	LRB	08/06/13 20:27				U	mg/L		-0.0011	0.0011			
WG348811LFB	LFB	08/06/13 20:31	MS130717-1	.05005		.05266	mg/L	105.2	85	115			
L13488-06LFM	LFM	08/06/13 22:01	MS130717-1	.05005	U	.05242	mg/L	104.7	70	130			
L13488-06LFMD	LFMD	08/06/13 22:04	MS130717-1	.05005	U	.0512	mg/L	102.3	70	130	2.35	20	

WG349149

WG349149ICV	ICV	08/08/13 23:01	MS130717-9	.05		.0494	mg/L	98.8	90	110			
WG349149ICB	ICB	08/08/13 23:04				U	mg/L		-0.0015	0.0015			
WG348811LRB	LRB	08/08/13 23:07				U	mg/L		-0.0011	0.0011			
WG348811LFB	LFB	08/08/13 23:11	MS130717-1	.05005		.04832	mg/L	96.5	85	115			
L13488-06LFM	LFM	08/09/13 0:04	MS130717-1	.05005	U	.04736	mg/L	94.6	70	130			
L13488-06LFMD	LFMD	08/09/13 0:07	MS130717-1	.05005	U	.04778	mg/L	95.5	70	130	0.88	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348361													
WG348361LCSW1	LCSW	07/27/13 14:23	PCN42820	1408.8		1465.3	µmhos/crr	104	90	110			
WG348361LCSW4	LCSW	07/27/13 16:11	PCN42820	1408.8		1429.4	µmhos/crr	101.5	90	110			
WG348361LCSW7	LCSW	07/27/13 19:17	PCN42820	1408.8		1367.9	µmhos/crr	97.1	90	110			
L13488-05DUP	DUP	07/27/13 20:51			1000	998	µmhos/crr				0.2	20	
L13493-04DUP	DUP	07/27/13 22:51			4310	4300	µmhos/crr				0.2	20	
WG348361LCSW10	LCSW	07/27/13 22:52	PCN42820	1408.8		1344.3	µmhos/crr	95.4	90	110			
WG348361LCSW13	LCSW	07/28/13 2:08	PCN42820	1408.8		1358.7	µmhos/crr	96.4	90	110			

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348694													
WG348694ICV	ICV	08/02/13 17:16	MS130717-9	.05		.04924	mg/L	98.5	90	110			
WG348694ICB	ICB	08/02/13 17:19				U	mg/L		-0.0015	0.0015			
WG348694LFB	LFB	08/02/13 17:22	MS130717-1	.05005		.04476	mg/L	89.4	85	115			
L13459-03AS	AS	08/02/13 18:19	MS130717-1	25.025	164	181.95	mg/L	71.7	70	130			
L13459-03ASD	ASD	08/02/13 18:22	MS130717-1	25.025	164	182.05	mg/L	72.1	70	130	0.05	20	

Caldera Mineral Resources

ACZ Project ID: **L13488**

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG349149													
WG349149ICV	ICV	08/08/13 23:01	MS130717-9	.05		.05007	mg/L	100.1	90	110			
WG349149ICB	ICB	08/08/13 23:04				U	mg/L		-0.0015	0.0015			
WG348811LRB	LRB	08/08/13 23:07				U	mg/L		-0.0011	0.0011			
WG348811LFB	LFB	08/08/13 23:11	MS130717-1	.05005		.04851	mg/L	96.9	85	115			
L13488-06LFM	LFM	08/09/13 0:04	MS130717-1	.05005	.0009	.04745	mg/L	93	70	130			
L13488-06LFMD	LFMD	08/09/13 0:07	MS130717-1	.05005	.0009	.04771	mg/L	93.5	70	130	0.55	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG349059													
WG349059ICV	ICV	08/07/13 18:54	WI130807-6	.3		.2903	mg/L	96.8	90	110			
WG349059ICB	ICB	08/07/13 18:55				U	mg/L		-0.003	0.003			
WG349061													
WG348905LRB	LRB	08/07/13 19:58				U	mg/L		-0.003	0.003			
WG348905LFB	LFB	08/07/13 19:58	WI130723-2	.2		.1805	mg/L	90.3	90	110			
L13479-01DUP	DUP	08/07/13 20:00			U	U	mg/L				0	20	RA
L13479-02LFM	LFM	08/07/13 20:02	WI130723-2	.2	U	.1561	mg/L	78.1	90	110			M2

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348865													
WG348865ICV	ICV	08/05/13 17:55	WI130723-6	.3		.2848	mg/L	94.9	90	110			
WG348865ICB	ICB	08/05/13 17:56				U	mg/L		-0.003	0.003			
WG348867													
WG348800LRB	LRB	08/05/13 18:32				U	mg/L		-0.003	0.003			
WG348800LFB	LFB	08/05/13 18:33	WI130723-4	.2		.1866	mg/L	93.3	90	110			
L13488-01DUP	DUP	08/05/13 18:35			U	U	mg/L				0	20	RA
L13488-02LFM	LFM	08/05/13 18:36	WI130723-4	.2	U	.1668	mg/L	83.4	90	110			M2
WG349059													
WG349059ICV	ICV	08/07/13 18:54	WI130807-6	.3		.2903	mg/L	96.8	90	110			
WG349059ICB	ICB	08/07/13 18:55				U	mg/L		-0.003	0.003			
WG349062													
WG348930LRB	LRB	08/07/13 20:32				U	mg/L		-0.003	0.003			
WG348930LFB	LFB	08/07/13 20:32	WI130723-2	.2		.1879	mg/L	94	90	110			
L13488-04DUP	DUP	08/07/13 20:34			U	U	mg/L				0	20	RA
L13488-05LFM	LFM	08/07/13 20:36	WI130723-2	.2	U	.1315	mg/L	65.8	90	110			M2

Dissolved Chromium, Hexavalent

SM3500Cr-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348252													
WG348252ICV	ICV	07/25/13 12:15	WC130531-	.05		.0489	mg/L	97.8	90	110			
WG348252ICB	ICB	07/25/13 12:20				U	mg/L		-0.015	0.015			
WG348252LFB	LFB	07/25/13 12:25	WC130523-	.05		.0509	mg/L	101.8	90	110			
L13488-06AS	AS	07/25/13 13:02	WC130523-	.05	U	.0521	mg/L	104.2	90	110			
L13488-06DUP	DUP	07/25/13 13:07			U	U	mg/L				0	20	RA

Caldera Mineral Resources

ACZ Project ID: **L13488**

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348699													
WG348699ICV	ICV	08/01/13 17:54	II130729-1	2		2.011	mg/L	100.6	95	105			
WG348699ICB	ICB	08/01/13 18:00				U	mg/L		-0.06	0.06			
WG348699LFB	LFB	08/01/13 18:13	II130716-5	1.0014		1.022	mg/L	102.1	85	115			
L13483-03AS	AS	08/01/13 19:02	II130716-5	1.0014	.08	1.09	mg/L	101.9	85	115			
L13483-03ASD	ASD	08/01/13 19:05	II130716-5	1.0014	.08	1.083	mg/L	101.2	85	115	0.64	20	
WG348997													
WG348997ICV	ICV	08/07/13 11:46	II130729-1	2		1.992	mg/L	99.6	95	105			
WG348997ICB	ICB	08/07/13 11:52				U	mg/L		-0.06	0.06			
WG348997LFB	LFB	08/07/13 12:04	II130716-5	1.0014		.982	mg/L	98.1	85	115			
L13326-03AS	AS	08/07/13 12:10	II130716-5	1.0014	U	.984	mg/L	98.3	85	115			
L13326-03ASD	ASD	08/07/13 12:13	II130716-5	1.0014	U	1.001	mg/L	100	85	115	1.71	20	

Iron, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348739													
WG348739ICV	ICV	08/02/13 21:11	II130716-1	2		2.026	mg/L	101.3	95	105			
WG348739ICB	ICB	08/02/13 21:17				U	mg/L		-0.06	0.06			
WG348663LRB	LRB	08/02/13 21:30				U	mg/L		-0.044	0.044			
WG348663LFB	LFB	08/02/13 21:33	II130716-5	1.0014		1.018	mg/L	101.7	85	115			
L13488-01LFM	LFM	08/02/13 21:49	II130716-5	1.0014	.12	1.134	mg/L	102.3	70	130			
L13488-01LFMD	LFMD	08/02/13 21:52	II130716-5	1.0014	.12	1.112	mg/L	100.1	70	130	1.96	20	
WG349094													
WG349094ICV	ICV	08/08/13 11:33	II130716-1	2		2.027	mg/L	101.4	95	105			
WG349094ICB	ICB	08/08/13 11:38				U	mg/L		-0.06	0.06			
WG349027LRB	LRB	08/08/13 11:51				U	mg/L		-0.044	0.044			
WG349027LFB	LFB	08/08/13 11:54	II130716-5	1.0014		1.036	mg/L	103.5	85	115			
L13603-01LFM	LFM	08/08/13 12:09	II130716-5	1.0014	.25	1.291	mg/L	104	70	130			
L13603-01LFMD	LFMD	08/08/13 12:12	II130716-5	1.0014	.25	1.277	mg/L	102.6	70	130	1.09	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348694													
WG348694ICV	ICV	08/02/13 17:16	MS130717-9	.05		.05098	mg/L	102	90	110			
WG348694ICB	ICB	08/02/13 17:19				U	mg/L		-0.0003	0.0003			
WG348694LFB	LFB	08/02/13 17:22	MS130717-1	.05005		.04561	mg/L	91.1	85	115			
L13459-03AS	AS	08/02/13 18:19	MS130717-1	25.025	U	22.645	mg/L	90.5	70	130			
L13459-03ASD	ASD	08/02/13 18:22	MS130717-1	25.025	U	22.72	mg/L	90.8	70	130	0.33	20	

Caldera Mineral Resources

ACZ Project ID: **L13488**

Lead, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG349149													
WG349149ICV	ICV	08/08/13 23:01	MS130717-9	.05		.04838	mg/L	96.8	90	110			
WG349149ICB	ICB	08/08/13 23:04				U	mg/L		-0.0003	0.0003			
WG348811LRB	LRB	08/08/13 23:07				U	mg/L		-0.00022	0.00022			
WG348811LFB	LFB	08/08/13 23:11	MS130717-1	.05005		.04384	mg/L	87.6	85	115			
L13488-06LFM	LFM	08/09/13 0:04	MS130717-1	.05005	.0003	.0447	mg/L	88.7	70	130			
L13488-06LFMD	LFMD	08/09/13 0:07	MS130717-1	.05005	.0003	.04485	mg/L	89	70	130	0.34	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348699													
WG348699ICV	ICV	08/01/13 17:54	II130729-1	100		98.82	mg/L	98.8	95	105			
WG348699ICB	ICB	08/01/13 18:00				U	mg/L		-0.6	0.6			
WG348699LFB	LFB	08/01/13 18:13	II130716-5	49.99752		50.38	mg/L	100.8	85	115			
L13483-03AS	AS	08/01/13 19:02	II130716-5	49.99752	6.8	56.55	mg/L	99.5	85	115			
L13483-03ASD	ASD	08/01/13 19:05	II130716-5	49.99752	6.8	56.43	mg/L	99.3	85	115	0.21	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348699													
WG348699ICV	ICV	08/01/13 17:54	II130729-1	2		1.9722	mg/L	98.6	95	105			
WG348699ICB	ICB	08/01/13 18:00				U	mg/L		-0.015	0.015			
WG348699LFB	LFB	08/01/13 18:13	II130716-5	.5		.5067	mg/L	101.3	85	115			
L13483-03AS	AS	08/01/13 19:02	II130716-5	.5	1.52	1.904	mg/L	76.8	85	115			M3
L13483-03ASD	ASD	08/01/13 19:05	II130716-5	.5	1.52	1.903	mg/L	76.6	85	115	0.05	20	M3

Manganese, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348739													
WG348739ICV	ICV	08/02/13 21:11	II130716-1	2		1.986	mg/L	99.3	95	105			
WG348739ICB	ICB	08/02/13 21:17				U	mg/L		-0.015	0.015			
WG348663LRB	LRB	08/02/13 21:30				U	mg/L		-0.011	0.011			
WG348663LFB	LFB	08/02/13 21:33	II130716-5	.5		.5004	mg/L	100.1	85	115			
L13488-01LFM	LFM	08/02/13 21:49	II130716-5	.5	.188	.7071	mg/L	103.8	70	130			
L13488-01LFMD	LFMD	08/02/13 21:52	II130716-5	.5	.188	.6764	mg/L	97.7	70	130	4.44	20	

Mercury, total

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348520													
WG348520ICV	ICV	08/01/13 8:48	II130711-4	.005025		.00483	mg/L	96.1	95	105			
WG348520ICB	ICB	08/01/13 8:51				U	mg/L		-0.0002	0.0002			
WG348586													
WG348586LRB	LRB	08/01/13 11:26				U	mg/L		-0.00044	0.00044			
WG348586LFB	LFB	08/01/13 11:28	II130708-7	.002002		.0018	mg/L	89.9	85	115			
L13488-03LFM	LFM	08/01/13 11:37	II130708-7	.002002	U	.00185	mg/L	92.4	85	115			
L13488-03LFMD	LFMD	08/01/13 11:39	II130708-7	.002002	U	.00182	mg/L	90.9	85	115	1.63	20	

Caldera Mineral Resources

ACZ Project ID: **L13488**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348699													
WG348699ICV	ICV	08/01/13 17:54	II130729-1	2		2.031	mg/L	101.6	95	105			
WG348699ICB	ICB	08/01/13 18:00				U	mg/L		-0.03	0.03			
WG348699LFB	LFB	08/01/13 18:13	II130716-5	.5		.506	mg/L	101.2	85	115			
L13483-03AS	AS	08/01/13 19:02	II130716-5	.5	U	.511	mg/L	102.2	85	115			
L13483-03ASD	ASD	08/01/13 19:05	II130716-5	.5	U	.511	mg/L	102.2	85	115	0	20	

Nickel, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348739													
WG348739ICV	ICV	08/02/13 21:11	II130716-1	2		1.998	mg/L	99.9	95	105			
WG348739ICB	ICB	08/02/13 21:17				U	mg/L		-0.03	0.03			
WG348663LRB	LRB	08/02/13 21:30				U	mg/L		-0.022	0.022			
WG348663LFB	LFB	08/02/13 21:33	II130716-5	.5		.495	mg/L	99	85	115			
L13488-01LFM	LFM	08/02/13 21:49	II130716-5	.5	U	.507	mg/L	101.4	70	130			
L13488-01LFMD	LFMD	08/02/13 21:52	II130716-5	.5	U	.485	mg/L	97	70	130	4.44	20	

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348280													
WG348280ICV	ICV	07/25/13 19:20	WI130712-3	2.416		2.499	mg/L	103.4	90	110			
WG348280ICB	ICB	07/25/13 19:21				U	mg/L		-0.06	0.06			
WG348280LFB	LFB	07/25/13 19:25	WI130215-3	2		2.026	mg/L	101.3	90	110			
L13479-01AS	AS	07/25/13 19:27	WI130215-3	2	.04	2.105	mg/L	103.3	90	110			
L13479-02DUP	DUP	07/25/13 19:29			U	U	mg/L				0	20	RA

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348280													
WG348280ICV	ICV	07/25/13 19:20	WI130712-3	.609		.582	mg/L	95.6	90	110			
WG348280ICB	ICB	07/25/13 19:21				U	mg/L		-0.03	0.03			
WG348280LFB	LFB	07/25/13 19:25	WI130215-3	1		1.037	mg/L	103.7	90	110			
L13479-01AS	AS	07/25/13 19:27	WI130215-3	1	U	1.043	mg/L	104.3	90	110			
L13479-02DUP	DUP	07/25/13 19:29			U	U	mg/L				0	20	RA

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348830													
WG348830ICV	ICV	08/05/13 13:12	WI121105-5	1.003		1.065	mg/L	106.2	90	110			
WG348830ICB	ICB	08/05/13 13:15				U	mg/L		-0.15	0.15			
WG348851													
WG348851LFB1	LFB	08/05/13 15:06	WI121218-3	1		1.002	mg/L	100.2	90	110			
L13378-03AS	AS	08/05/13 15:23	WI121218-3	1	U	.97	mg/L	97	90	110			
L13378-04DUP	DUP	08/05/13 15:25			U	U	mg/L				0	20	RA
WG348851LFB2	LFB	08/05/13 15:37	WI121218-3	1		1.006	mg/L	100.6	90	110			
L13488-06AS	AS	08/05/13 15:39	WI121218-3	1	U	1.021	mg/L	102.1	90	110			
L13506-10DUP	DUP	08/05/13 15:41			.08	.083	mg/L				3.7	20	RA

Caldera Mineral Resources

ACZ Project ID: **L13488**

pH (lab) SM4500H+ B													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348361													
WG348361LCSW3	LCSW	07/27/13 14:37	PCN41777	6		6.01	units	100.2	98	102			
WG348361LCSW6	LCSW	07/27/13 16:27	PCN41777	6		6.04	units	100.7	98	102			
WG348361LCSW9	LCSW	07/27/13 19:33	PCN41777	6		6.04	units	100.7	98	102			
L13488-05DUP	DUP	07/27/13 20:51			8	8.01	units				0.1	20	
L13493-04DUP	DUP	07/27/13 22:51			8.6	8.64	units				0.5	20	
WG348361LCSW12	LCSW	07/27/13 23:07	PCN41777	6		6.03	units	100.5	98	102			
WG348361LCSW15	LCSW	07/28/13 2:23	PCN41777	6		6.04	units	100.7	98	102			
Residue, Filterable (TDS) @180C SM2540C													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348592													
WG348592PBW	PBW	07/31/13 13:50				U	mg/L		-20	20			
WG348592LCSW	LCSW	07/31/13 13:51	PCN42842	260		264	mg/L	101.5	80	120			
L13539-01DUP	DUP	07/31/13 14:10			1030	1050	mg/L				1.9	10	
Residue, Non-Filterable (TSS) @105C SM2540D													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348568													
WG348568PBW	PBW	07/31/13 11:10				U	mg/L		-6	6			
WG348568LCSW	LCSW	07/31/13 11:12	PCN42842	160		148	mg/L	92.5	80	120			
L13488-04DUP	DUP	07/31/13 11:36			U	U	mg/L				0	10	RA
L13493-04DUP	DUP	07/31/13 11:59			13	14	mg/L				7.4	10	RA
Selenium, dissolved M200.8 ICP-MS													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348694													
WG348694ICV	ICV	08/02/13 17:16	MS130717-9	.05		.05401	mg/L	108	90	110			
WG348694ICB	ICB	08/02/13 17:19				U	mg/L		-0.0003	0.0003			
WG348694LFB	LFB	08/02/13 17:22	MS130717-1	.05005		.04789	mg/L	95.7	85	115			
L13459-03AS	AS	08/02/13 18:19	MS130717-1	25.025	U	23.455	mg/L	93.7	70	130			
L13459-03ASD	ASD	08/02/13 18:22	MS130717-1	25.025	U	23.725	mg/L	94.8	70	130	1.14	20	
Silver, dissolved M200.8 ICP-MS													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348694													
WG348694ICV	ICV	08/02/13 17:16	MS130717-9	.02002		.01927	mg/L	96.3	90	110			
WG348694ICB	ICB	08/02/13 17:19				U	mg/L		-0.00015	0.00015			
WG348694LFB	LFB	08/02/13 17:22	MS130717-1	.01001		.009023	mg/L	90.1	85	115			
L13459-03AS	AS	08/02/13 18:19	MS130717-1	5.005	U	4.547	mg/L	90.8	70	130			
L13459-03ASD	ASD	08/02/13 18:22	MS130717-1	5.005	U	4.52	mg/L	90.3	70	130	0.6	20	

Caldera Mineral Resources

ACZ Project ID: **L13488**

Silver, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348943													
WG348943ICV	ICV	08/06/13 20:21	MS130717-9	.02002		.01961	mg/L	98	90	110			
WG348943ICB	ICB	08/06/13 20:24				U	mg/L		-0.00015	0.00015			
WG348811LRB	LRB	08/06/13 20:27				U	mg/L		-0.00011	0.00011			
WG348811LFB	LFB	08/06/13 20:31	MS130717-1	.01001		.01055	mg/L	105.4	85	115			
L13488-06LFM	LFM	08/06/13 22:01	MS130717-1	.01001	U	.01058	mg/L	105.7	70	130			
L13488-06LFMD	LFMD	08/06/13 22:04	MS130717-1	.01001	U	.009913	mg/L	99	70	130	6.51	20	

WG349149

WG349149ICV	ICV	08/08/13 23:01	MS130717-9	.02002		.0201	mg/L	100.4	90	110			
WG349149ICB	ICB	08/08/13 23:04				U	mg/L		-0.00015	0.00015			
WG348811LRB	LRB	08/08/13 23:07				U	mg/L		-0.00011	0.00011			
WG348811LFB	LFB	08/08/13 23:11	MS130717-1	.01001		.009559	mg/L	95.5	85	115			
L13488-06LFM	LFM	08/09/13 0:04	MS130717-1	.01001	U	.009323	mg/L	93.1	70	130			
L13488-06LFMD	LFMD	08/09/13 0:07	MS130717-1	.01001	U	.009266	mg/L	92.6	70	130	0.61	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG349105													
WG349105ICB	ICB	08/08/13 9:37				U	mg/L		-3	3			
WG349105ICV	ICV	08/08/13 9:37	WI130808-1	20		19.3	mg/L	96.5	90	110			
WG349105LFB	LFB	08/08/13 10:38	WI130416-3	9.99		10.5	mg/L	105.1	90	110			
L13483-01DUP	DUP	08/08/13 10:45			133	131	mg/L				1.5	20	
L13483-02AS	AS	08/08/13 10:45	SO4TURB5	10	132	140	mg/L	80	90	110			M3
L13658-01DUP	DUP	08/08/13 11:18			192	190	mg/L				1	20	
L13658-02AS	AS	08/08/13 11:30	SO4TURB10	10	201	209	mg/L	80	90	110			M3

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348547													
WG348547ICV	ICV	07/31/13 9:15	WC130730-	.31734		.33	mg/L	104	90	110			
WG348547ICB	ICB	07/31/13 9:21				U	mg/L		-0.06	0.06			
WG348583													
WG348583ICV	ICV	07/31/13 13:15	WC130730-	.31734		.307	mg/L	96.7	90	110			
WG348583ICB	ICB	07/31/13 13:20				U	mg/L		-0.06	0.06			
WG348583LFB	LFB	07/31/13 13:26	WC130730-	.22044		.234	mg/L	106.2	80	120			
L13513-05AS	AS	07/31/13 14:42	WC130730-	.22044	U	.248	mg/L	112.5	75	125			
L13513-05DUP	DUP	07/31/13 14:47			U	U	mg/L				0	20	RA

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348694													
WG348694ICV	ICV	08/02/13 17:16	MS130717-9	.05		.05263	mg/L	105.3	90	110			
WG348694ICB	ICB	08/02/13 17:19				U	mg/L		-0.0003	0.0003			
WG348694LFB	LFB	08/02/13 17:22	MS130717-1	.05		.04896	mg/L	97.9	85	115			
L13459-03AS	AS	08/02/13 18:19	MS130717-1	25	.13	24.195	mg/L	96.3	70	130			
L13459-03ASD	ASD	08/02/13 18:22	MS130717-1	25	.13	24.16	mg/L	96.1	70	130	0.14	20	

Caldera Mineral Resources

ACZ Project ID: **L13488**

Uranium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348943													
WG348943ICV	ICV	08/06/13 20:21	MS130717-9	.05		.0514	mg/L	102.8	90	110			
WG348943ICB	ICB	08/06/13 20:24				U	mg/L		-0.0003	0.0003			
WG348811LRB	LRB	08/06/13 20:27				U	mg/L		-0.00022	0.00022			
WG348811LFB	LFB	08/06/13 20:31	MS130717-1	.05		.05355	mg/L	107.1	85	115			
L13488-06LFM	LFM	08/06/13 22:01	MS130717-1	.05	.0003	.05794	mg/L	115.3	70	130			
L13488-06LFMD	LFMD	08/06/13 22:04	MS130717-1	.05	.0003	.0533	mg/L	106	70	130	8.34	20	

WG349149

WG349149ICV	ICV	08/08/13 23:01	MS130717-9	.05		.0529	mg/L	105.8	90	110			
WG349149ICB	ICB	08/08/13 23:04				U	mg/L		-0.0003	0.0003			
WG348811LRB	LRB	08/08/13 23:07				U	mg/L		-0.00022	0.00022			
WG348811LFB	LFB	08/08/13 23:11	MS130717-1	.05		.04769	mg/L	95.4	85	115			
L13488-06LFM	LFM	08/09/13 0:04	MS130717-1	.05	.0003	.05087	mg/L	101.1	70	130			
L13488-06LFMD	LFMD	08/09/13 0:07	MS130717-1	.05	.0003	.05058	mg/L	100.6	70	130	0.57	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348699													
WG348699ICV	ICV	08/01/13 17:54	II130729-1	2		1.958	mg/L	97.9	95	105			
WG348699ICB	ICB	08/01/13 18:00				U	mg/L		-0.03	0.03			
WG348699LFB	LFB	08/01/13 18:13	II130716-5	.5		.512	mg/L	102.4	85	115			
L13483-03AS	AS	08/01/13 19:02	II130716-5	.5	.02	.53	mg/L	102	85	115			
L13483-03ASD	ASD	08/01/13 19:05	II130716-5	.5	.02	.525	mg/L	101	85	115	0.95	20	

Zinc, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG348739													
WG348739ICV	ICV	08/02/13 21:11	II130716-1	2		1.993	mg/L	99.7	95	105			
WG348739ICB	ICB	08/02/13 21:17				U	mg/L		-0.03	0.03			
WG348663LRB	LRB	08/02/13 21:30				U	mg/L		-0.022	0.022			
WG348663LFB	LFB	08/02/13 21:33	II130716-5	.5		.504	mg/L	100.8	85	115			
L13488-01LFM	LFM	08/02/13 21:49	II130716-5	.5	.23	.754	mg/L	106.8	70	130			
L13488-01LFMD	LFMD	08/02/13 21:52	II130716-5	.5	.23	.722	mg/L	100.4	70	130	4.34	20	

Caldera Mineral Resources

ACZ Project ID: **L13488**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L13488-01	WG348897	Total Recoverable Digestion	M200.2 ICP-MS	DJ	Sample dilution required due to insufficient sample.
	WG348699	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.
	WG348361	Bicarbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348826	Chloride	SM4500Cl-E	Q6	Sample was received above recommended temperature.
	WG348361	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG349061	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348867	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500-CN I-Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348252	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	Q6	Sample was received above recommended temperature.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Hydroxide as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348280	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348851	Nitrogen, ammonia	M350.1 - Automated Phenate	Q6	Sample was received above recommended temperature.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	pH	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG348592	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
	WG348568	Residue, Non-Filterable (TSS) @105C	SM2540D	Q6	Sample was received above recommended temperature.
			SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG349105	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	Q6	Sample was received above recommended temperature.
	WG348583	Sulfide as S	SM4500S2-D	Q6	Sample was received above recommended temperature.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.

Caldera Mineral Resources

ACZ Project ID: **L13488**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L13488-02	WG349027	Total Hot Plate Digestion	M200.2 ICP	DJ	Sample dilution required due to insufficient sample.
	WG348699	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.
	WG348361	Bicarbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348826	Chloride	SM4500Cl-E	Q6	Sample was received above recommended temperature.
	WG348361	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG349061	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348867	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500-CN I-Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348252	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	Q6	Sample was received above recommended temperature.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Hydroxide as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348280	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348851	Nitrogen, ammonia	M350.1 - Automated Phenate	Q6	Sample was received above recommended temperature.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	pH	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG348592	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
	WG348568	Residue, Non-Filterable (TSS) @105C	SM2540D	Q6	Sample was received above recommended temperature.
			SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG349105	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	Q6	Sample was received above recommended temperature.
	WG348583	Sulfide as S	SM4500S2-D	Q6	Sample was received above recommended temperature.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.

Caldera Mineral Resources

ACZ Project ID: **L13488**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L13488-03	WG348699	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.
	WG348361	Bicarbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348826	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	Q6	Sample was received above recommended temperature.
	WG348361	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG349061	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348867	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500-CN I-Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348252	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	Q6	Sample was received above recommended temperature.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Hydroxide as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348280	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348851	Nitrogen, ammonia	M350.1 - Automated Phenate	Q6	Sample was received above recommended temperature.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	pH	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG348592	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
	WG348568	Residue, Non-Filterable (TSS) @105C	SM2540D	Q6	Sample was received above recommended temperature.
			SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG349105	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	Q6	Sample was received above recommended temperature.
	WG348583	Sulfide as S	SM4500S2-D	Q6	Sample was received above recommended temperature.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.

Caldera Mineral Resources

ACZ Project ID: **L13488**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L13488-04	WG348699	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.
	WG348361	Bicarbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348858	Chloride	SM4500Cl-E	Q6	Sample was received above recommended temperature.
			SM4500Cl-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG349061	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG349062	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500-CN I-Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348252	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	Q6	Sample was received above recommended temperature.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Hydroxide as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348280	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348851	Nitrogen, ammonia	M350.1 - Automated Phenate	Q6	Sample was received above recommended temperature.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	pH	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG348592	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
	WG348568	Residue, Non-Filterable (TSS) @105C	SM2540D	Q6	Sample was received above recommended temperature.
			SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG349105	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	Q6	Sample was received above recommended temperature.
	WG348583	Sulfide as S	SM4500S2-D	Q6	Sample was received above recommended temperature.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.

Caldera Mineral Resources

ACZ Project ID: **L13488**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L13488-05	WG348699	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.
	WG348361	Bicarbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348858	Chloride	SM4500Cl-E	Q6	Sample was received above recommended temperature.
			SM4500Cl-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG349061	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG349062	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500-CN I-Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348252	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	Q6	Sample was received above recommended temperature.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Hydroxide as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348280	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348851	Nitrogen, ammonia	M350.1 - Automated Phenate	Q6	Sample was received above recommended temperature.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	pH	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG348592	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
	WG348568	Residue, Non-Filterable (TSS) @105C	SM2540D	Q6	Sample was received above recommended temperature.
			SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG349105	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	Q6	Sample was received above recommended temperature.
	WG348583	Sulfide as S	SM4500S2-D	Q6	Sample was received above recommended temperature.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.

Caldera Mineral Resources

ACZ Project ID: **L13488**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L13488-06	WG348897	Total Recoverable Digestion	M200.2 ICP-MS	DJ	Sample dilution required due to insufficient sample.
	WG348699	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.
	WG348361	Bicarbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
		Carbonate as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348858	Chloride	SM4500Cl-E	Q6	Sample was received above recommended temperature.
			SM4500Cl-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Conductivity @25C	SM2510B	Q6	Sample was received above recommended temperature.
	WG349061	Cyanide, total	M335.4 - Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M335.4 - Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG349062	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500-CN I-Colorimetric w/ distillation	Q6	Sample was received above recommended temperature.
			SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348252	Dissolved Chromium, Hexavalent	SM3500Cr-D	H3	Sample was received and analyzed past holding time.
			SM3500Cr-D	Q6	Sample was received above recommended temperature.
			SM3500Cr-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	Hydroxide as CaCO ₃	SM2320B - Titration	Q6	Sample was received above recommended temperature.
	WG348280	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348851	Nitrogen, ammonia	M350.1 - Automated Phenate	Q6	Sample was received above recommended temperature.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG348361	pH	SM4500H+ B	Q6	Sample was received above recommended temperature.
		pH measured at	SM4500H+ B	Q6	Sample was received above recommended temperature.
	WG348592	Residue, Filterable (TDS) @180C	SM2540C	Q6	Sample was received above recommended temperature.
	WG348568	Residue, Non-Filterable (TSS) @105C	SM2540D	Q6	Sample was received above recommended temperature.
			SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG349105	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	Q6	Sample was received above recommended temperature.
	WG348583	Sulfide as S	SM4500S2-D	Q6	Sample was received above recommended temperature.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources

ACZ Project ID: **L13488**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
	WG348361	Total Alkalinity	SM2320B - Titration	Q6	Sample was received above recommended temperature.

Caldera Mineral Resources

Project ID:

Sample ID: CB-A

ACZ Sample ID: **L13488-01**

Date Sampled: 07/24/13 0:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG348759

Analyst: itk

Extract Date:

Analysis Date: 08/02/13 13:41

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.031	*	mg/L	2.062	10.31

Caldera Mineral Resources

Project ID:

Sample ID: CB-B

ACZ Sample ID: **L13488-02**

Date Sampled: 07/24/13 0:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG348759**

Analyst: itk

Extract Date:

Analysis Date: 08/02/13 13:42

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.02	*	mg/L	2.04	10.2

Caldera Mineral Resources

Project ID:

Sample ID: CB-C

ACZ Sample ID: **L13488-03**

Date Sampled: 07/24/13 0:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG348759**

Analyst: itk

Extract Date:

Analysis Date: 08/02/13 13:43

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.031	*	mg/L	2.062	10.31

Caldera Mineral Resources

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L13488-04**

Date Sampled: 07/24/13 0:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG348759

Analyst: itk

Extract Date:

Analysis Date: 08/02/13 13:44

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.075	*	mg/L	2.15	10.75

Caldera Mineral Resources

Project ID:

Sample ID: CB-E

ACZ Sample ID: **L13488-05**

Date Sampled: 07/24/13 0:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG348759**

Analyst: itk

Extract Date:

Analysis Date: 08/02/13 13:45

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.02	*	mg/L	2.04	10.2

Caldera Mineral Resources

Project ID:

Sample ID: CB-F

ACZ Sample ID: **L13488-06**

Date Sampled: 07/24/13 0:00

Date Received: 07/25/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG348759**

Analyst: itk

Extract Date:

Analysis Date: 08/02/13 13:46

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.075	*	mg/L	2.15	10.75



Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
- (3) EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Excluding Oil & Grease, solid & biological matrices for organic analyses are reported on a wet weight basis.
- (3) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (4) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources

ACZ Project ID: **L13488**

Oil & Grease, Total Recoverable

1664A - Gravimetric

WG348759

LCSW		Sample ID: WG348759LCSW		PCN/SCN: OP130726-2			Analyzed: 08/02/13 13:47			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		34.5	mg/L	86.3	78	114			

LCSWD		Sample ID: WG348759LCSWD		PCN/SCN: OP130726-2			Analyzed: 08/02/13 13:49			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		34.4	mg/L	86.0	78	114	0.3	18	

PBW		Sample ID: WG348759PBW					Analyzed: 08/02/13 13:40			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE			U	mg/L		-5	5			

Caldera Mineral Resources

ACZ Project ID: **L13488**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L13488-01	WG348759	Oil and Grease	1664A - Gravimetric	Q6	Sample was received above recommended temperature.
			1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L13488-02	WG348759	Oil and Grease	1664A - Gravimetric	Q6	Sample was received above recommended temperature.
			1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L13488-03	WG348759	Oil and Grease	1664A - Gravimetric	Q6	Sample was received above recommended temperature.
			1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L13488-04	WG348759	Oil and Grease	1664A - Gravimetric	Q6	Sample was received above recommended temperature.
			1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L13488-05	WG348759	Oil and Grease	1664A - Gravimetric	Q6	Sample was received above recommended temperature.
			1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L13488-06	WG348759	Oil and Grease	1664A - Gravimetric	Q6	Sample was received above recommended temperature.
			1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.

Caldera Mineral Resources

ACZ Project ID: **L13488**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Caldera Mineral Resources

ACZ Project ID: L13488

Date Received: 07/25/2013 10:15

Received By: gac

Date Printed: 7/25/2013

Receipt Verification

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

Samples/Containers

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

Some parameters were received past hold time.

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3332	12.8	13	Yes
3376	9.1	12	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s) but was thawed by receipt at ACZ.

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



Laboratories, Inc.

L13488

CHAIN of CUSTODY

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

Report to:

Name: Mike Thompson
Company: Reardon Steel LLC
E-mail: mt@reardonsteel.us

Address: 4 River St.
Silverton, CO 81321 81433
Telephone: 970-426-2924

Copy of Report to:

Name: John Bryan
Company: Caldera Mineral Resources

E-mail: jbryan@wafley.com
Telephone: 310-777-8889

Invoice to:

Name: Laurens Nuyens
Company: Caldera Mineral Resources
E-mail: Laurens@wafley.com

Address: 8439 Sunset Blvd. Suite 402
West Hollywood, CA 90069
Telephone: 310-777-8889

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.

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: Camp Bird - SW - Short

Project/PO #:

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material?

of Containers

please refer
to quote

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers																	
CB-A	07/24/2013	SW	8																	
CB-B	07/24/2013	SW	8																	
CB-C	07/24/2013	SW	8																	
CB-D	07/24/2013	SW	8																	
CB-E	07/24/2013	SW	8																	
CB-F	07/24/2013	SW	8																	

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

REMARKS/ SAMPLE DISCLOSURES

2 Coolers

PAGE
1
of
1

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
	07/24/13		7-25/310:13

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L13488 Chain of Custody

October 11, 2013

Report to:

Mike Thompson
Caldera Mineral Resources LLC
P.O. Box 549, 4900 County Road 361
Ouary, CO 81427

Bill to:

Mike Thompson
Caldera Mineral Resources LLC
P.O. Box 549, 4900 County Road 361
Ouary, CO 81427

cc: Karmen King

Project ID:

ACZ Project ID: L14633

Mike Thompson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on September 25, 2013. This project has been assigned to ACZ's project number, L14633. Please reference this number in all future inquiries.

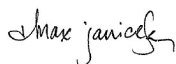
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L14633. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

Except as noted, the test results for the methods and parameters listed on ACZ's current NELAC certificate letter (#ACZ) meet all requirements of NELAC.

This report shall be used or copied only in its entirety. ACZ is not responsible for the consequences arising from the use of a partial report.

All samples and sub-samples associated with this project will be disposed of after November 10, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and
approved this report.



Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L14633-01**

Date Sampled: 09/24/13 00:00

Date Received: 09/25/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								10/03/13 12:43	mpb
Cyanide, WAD	SM4500-CN I- distillation								10/03/13 13:33	mpb
Total Hot Plate Digestion	M200.2 ICP-MS				*				10/02/13 13:12	las
Total Hot Plate Digestion	M200.2 ICP								10/01/13 16:11	aeb
Total Recoverable Digestion	M200.2 ICP-MS								09/27/13 14:32	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.042			mg/L	0.001	0.005	10/01/13 4:00	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0002	0.001	10/10/13 3:10	pmc
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0009	B		mg/L	0.0002	0.001	10/01/13 4:00	pmc
Barium, dissolved	M200.7 ICP	1	0.023			mg/L	0.003	0.02	09/30/13 10:40	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	09/30/13 10:40	aeb
Boron, dissolved	M200.7 ICP	1	0.03	B		mg/L	0.01	0.05	09/30/13 10:40	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0016			mg/L	0.0001	0.0005	10/04/13 21:15	las
Cadmium, total	M200.8 ICP-MS	5	0.0019	B		mg/L	0.0005	0.003	10/05/13 0:21	pmc
Calcium, dissolved	M200.7 ICP	1	216		*	mg/L	0.2	1	09/30/13 10:40	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	10/04/13 21:15	las
Chromium, total	M200.8 ICP-MS	5		U		mg/L	0.003	0.01	10/05/13 0:21	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.003	0.01	10/11/13 13:52	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0032			mg/L	0.0005	0.003	10/04/13 21:15	las
Copper, total	M200.8 ICP-MS	5	0.023			mg/L	0.003	0.01	10/05/13 0:21	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	09/30/13 10:40	aeb
Iron, total	M200.7 ICP	1	0.29		*	mg/L	0.02	0.05	10/02/13 21:22	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0001	0.0005	10/04/13 21:15	las
Lead, total	M200.8 ICP-MS	5	0.0179			mg/L	0.0005	0.003	10/05/13 0:21	pmc
Magnesium, dissolved	M200.7 ICP	1	3.3			mg/L	0.2	1	09/30/13 10:40	aeb
Manganese, dissolved	M200.7 ICP	1	0.110			mg/L	0.005	0.03	09/30/13 10:40	aeb
Manganese, total	M200.7 ICP	1	0.135		*	mg/L	0.005	0.03	10/02/13 21:22	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	09/30/13 13:33	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	09/30/13 10:40	aeb
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	10/02/13 21:22	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0007			mg/L	0.0001	0.0003	10/04/13 21:15	las
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	10/04/13 21:15	las
Silver, total	M200.8 ICP-MS	5		U		mg/L	0.0003	0.001	10/05/13 0:21	pmc
Uranium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	10/04/13 21:15	las
Uranium, total	M200.8 ICP-MS	5	0.0006	B		mg/L	0.0005	0.003	10/05/13 0:21	pmc
Zinc, dissolved	M200.7 ICP	1	0.36			mg/L	0.01	0.05	09/30/13 10:40	aeb
Zinc, total	M200.7 ICP	1	0.42			mg/L	0.01	0.05	10/02/13 21:22	aeb

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L14633-01**

Date Sampled: 09/24/13 00:00

Date Received: 09/25/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	63			mg/L	2	20	09/26/13 0:00	mss3
Carbonate as CaCO ₃		1		U		mg/L	2	20	09/26/13 0:00	mss3
Hydroxide as CaCO ₃		1		U		mg/L	2	20	09/26/13 0:00	mss3
Total Alkalinity		1	63			mg/L	2	20	09/26/13 0:00	mss3
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	10/09/13 11:18	tcd
Conductivity @25C	SM2510B	1	1030			umhos/cm	1	10	09/26/13 18:33	mss3
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	10/03/13 23:04	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	10/03/13 23:37	pjb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	09/25/13 12:22	mss3
Hardness as CaCO ₃	SM2340B - Calculation		554			mg/L	1	7	10/11/13 13:52	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/30/13 9:54	id
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							09/26/13 15:25	mfm
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.11			mg/L	0.02	0.1	10/11/13 13:52	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.11			mg/L	0.02	0.1	09/25/13 19:42	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/25/13 19:42	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	10/01/13 15:46	mla
pH (lab)	SM4500H+ B									
pH		1	8	H		units	0.1	0.1	09/26/13 0:00	mss3
pH measured at		1	20			C	0.1	0.1	09/26/13 0:00	mss3
Residue, Filterable (TDS) @180C	SM2540C	1	840			mg/L	10	20	09/27/13 19:31	khw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	09/30/13 11:35	id
Sulfate	D516-02 - Turbidimetric	20	514		*	mg/L	20	100	10/04/13 13:33	mpb
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	06/25/13 12:45	khw

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-E

ACZ Sample ID: **L14633-02**

Date Sampled: 09/24/13 00:00

Date Received: 09/25/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								10/03/13 12:50	mpb
Cyanide, WAD	SM4500-CN I- distillation								10/03/13 13:51	mpb
Total Hot Plate Digestion	M200.2 ICP								10/01/13 16:22	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								10/02/13 13:24	las
Total Recoverable Digestion	M200.2 ICP-MS								09/27/13 15:14	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.037			mg/L	0.001	0.005	10/01/13 4:16	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0002	0.001	10/10/13 3:13	pmc
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0009	B		mg/L	0.0002	0.001	10/01/13 4:16	pmc
Barium, dissolved	M200.7 ICP	1	0.023			mg/L	0.003	0.02	09/30/13 10:49	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	09/30/13 10:49	aeb
Boron, dissolved	M200.7 ICP	1	0.03	B		mg/L	0.01	0.05	09/30/13 10:49	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0014			mg/L	0.0001	0.0005	10/10/13 3:13	pmc
Cadmium, total	M200.8 ICP-MS	1	0.0017			mg/L	0.0001	0.0005	10/05/13 0:24	pmc
Calcium, dissolved	M200.7 ICP	1	215		*	mg/L	0.2	1	09/30/13 10:49	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	10/04/13 21:33	las
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	10/05/13 0:24	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	10/11/13 13:53	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0030			mg/L	0.0005	0.003	10/04/13 21:33	las
Copper, total	M200.8 ICP-MS	1	0.0159			mg/L	0.0005	0.003	10/05/13 0:24	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	09/30/13 10:49	aeb
Iron, total	M200.7 ICP	1	0.28		*	mg/L	0.02	0.05	10/02/13 21:25	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	10/10/13 3:13	pmc
Lead, total	M200.8 ICP-MS	1	0.0228			mg/L	0.0001	0.0005	10/05/13 0:24	pmc
Magnesium, dissolved	M200.7 ICP	1	3.3			mg/L	0.2	1	09/30/13 10:49	aeb
Manganese, dissolved	M200.7 ICP	1	0.105			mg/L	0.005	0.03	09/30/13 10:49	aeb
Manganese, total	M200.7 ICP	1	0.175		*	mg/L	0.005	0.03	10/02/13 21:25	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	09/30/13 13:39	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	09/30/13 10:49	aeb
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	10/02/13 21:25	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0003	10/04/13 21:33	las
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	10/04/13 21:33	las
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	10/05/13 0:24	pmc
Uranium, dissolved	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0001	0.0005	10/04/13 21:33	las
Uranium, total	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0005	10/05/13 0:24	pmc
Zinc, dissolved	M200.7 ICP	1	0.32			mg/L	0.01	0.05	09/30/13 10:49	aeb
Zinc, total	M200.7 ICP	1	0.39			mg/L	0.01	0.05	10/02/13 21:25	aeb

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-E

ACZ Sample ID: **L14633-02**

Date Sampled: 09/24/13 00:00

Date Received: 09/25/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	47			mg/L	2	20	09/26/13 0:00	mss3
Carbonate as CaCO ₃		1		U		mg/L	2	20	09/26/13 0:00	mss3
Hydroxide as CaCO ₃		1		U		mg/L	2	20	09/26/13 0:00	mss3
Total Alkalinity		1	47			mg/L	2	20	09/26/13 0:00	mss3
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	10/09/13 11:18	tcd
Conductivity @25C	SM2510B	1	1040			umhos/cm	1	10	09/26/13 18:41	mss3
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	10/03/13 23:04	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	10/03/13 23:39	pjb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	09/25/13 12:25	mss3
Hardness as CaCO ₃	SM2340B - Calculation		551			mg/L	1	7	10/11/13 13:53	calc
Lab Filtration (0.45um filter)	SOPWC050	1							09/30/13 10:00	id
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							09/26/13 15:25	mfm
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.11			mg/L	0.02	0.1	10/11/13 13:53	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.11			mg/L	0.02	0.1	09/25/13 19:43	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	09/25/13 19:43	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	10/01/13 15:48	mla
pH (lab)	SM4500H+ B									
pH		1	8	H		units	0.1	0.1	09/26/13 0:00	mss3
pH measured at		1	21			C	0.1	0.1	09/26/13 0:00	mss3
Residue, Filterable (TDS) @180C	SM2540C	1	848			mg/L	10	20	09/27/13 19:32	khw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	09/30/13 11:40	id
Sulfate	D516-02 - Turbidimetric	20	520		*	mg/L	20	100	10/04/13 13:33	mpb
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	06/25/13 12:45	khw

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG351885													
WG351885PBW1	PBW	09/26/13 13:45				U	mg/L		-20	20			
WG351885LCSW2	LCSW	09/26/13 13:59	WC130916-	820.0001		779.8	mg/L	95.1	90	110			
WG351885LCSW5	LCSW	09/26/13 16:21	WC130916-	820.0001		786.3	mg/L	95.9	90	110			
WG351885PBW2	PBW	09/26/13 16:30				2.7	mg/L		-20	20			
L14634-01DUP	DUP	09/26/13 19:03			568	570.9	mg/L				0.5	20	
WG351885LCSW8	LCSW	09/26/13 19:15	WC130916-	820.0001		788.4	mg/L	96.1	90	110			
WG351885PBW3	PBW	09/26/13 19:24				U	mg/L		-20	20			
WG351885LCSW11	LCSW	09/26/13 22:35	WC130916-	820.0001		793.5	mg/L	96.8	90	110			
WG351885PBW4	PBW	09/26/13 22:43				2.6	mg/L		-20	20			
WG351885LCSW14	LCSW	09/27/13 1:32	WC130916-	820.0001		805.4	mg/L	98.2	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352082													
WG352082ICV	ICV	10/01/13 2:49	MS130717-9	.1		.1002	mg/L	100.2	90	110			
WG352082ICB	ICB	10/01/13 2:52				U	mg/L		-0.003	0.003			
WG351928LRB	LRB	10/01/13 2:56				U	mg/L		-0.0022	0.0022			
WG351928LFB	LFB	10/01/13 2:59	MS130816-3	.050055		.0509	mg/L	101.7	85	115			
L14633-01LFM	LFM	10/01/13 4:10	MS130816-3	.050055	.042	.0862	mg/L	88.3	70	130			
L14633-01LFMD	LFMD	10/01/13 4:13	MS130816-3	.050055	.042	.0887	mg/L	93.3	70	130	2.86	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352650													
WG352650ICV	ICV	10/10/13 2:02	MS131001-1	.05		.0525	mg/L	105	90	110			
WG352650ICB	ICB	10/10/13 2:06				U	mg/L		-0.0006	0.0006			
WG352650LFB	LFB	10/10/13 2:09	MS130927-2	.05005		.04759	mg/L	95.1	85	115			
L14695-01AS	AS	10/10/13 3:26	MS130927-2	.05005	.0009	.05686	mg/L	111.8	70	130			
L14695-01ASD	ASD	10/10/13 3:29	MS130927-2	.05005	.0009	.05789	mg/L	113.9	70	130	1.8	20	

Arsenic, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352082													
WG352082ICV	ICV	10/01/13 2:49	MS130717-9	.05		.05326	mg/L	106.5	90	110			
WG352082ICB	ICB	10/01/13 2:52				U	mg/L		-0.0006	0.0006			
WG351928LRB	LRB	10/01/13 2:56				.00025	mg/L		-0.00044	0.00044			
WG351928LFB	LFB	10/01/13 2:59	MS130816-3	.05005		.05084	mg/L	101.6	85	115			
L14633-01LFM	LFM	10/01/13 4:10	MS130816-3	.05005	.0009	.05285	mg/L	103.8	70	130			
L14633-01LFMD	LFMD	10/01/13 4:13	MS130816-3	.05005	.0009	.05384	mg/L	105.8	70	130	1.86	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352022													
WG352022ICV	ICV	09/30/13 10:02	II130916-1	2		2.011	mg/L	100.6	95	105			
WG352022ICB	ICB	09/30/13 10:08				.0034	mg/L		-0.009	0.009			
WG352022LFB	LFB	09/30/13 10:20	II130906-9	.5		.4965	mg/L	99.3	85	115			
L14633-01AS	AS	09/30/13 10:43	II130906-9	.5	.023	.5301	mg/L	101.4	85	115			
L14633-01ASD	ASD	09/30/13 10:46	II130906-9	.5	.023	.528	mg/L	101	85	115	0.4	20	

Beryllium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352022													
WG352022ICV	ICV	09/30/13 10:02	II130916-1	2		1.963	mg/L	98.2	95	105			
WG352022ICB	ICB	09/30/13 10:08				U	mg/L		-0.03	0.03			
WG352022LFB	LFB	09/30/13 10:20	II130906-9	.5		.501	mg/L	100.2	85	115			
L14633-01AS	AS	09/30/13 10:43	II130906-9	.5	U	.501	mg/L	100.2	85	115			
L14633-01ASD	ASD	09/30/13 10:46	II130906-9	.5	U	.497	mg/L	99.4	85	115	0.8	20	

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352022													
WG352022ICV	ICV	09/30/13 10:02	II130916-1	2		2.046	mg/L	102.3	95	105			
WG352022ICB	ICB	09/30/13 10:08				U	mg/L		-0.03	0.03			
WG352022LFB	LFB	09/30/13 10:20	II130906-9	.5005		.516	mg/L	103.1	85	115			
L14633-01AS	AS	09/30/13 10:43	II130906-9	.5005	.03	.561	mg/L	106.1	85	115			
L14633-01ASD	ASD	09/30/13 10:46	II130906-9	.5005	.03	.56	mg/L	105.9	85	115	0.18	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352373													
WG352373ICV	ICV	10/04/13 19:58	MS131001-1	.05		.04869	mg/L	97.4	90	110			
WG352373ICB	ICB	10/04/13 20:01				U	mg/L		-0.0003	0.0003			
WG352373LFB	LFB	10/04/13 20:05	MS130927-2	.0501		.04767	mg/L	95.1	85	115			
L14633-01AS	AS	10/04/13 21:26	MS130927-2	.0501	.0016	.04956	mg/L	95.7	70	130			
L14633-01ASD	ASD	10/04/13 21:29	MS130927-2	.0501	.0016	.04934	mg/L	95.3	70	130	0.44	20	

WG352650

WG352650ICV	ICV	10/10/13 2:02	MS131001-1	.05		.04888	mg/L	97.8	90	110			
WG352650ICB	ICB	10/10/13 2:06				U	mg/L		-0.0003	0.0003			
WG352650LFB	LFB	10/10/13 2:09	MS130927-2	.0501		.04851	mg/L	96.8	85	115			
L14695-01AS	AS	10/10/13 3:26	MS130927-2	.0501	U	.04966	mg/L	99.1	70	130			
L14695-01ASD	ASD	10/10/13 3:29	MS130927-2	.0501	U	.04988	mg/L	99.6	70	130	0.44	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Cadmium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352389													
WG352389ICV	ICV	10/04/13 23:55	MS131001-1	.05		.05027	mg/L	100.5	90	110			
WG352389ICB	ICB	10/04/13 23:58				U	mg/L		-0.0003	0.0003			
WG352179LRB	LRB	10/05/13 0:01				U	mg/L		-0.00022	0.00022			
WG352179LFB	LFB	10/05/13 0:05	MS130927-2	.0501		.04971	mg/L	99.2	85	115			
L14610-02LFM	LFM	10/05/13 0:14	MS130927-2	.0501	.0014	.05144	mg/L	99.9	70	130			
L14610-02LFMD	LFMD	10/05/13 0:17	MS130927-2	.0501	.0014	.05108	mg/L	99.2	70	130	0.7	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352022													
WG352022ICV	ICV	09/30/13 10:02	II130916-1	100		98.49	mg/L	98.5	95	105			
WG352022ICB	ICB	09/30/13 10:08				U	mg/L		-0.6	0.6			
WG352022LFB	LFB	09/30/13 10:20	II130906-9	68.00225		70.03	mg/L	103	85	115			
L14633-01AS	AS	09/30/13 10:43	II130906-9	68.00225	216	273.1	mg/L	84	85	115			M3
L14633-01ASD	ASD	09/30/13 10:46	II130906-9	68.00225	216	271.9	mg/L	82.2	85	115	0.44	20	M3

Chloride

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352603													
WG352603ICB	ICB	10/09/13 11:06				U	mg/L		-3	3			
WG352603ICV	ICV	10/09/13 11:06	WI130722-5	54.945		58.6	mg/L	106.7	90	110			
WG352603LFB1	LFB	10/09/13 11:17	WI130201-8	30		31.7	mg/L	105.7	90	110			
L14633-02AS	AS	10/09/13 11:24	WI130201-8	30	U	33.5	mg/L	111.7	90	110			M1
L14638-01DUP	DUP	10/09/13 11:24			6	5.9	mg/L				1.7	20	RA
L14612-01AS	AS	10/09/13 11:27	10XCL	30	580	597	mg/L	56.7	90	110			M3
L14612-02DUP	DUP	10/09/13 11:35			580	580	mg/L				0	20	
WG352603LFB2	LFB	10/09/13 11:35	WI130201-8	30		31.7	mg/L	105.7	90	110			

Chromium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352373													
WG352373ICV	ICV	10/04/13 19:58	MS131001-1	.05		.04746	mg/L	94.9	90	110			
WG352373ICB	ICB	10/04/13 20:01				U	mg/L		-0.0015	0.0015			
WG352373LFB	LFB	10/04/13 20:05	MS130927-2	.05005		.04818	mg/L	96.3	85	115			
L14633-01AS	AS	10/04/13 21:26	MS130927-2	.05005	U	.04706	mg/L	94	70	130			
L14633-01ASD	ASD	10/04/13 21:29	MS130927-2	.05005	U	.04913	mg/L	98.2	70	130	4.3	20	

Chromium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352389													
WG352389ICV	ICV	10/04/13 23:55	MS131001-1	.05		.04779	mg/L	95.6	90	110			
WG352389ICB	ICB	10/04/13 23:58				U	mg/L		-0.0015	0.0015			
WG352179LRB	LRB	10/05/13 0:01				U	mg/L		-0.0011	0.0011			
WG352179LFB	LFB	10/05/13 0:05	MS130927-2	.05005		.04917	mg/L	98.2	85	115			
L14610-02LFM	LFM	10/05/13 0:14	MS130927-2	.05005	U	.0497	mg/L	99.3	70	130			
L14610-02LFMD	LFMD	10/05/13 0:17	MS130927-2	.05005	U	.0485	mg/L	96.9	70	130	2.44	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG351885													
WG351885LCSW1	LCSW	09/26/13 13:47	PCN42819	1408.8		1459.8	µmhos/crr	103.6	90	110			
WG351885LCSW4	LCSW	09/26/13 16:09	PCN42819	1408.8		1430.3	µmhos/crr	101.5	90	110			
L14634-01DUP	DUP	09/26/13 19:03			6480	6490	µmhos/crr				0.2	20	
WG351885LCSW7	LCSW	09/26/13 19:04	PCN42819	1408.8		1411	µmhos/crr	100.2	90	110			
WG351885LCSW10	LCSW	09/26/13 22:23	PCN42819	1408.8		1395.7	µmhos/crr	99.1	90	110			
WG351885LCSW13	LCSW	09/27/13 1:20	PCN42819	1408.8		1381.4	µmhos/crr	98.1	90	110			

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352373													
WG352373ICV	ICV	10/04/13 19:58	MS131001-1	.05		.04873	mg/L	97.5	90	110			
WG352373ICB	ICB	10/04/13 20:01				U	mg/L		-0.0015	0.0015			
WG352373LFB	LFB	10/04/13 20:05	MS130927-2	.05005		.04765	mg/L	95.2	85	115			
L14633-01AS	AS	10/04/13 21:26	MS130927-2	.05005	.0032	.04663	mg/L	86.8	70	130			
L14633-01ASD	ASD	10/04/13 21:29	MS130927-2	.05005	.0032	.04905	mg/L	91.6	70	130	5.06	20	

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352389													
WG352389ICV	ICV	10/04/13 23:55	MS131001-1	.05		.05017	mg/L	100.3	90	110			
WG352389ICB	ICB	10/04/13 23:58				U	mg/L		-0.0015	0.0015			
WG352179LRB	LRB	10/05/13 0:01				U	mg/L		-0.0011	0.0011			
WG352179LFB	LFB	10/05/13 0:05	MS130927-2	.05005		.05059	mg/L	101.1	85	115			
L14610-02LFM	LFM	10/05/13 0:14	MS130927-2	.05005	U	.0499	mg/L	99.7	70	130			
L14610-02LFMD	LFMD	10/05/13 0:17	MS130927-2	.05005	U	.0492	mg/L	98.3	70	130	1.41	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352333													
WG352333ICV	ICV	10/03/13 22:23	WI131002-8	.3		.2805	mg/L	93.5	90	110			
WG352333ICB	ICB	10/03/13 22:24				U	mg/L		-0.003	0.003			
WG352336													
WG352290LRB	LRB	10/03/13 22:58				U	mg/L		-0.003	0.003			
WG352290LFB	LFB	10/03/13 22:59	WI131002-4	.2		.2105	mg/L	105.3	90	110			
L14628-02DUP	DUP	10/03/13 23:01			U	U	mg/L				0	20	RA
L14628-03LFM	LFM	10/03/13 23:03	WI131002-4	.2	U	.2076	mg/L	103.8	90	110			

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352333													
WG352333ICV	ICV	10/03/13 22:23	WI131002-8	.3		.2805	mg/L	93.5	90	110			
WG352333ICB	ICB	10/03/13 22:24				U	mg/L		-0.003	0.003			
WG352338													
WG352298LRB	LRB	10/03/13 23:36				U	mg/L		-0.003	0.003			
WG352298LFB	LFB	10/03/13 23:37	WI131002-6	.2		.1966	mg/L	98.3	90	110			
L14633-01DUP	DUP	10/03/13 23:38			U	U	mg/L				0	20	RA
L14633-02LFM	LFM	10/03/13 23:40	WI131002-6	.2	U	.191	mg/L	95.5	90	110			

Dissolved Chromium, Hexavalent

SM3500Cr-B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG351751													
WG351751ICV	ICV	09/25/13 9:50	WC130531-	.05		.0496	mg/L	99.2	90	110			
WG351751ICB	ICB	09/25/13 9:52				U	mg/L		-0.015	0.015			
WG351782													
WG351782ICV	ICV	09/25/13 12:13	WC130531-	.05		.0523	mg/L	104.6	90	110			
WG351782ICB	ICB	09/25/13 12:16				U	mg/L		-0.015	0.015			
WG351782LFB	LFB	09/25/13 12:19	WC130523-	.05		.0515	mg/L	103	90	110			
L14633-02AS	AS	09/25/13 12:28	WC130523-	.05	U	.0554	mg/L	110.8	90	110			M1
L14633-02DUP	DUP	09/25/13 12:31			U	U	mg/L				0	20	RA

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352022													
WG352022ICV	ICV	09/30/13 10:02	II130916-1	2		2.03	mg/L	101.5	95	105			
WG352022ICB	ICB	09/30/13 10:08				U	mg/L		-0.06	0.06			
WG352022LFB	LFB	09/30/13 10:20	II130906-9	1.0014		1.021	mg/L	102	85	115			
L14633-01AS	AS	09/30/13 10:43	II130906-9	1.0014	U	1.046	mg/L	104.5	85	115			
L14633-01ASD	ASD	09/30/13 10:46	II130906-9	1.0014	U	1.039	mg/L	103.8	85	115	0.67	20	

Iron, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352199													
WG352199ICV	ICV	10/02/13 20:26	II130820-1	2		2.044	mg/L	102.2	95	105			
WG352199ICB	ICB	10/02/13 20:32				U	mg/L		-0.06	0.06			
WG352132LRB	LRB	10/02/13 20:45				.021	mg/L		-0.044	0.044			
WG352132LFB	LFB	10/02/13 20:48	II130906-9	1.0014		1.064	mg/L	106.3	85	115			
L14610-02LFM	LFM	10/02/13 21:04	II130906-9	1.0014	92.1	92.52	mg/L	41.9	70	130			M3
L14610-02LFMD	LFMD	10/02/13 21:07	II130906-9	1.0014	92.1	91.66	mg/L	-43.9	70	130	0.93	20	M3

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352373													
WG352373ICV	ICV	10/04/13 19:58	MS131001-1	.05		.04766	mg/L	95.3	90	110			
WG352373ICB	ICB	10/04/13 20:01				U	mg/L		-0.0003	0.0003			
WG352373LFB	LFB	10/04/13 20:05	MS130927-2	.05005		.04582	mg/L	91.5	85	115			
L14633-01AS	AS	10/04/13 21:26	MS130927-2	.05005	.0004	.04162	mg/L	82.4	70	130			
L14633-01ASD	ASD	10/04/13 21:29	MS130927-2	.05005	.0004	.04246	mg/L	84	70	130	2	20	
WG352650													
WG352650ICV	ICV	10/10/13 2:02	MS131001-1	.05		.04963	mg/L	99.3	90	110			
WG352650ICB	ICB	10/10/13 2:06				U	mg/L		-0.0003	0.0003			
WG352650LFB	LFB	10/10/13 2:09	MS130927-2	.05005		.04811	mg/L	96.1	85	115			
L14695-01AS	AS	10/10/13 3:26	MS130927-2	.05005	U	.04992	mg/L	99.7	70	130			
L14695-01ASD	ASD	10/10/13 3:29	MS130927-2	.05005	U	.05051	mg/L	100.9	70	130	1.17	20	

Lead, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352389													
WG352389ICV	ICV	10/04/13 23:55	MS131001-1	.05		.05199	mg/L	104	90	110			
WG352389ICB	ICB	10/04/13 23:58				U	mg/L		-0.0003	0.0003			
WG352179LRB	LRB	10/05/13 0:01				U	mg/L		-0.00022	0.00022			
WG352179LFB	LFB	10/05/13 0:05	MS130927-2	.05005		.05038	mg/L	100.7	85	115			
L14610-02LFM	LFM	10/05/13 0:14	MS130927-2	.05005	U	.05202	mg/L	103.9	70	130			
L14610-02LFMD	LFMD	10/05/13 0:17	MS130927-2	.05005	U	.0518	mg/L	103.5	70	130	0.42	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352022													
WG352022ICV	ICV	09/30/13 10:02	II130916-1	100		96.53	mg/L	96.5	95	105			
WG352022ICB	ICB	09/30/13 10:08				U	mg/L		-0.6	0.6			
WG352022LFB	LFB	09/30/13 10:20	II130906-9	49.99695		49.15	mg/L	98.3	85	115			
L14633-01AS	AS	09/30/13 10:43	II130906-9	49.99695	3.3	52.16	mg/L	97.7	85	115			
L14633-01ASD	ASD	09/30/13 10:46	II130906-9	49.99695	3.3	51.93	mg/L	97.3	85	115	0.44	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352022													
WG352022ICV	ICV	09/30/13 10:02	II130916-1	2		1.965	mg/L	98.3	95	105			
WG352022ICB	ICB	09/30/13 10:08				U	mg/L		-0.015	0.015			
WG352022LFB	LFB	09/30/13 10:20	II130906-9	.5		.4975	mg/L	99.5	85	115			
L14633-01AS	AS	09/30/13 10:43	II130906-9	.5	.11	.6052	mg/L	99	85	115			
L14633-01ASD	ASD	09/30/13 10:46	II130906-9	.5	.11	.601	mg/L	98.2	85	115	0.7	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Manganese, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352199													
WG352199ICV	ICV	10/02/13 20:26	II130820-1	2		1.978	mg/L	98.9	95	105			
WG352199ICB	ICB	10/02/13 20:32				U	mg/L		-0.015	0.015			
WG352132LRB	LRB	10/02/13 20:45				.007	mg/L		-0.011	0.011			
WG352132LFB	LFB	10/02/13 20:48	II130906-9	.5		.5165	mg/L	103.3	85	115			
L14610-02LFM	LFM	10/02/13 21:04	II130906-9	.5	101	101.34	mg/L	68	70	130			M3
L14610-02LFMD	LFMD	10/02/13 21:07	II130906-9	.5	101	99.46	mg/L	-308	70	130	1.87	20	M3

Mercury, total M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG351910													
WG351910ICV2	ICV	09/30/13 9:14	II130920-2	.005025		.0052	mg/L	103.5	95	105			
WG351910ICB	ICB	09/30/13 9:16				U	mg/L		-0.0002	0.0002			
WG352020													
WG352020LRB	LRB	09/30/13 12:40				U	mg/L		-0.00044	0.00044			
WG352020LFB	LFB	09/30/13 12:42	II130924-2	.002002		.00183	mg/L	91.4	85	115			
L14633-01LFM	LFM	09/30/13 13:35	II130924-2	.002002	U	.00185	mg/L	92.4	85	115			
L14633-01LFMD	LFMD	09/30/13 13:37	II130924-2	.002002	U	.00188	mg/L	93.9	85	115	1.61	20	

Nickel, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352022													
WG352022ICV	ICV	09/30/13 10:02	II130916-1	2		2.003	mg/L	100.2	95	105			
WG352022ICB	ICB	09/30/13 10:08				U	mg/L		-0.03	0.03			
WG352022LFB	LFB	09/30/13 10:20	II130906-9	.5		.497	mg/L	99.4	85	115			
L14633-01AS	AS	09/30/13 10:43	II130906-9	.5	U	.491	mg/L	98.2	85	115			
L14633-01ASD	ASD	09/30/13 10:46	II130906-9	.5	U	.493	mg/L	98.6	85	115	0.41	20	

Nickel, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352199													
WG352199ICV	ICV	10/02/13 20:26	II130820-1	2		2.026	mg/L	101.3	95	105			
WG352199ICB	ICB	10/02/13 20:32				U	mg/L		-0.03	0.03			
WG352132LRB	LRB	10/02/13 20:45				U	mg/L		-0.022	0.022			
WG352132LFB	LFB	10/02/13 20:48	II130906-9	.5		.514	mg/L	102.8	85	115			
L14610-02LFM	LFM	10/02/13 21:04	II130906-9	.5	.34	.837	mg/L	99.4	70	130			
L14610-02LFMD	LFMD	10/02/13 21:07	II130906-9	.5	.34	.85	mg/L	102	70	130	1.54	20	

Nitrate/Nitrite as N, dissolved M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG351818													
WG351818ICV	ICV	09/25/13 19:26	WI130712-3	2.416		2.374	mg/L	98.3	90	110			
WG351818ICB	ICB	09/25/13 19:27				U	mg/L		-0.06	0.06			
WG351818LFB1	LFB	09/25/13 19:32	WI130816-3	2		1.987	mg/L	99.4	90	110			
L14632-01DUP	DUP	09/25/13 19:36			.42	.41	mg/L				2.4	20	
WG351818LFB2	LFB	09/25/13 20:06	WI130816-3	2		1.872	mg/L	93.6	90	110			
L14630-01AS	AS	09/25/13 20:18	WI130816-3	40	23	63.26	mg/L	100.7	90	110			

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG351818													
WG351818ICV	ICV	09/25/13 19:26	WI130712-3	.609		.58	mg/L	95.2	90	110			
WG351818ICB	ICB	09/25/13 19:27				U	mg/L		-0.03	0.03			
WG351818LFB1	LFB	09/25/13 19:32	WI130816-3	1		1.003	mg/L	100.3	90	110			
L14630-01AS	AS	09/25/13 19:34	WI130816-3	1	.03	1.016	mg/L	98.6	90	110			
L14632-01DUP	DUP	09/25/13 19:36			U	U	mg/L				0	20	RA
WG351818LFB2	LFB	09/25/13 20:06	WI130816-3	1		1.028	mg/L	102.8	90	110			

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352118													
WG352118ICV	ICV	10/01/13 14:12	WI121105-5	1.003		.989	mg/L	98.6	90	110			
WG352118ICB	ICB	10/01/13 14:15				U	mg/L		-0.15	0.15			
WG352133													
WG352133LFB1	LFB	10/01/13 15:43	WI121218-3	1		1.069	mg/L	106.9	90	110			
L14630-01AS	AS	10/01/13 15:45	WI121218-3	1	.15	1.254	mg/L	110.4	90	110			
L14633-01DUP	DUP	10/01/13 15:47			U	U	mg/L				0	20	RA
WG352133LFB2	LFB	10/01/13 16:14	WI121218-3	1		1.092	mg/L	109.2	90	110			

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG351885													
WG351885LCSW3	LCSW	09/26/13 14:02	PCN41777	6		6.03	units	100.5	98	102			
WG351885LCSW6	LCSW	09/26/13 16:25	PCN41777	6		6.04	units	100.7	98	102			
L14634-01DUP	DUP	09/26/13 19:03			7.7	7.65	units				0.7	20	
WG351885LCSW9	LCSW	09/26/13 19:19	PCN41777	6		6.04	units	100.7	98	102			
WG351885LCSW12	LCSW	09/26/13 22:38	PCN41777	6		6.04	units	100.7	98	102			
WG351885LCSW15	LCSW	09/27/13 1:36	PCN41777	6		6.05	units	100.8	98	102			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG351997													
WG351997PBW	PBW	09/27/13 19:25				U	mg/L		-20	20			
WG351997LCSW	LCSW	09/27/13 19:26	PCN43784	260		266	mg/L	102.3	80	120			
L14637-04DUP	DUP	09/27/13 19:43			1010	1000	mg/L				1	10	

Residue, Non-Filterable (TSS) @105C

SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352034													
WG352034PBW	PBW	09/30/13 10:46				U	mg/L		-6	6			
WG352034LCSW	LCSW	09/30/13 10:50	PCN43785	160		153	mg/L	95.6	80	120			
L14633-02DUP	DUP	09/30/13 11:45			U	U	mg/L				0	10	RA

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352373													
WG352373ICV	ICV	10/04/13 19:58	MS131001-1	.05		.05038	mg/L	100.8	90	110			
WG352373ICB	ICB	10/04/13 20:01				U	mg/L		-0.0003	0.0003			
WG352373LFB	LFB	10/04/13 20:05	MS130927-2	.05005		.04732	mg/L	94.5	85	115			
L14633-01AS	AS	10/04/13 21:26	MS130927-2	.05005	.0007	.05354	mg/L	105.6	70	130			
L14633-01ASD	ASD	10/04/13 21:29	MS130927-2	.05005	.0007	.05034	mg/L	99.2	70	130	6.16	20	

Silver, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352373													
WG352373ICV	ICV	10/04/13 19:58	MS131001-1	.02002		.01875	mg/L	93.7	90	110			
WG352373ICB	ICB	10/04/13 20:01				U	mg/L		-0.00015	0.00015			
WG352373LFB	LFB	10/04/13 20:05	MS130927-2	.01001		.01033	mg/L	103.2	85	115			
L14633-01AS	AS	10/04/13 21:26	MS130927-2	.01001	U	.008729	mg/L	87.2	70	130			
L14633-01ASD	ASD	10/04/13 21:29	MS130927-2	.01001	U	.008658	mg/L	86.5	70	130	0.82	20	

Silver, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352389													
WG352389ICV	ICV	10/04/13 23:55	MS131001-1	.02002		.01968	mg/L	98.3	90	110			
WG352389ICB	ICB	10/04/13 23:58				U	mg/L		-0.00015	0.00015			
WG352179LRB	LRB	10/05/13 0:01				U	mg/L		-0.00011	0.00011			
WG352179LFB	LFB	10/05/13 0:05	MS130927-2	.01001		.009489	mg/L	94.8	85	115			
L14610-02LFM	LFM	10/05/13 0:14	MS130927-2	.01001	U	.00907	mg/L	90.6	70	130			
L14610-02LFMD	LFMD	10/05/13 0:17	MS130927-2	.01001	U	.00894	mg/L	89.3	70	130	1.44	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352376													
WG352376ICB	ICB	10/04/13 10:36				U	mg/L		-3	3			
WG352376ICV	ICV	10/04/13 10:36	W1130924-7	20		19.9	mg/L	99.5	90	110			
WG352376LFB	LFB	10/04/13 12:53	W1130416-3	9.99		10.3	mg/L	103.1	90	110			
L14612-05DUP	DUP	10/04/13 12:53			29.6	43	mg/L				36.9	20	RA
L14612-06AS	AS	10/04/13 13:33	SO4TURB20	100	3090	2950	mg/L	-140	90	110			M3

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG351788													
L14633-02DUP	DUP	06/25/13 12:45			U	U	mg/L				0	20	RA
WG351788ICB	ICB	06/25/13 12:45				U	mg/L		-0.06	0.06			
WG351788ICV	ICV	06/25/13 12:45	WC130924-	.33734		.334	mg/L	99	90	110			
WG351788LFB	LFB	06/25/13 12:45	WC130924-	.2337734		.267	mg/L	114.2	80	120			
L14633-02AS	AS	06/25/13 12:45	WC130924-	.2337734	U	.289	mg/L	123.6	75	125			

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Uranium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352373													
WG352373ICV	ICV	10/04/13 19:58	MS131001-1	.05		.0516	mg/L	103.2	90	110			
WG352373ICB	ICB	10/04/13 20:01				U	mg/L		-0.0003	0.0003			
WG352373LFB	LFB	10/04/13 20:05	MS130927-2	.05		.05047	mg/L	100.9	85	115			
L14633-01AS	AS	10/04/13 21:26	MS130927-2	.05	.0005	.04172	mg/L	82.4	70	130			E6
L14633-01ASD	ASD	10/04/13 21:29	MS130927-2	.05	.0005	.04311	mg/L	85.2	70	130	3.28	20	

Uranium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352389													
WG352389ICV	ICV	10/04/13 23:55	MS131001-1	.05		.05103	mg/L	102.1	90	110			
WG352389ICB	ICB	10/04/13 23:58				U	mg/L		-0.0003	0.0003			
WG352179LRB	LRB	10/05/13 0:01				U	mg/L		-0.00022	0.00022			
WG352179LFB	LFB	10/05/13 0:05	MS130927-2	.05		.05008	mg/L	100.2	85	115			
L14610-02LFM	LFM	10/05/13 0:14	MS130927-2	.05	.0035	.0564	mg/L	105.8	70	130			
L14610-02LFMD	LFMD	10/05/13 0:17	MS130927-2	.05	.0035	.0567	mg/L	106.4	70	130	0.53	20	

Zinc, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352022													
WG352022ICV	ICV	09/30/13 10:02	II130916-1	2		1.99	mg/L	99.5	95	105			
WG352022ICB	ICB	09/30/13 10:08				U	mg/L		-0.03	0.03			
WG352022LFB	LFB	09/30/13 10:20	II130906-9	.5		.501	mg/L	100.2	85	115			
L14633-01AS	AS	09/30/13 10:43	II130906-9	.5	.36	.849	mg/L	97.8	85	115			
L14633-01ASD	ASD	09/30/13 10:46	II130906-9	.5	.36	.852	mg/L	98.4	85	115	0.35	20	

Zinc, total M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG352199													
WG352199ICV	ICV	10/02/13 20:26	II130820-1	2		1.975	mg/L	98.8	95	105			
WG352199ICB	ICB	10/02/13 20:32				U	mg/L		-0.03	0.03			
WG352132LRB	LRB	10/02/13 20:45				U	mg/L		-0.022	0.022			
WG352132LFB	LFB	10/02/13 20:48	II130906-9	.5		.513	mg/L	102.6	85	115			
L14610-02LFM	LFM	10/02/13 21:04	II130906-9	.5	1.05	1.502	mg/L	96.4	70	130			
L14610-02LFMD	LFMD	10/02/13 21:07	II130906-9	.5	1.05	1.504	mg/L	96.8	70	130	0.13	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L14633-01	WG352179	Total Hot Plate Digestion	M200.2 ICP-MS	DJ	Sample dilution required due to insufficient sample.
	WG352022	Calcium, 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.
	WG352199	Iron, total	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, total	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.
	WG352603	Chloride	SM4500Cl-E	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.
	WG352336	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG352338	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG351782	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG351818	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG352133	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG352034	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG352376	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG351788	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L14633-02	WG352022	Calcium, 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.
	WG352199	Iron, total	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, total	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.
	WG352603	Chloride	SM4500Cl-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500Cl-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG352336	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG352338	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG351782	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG351818	Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG352133	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG352034	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG352376	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG351788	Sulfide as S	SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L14633-01**

Date Sampled: 09/24/13 0:00

Date Received: 09/25/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: **WG352271**

Analyst: RJV/JAD

Extract Date:

Analysis Date: 10/03/13 10:00

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.03		mg/L	2.06	10.3

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-E

ACZ Sample ID: **L14633-02**

Date Sampled: 09/24/13 0:00

Date Received: 09/25/13

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG352271

Analyst: RJV/JAD

Extract Date:

Analysis Date: 10/03/13 10:24

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.05		mg/L	2.1	10.5



Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
- (3) EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Excluding Oil & Grease, solid & biological matrices for organic analyses are reported on a wet weight basis.
- (3) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (4) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Oil & Grease, Total Recoverable

1664A - Gravimetric

WG352271

MS	Sample ID: L14682-01MS			PCN/SCN: OP130926-2			Analyzed:		10/03/13 14:07	
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40	U	36.3	mg/L	90.8	78	114			

LCSW		Sample ID: WG352271LCSW		PCN/SCN: OP130926-2			Analyzed: 10/03/13 16:10			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		38.1	mg/L	95.3	78	114			

LCSWD	Sample ID: WG352271LCSWD			PCN/SCN: OP130926-2			Analyzed:		10/03/13 16:35	
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		37	mg/L	92.5	78	114	2.9	18	

PBW		Sample ID: WG352271PBW						Analyzed:		10/03/13 16:59	
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual	
OIL AND GREASE			U	mg/L		-5	5				

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
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No extended qualifiers associated with this analysis

Caldera Mineral Resources LLC

ACZ Project ID: **L14633**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Caldera Mineral Resources LLC

ACZ Project ID: L14633

Date Received: 09/25/2013 10:09

Received By: mtb

Date Printed: 9/25/2013

Receipt Verification

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

Samples/Containers

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

Some parameters were received past hold time.

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3047	2.5	14	N/A

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

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

Report to:

Name: Mik Thompson
 Company: Caldora Mineral Resources LLC
 E-mail: mt@reardonsteel.us

Address: PO Box 549, 4900 CR 361
Ouray, CO 81427
 Telephone: 970-426-2924
mt@reardonsteel.us

Copy of Report to:

Name: Karmen King
 Company: Grayling LLC

E-mail: KKing@Aquatox.us
 Telephone: 970-565-0278

Invoice to:

Name: Mik Thompson
 Company: Caldora Mineral Resources LLC
 E-mail: mt@reardonsteel.us

Address: PO Box 549, 4900 CR 361
Ouray, CO 81427
 Telephone: 970-426-2924

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

YES



NO



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

Are samples for SDWA Compliance Monitoring?

Yes



No



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

Sampler's Name: KK Sampler's site Information State: CO Zip code 81433 Time Zone MSI

Check box if observe Daylight Savings Time ☒

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: 8030029
 PO#:
 Reporting state for compliance testing:
 Check box if samples include NRC licensed material? ☐

SAMPLE IDENTIFICATION DATE: TIME Matrix

CB-D 09/24/2013 SW 8
 CB-E 09/24/2013 SW 8

of Containers

please refer to
quote

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

REMARKS

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

RELINQUISHED BY:

DATE: TIME

RECEIVED BY:

DATE: TIME

MT 9/24/13 MT 9-25-13 10:09



December 16, 2013

Report to:

Mike Thompson
Caldera Mineral Resources LLC
P.O. Box 549, 4900 County Road 361
Ouary, CO 81427

Bill to:

Mike Thompson
Caldera Mineral Resources LLC
P.O. Box 549, 4900 County Road 361
Ouary, CO 81427

cc: Karmen King

Project ID:

ACZ Project ID: L15777

Mike Thompson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 27, 2013. This project has been assigned to ACZ's project number, L15777. Please reference this number in all future inquiries.

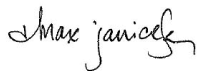
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L15777. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 January 15, 2014. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and
approved this report.



Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-A

ACZ Sample ID: **L15777-01**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								12/06/13 15:15	mpb
Cyanide, WAD	SM4500-CN I- distillation								12/10/13 9:28	mla
Total Hot Plate Digestion	M200.2 ICP								12/06/13 11:51	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								12/10/13 14:46	las
Total Recoverable Digestion	M200.2 ICP-MS								12/06/13 10:07	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.041			mg/L	0.001	0.005	12/10/13 4:02	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	12/07/13 4:01	pmc
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0007	B		mg/L	0.0002	0.001	12/10/13 4:02	pmc
Barium, dissolved	M200.7 ICP	1	0.048			mg/L	0.003	0.02	12/05/13 14:42	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 14:42	aeb
Boron, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	12/05/13 14:42	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	12/07/13 4:01	pmc
Cadmium, total	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	12/12/13 3:21	pmc
Calcium, dissolved	M200.7 ICP	1	103			mg/L	0.2	1	12/05/13 14:42	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	12/07/13 4:01	pmc
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	12/12/13 3:21	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	12/16/13 9:04	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0012	B		mg/L	0.0005	0.003	12/07/13 4:01	pmc
Copper, total	M200.8 ICP-MS	1	0.0018	B		mg/L	0.0005	0.003	12/12/13 3:21	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	12/05/13 14:42	aeb
Iron, total	M200.7 ICP	1	0.05			mg/L	0.02	0.05	12/06/13 18:23	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0007			mg/L	0.0001	0.0005	12/07/13 4:01	pmc
Lead, total	M200.8 ICP-MS	1	0.0020			mg/L	0.0001	0.0005	12/12/13 3:21	pmc
Magnesium, dissolved	M200.7 ICP	1	2.8			mg/L	0.2	1	12/05/13 14:42	aeb
Manganese, dissolved	M200.7 ICP	1	0.048			mg/L	0.005	0.03	12/05/13 14:42	aeb
Manganese, total	M200.7 ICP	1	0.053			mg/L	0.005	0.03	12/06/13 18:23	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	12/03/13 12:15	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 14:42	aeb
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	12/06/13 18:23	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0004			mg/L	0.0001	0.0003	12/07/13 4:01	pmc
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	12/07/13 4:01	pmc
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	12/12/13 3:21	pmc
Uranium, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	12/07/13 4:01	pmc
Uranium, total	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	12/12/13 3:21	pmc
Zinc, dissolved	M200.7 ICP	1	0.14			mg/L	0.01	0.05	12/05/13 14:42	aeb
Zinc, total	M200.7 ICP	1	0.14			mg/L	0.01	0.05	12/06/13 18:23	aeb

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-A

ACZ Sample ID: **L15777-01**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	56			mg/L	2	20	12/07/13 0:00	khw
Carbonate as CaCO ₃		1		U		mg/L	2	20	12/07/13 0:00	khw
Hydroxide as CaCO ₃		1		U		mg/L	2	20	12/07/13 0:00	khw
Total Alkalinity		1	56			mg/L	2	20	12/07/13 0:00	khw
Chloride	SM4500Cl-E	1		U		mg/L	1	5	12/09/13 14:34	bsu
Conductivity @25C	SM2510B	1	548			umhos/cm	1	10	12/07/13 15:41	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/07/13 2:05	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/10/13 16:30	mpb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	11/27/13 13:38	abm
Hardness as CaCO ₃	SM2340B - Calculation		269			mg/L	1	7	12/16/13 9:04	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/05/13 12:08	dcw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							12/03/13 16:04	mfm
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.18			mg/L	0.02	0.1	12/16/13 9:04	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.18		*	mg/L	0.02	0.1	11/27/13 23:51	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	11/27/13 23:51	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	12/09/13 17:48	mpb
pH (lab)	SM4500H+ B									
pH		1	7.9	H		units	0.1	0.1	12/07/13 0:00	khw
pH measured at		1	22			C	0.1	0.1	12/07/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	390			mg/L	10	20	12/02/13 16:39	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	12/03/13 15:23	abm
Sulfate	D516-02 - Turbidimetric	20	206			mg/L	20	100	12/10/13 14:20	mla
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	12/03/13 11:10	khw

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-B

ACZ Sample ID: **L15777-02**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation		-						12/06/13 15:28	mpb
Cyanide, WAD	SM4500-CN I- distillation								12/10/13 9:41	mla
Total Hot Plate Digestion	M200.2 ICP								12/06/13 12:02	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								12/10/13 14:56	las
Total Recoverable Digestion	M200.2 ICP-MS								12/06/13 10:16	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.039			mg/L	0.001	0.005	12/10/13 4:05	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0009	B		mg/L	0.0002	0.001	12/07/13 4:05	pmc
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0010			mg/L	0.0002	0.001	12/10/13 4:05	pmc
Barium, dissolved	M200.7 ICP	1	0.046			mg/L	0.003	0.02	12/05/13 14:45	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 14:45	aeb
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 14:45	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	12/07/13 4:05	pmc
Cadmium, total	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	12/12/13 3:25	pmc
Calcium, dissolved	M200.7 ICP	1	35			mg/L	0.2	1	12/05/13 14:45	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	12/07/13 4:05	pmc
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	12/12/13 3:25	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	12/16/13 9:04	calc
Copper, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.003	12/07/13 4:05	pmc
Copper, total	M200.8 ICP-MS	1	0.0006	B		mg/L	0.0005	0.003	12/12/13 3:25	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	12/05/13 14:45	aeb
Iron, total	M200.7 ICP	1	0.04	B		mg/L	0.02	0.05	12/06/13 18:26	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0014			mg/L	0.0001	0.0005	12/07/13 4:05	pmc
Lead, total	M200.8 ICP-MS	1	0.0025			mg/L	0.0001	0.0005	12/12/13 3:25	pmc
Magnesium, dissolved	M200.7 ICP	1	2.5			mg/L	0.2	1	12/05/13 14:45	aeb
Manganese, dissolved	M200.7 ICP	1	0.020	B		mg/L	0.005	0.03	12/05/13 14:45	aeb
Manganese, total	M200.7 ICP	1	0.026	B		mg/L	0.005	0.03	12/06/13 18:26	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	12/03/13 12:17	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 14:45	aeb
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	12/06/13 18:26	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0003			mg/L	0.0001	0.0003	12/07/13 4:05	pmc
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	12/07/13 4:05	pmc
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	12/12/13 3:25	pmc
Uranium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	12/07/13 4:05	pmc
Uranium, total	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	12/12/13 3:25	pmc
Zinc, dissolved	M200.7 ICP	1	0.10			mg/L	0.01	0.05	12/05/13 14:45	aeb
Zinc, total	M200.7 ICP	1	0.10			mg/L	0.01	0.05	12/06/13 18:26	aeb

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-B

ACZ Sample ID: **L15777-02**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	45			mg/L	2	20	12/07/13 0:00	khw
Carbonate as CaCO ₃		1		U		mg/L	2	20	12/07/13 0:00	khw
Hydroxide as CaCO ₃		1		U		mg/L	2	20	12/07/13 0:00	khw
Total Alkalinity		1	45			mg/L	2	20	12/07/13 0:00	khw
Chloride	SM4500Cl-E	1		U		mg/L	1	5	12/09/13 14:34	bsu
Conductivity @25C	SM2510B	1	221			umhos/cm	1	10	12/07/13 15:48	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/07/13 2:07	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/10/13 16:32	mpb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	11/27/13 13:46	abm
Hardness as CaCO ₃	SM2340B - Calculation		98			mg/L	1	7	12/16/13 9:04	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/05/13 12:14	dcw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							12/03/13 16:05	mfm
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.47			mg/L	0.02	0.1	12/16/13 9:04	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.47		*	mg/L	0.02	0.1	11/27/13 23:52	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	11/27/13 23:52	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	12/09/13 17:49	mpb
pH (lab)	SM4500H+ B									
pH		1	8	H		units	0.1	0.1	12/07/13 0:00	khw
pH measured at		1	22			C	0.1	0.1	12/07/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	130			mg/L	10	20	12/02/13 16:41	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	12/03/13 15:25	abm
Sulfate	D516-02 - Turbidimetric	5	61.3			mg/L	5	25	12/10/13 12:39	mfa
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	12/03/13 11:14	khw

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-C

ACZ Sample ID: **L15777-03**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								12/06/13 15:35	mpb
Cyanide, WAD	SM4500-CN I- distillation								12/10/13 9:54	mla
Total Hot Plate Digestion	M200.2 ICP								12/06/13 12:13	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								12/10/13 15:06	las
Total Recoverable Digestion	M200.2 ICP-MS								12/06/13 10:25	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.103			mg/L	0.001	0.005	12/10/13 4:08	pmc
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	12/07/13 4:08	pmc
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0002	0.001	12/10/13 4:08	pmc
Barium, dissolved	M200.7 ICP	1	0.036			mg/L	0.003	0.02	12/05/13 15:01	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 15:01	aeb
Boron, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 15:01	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0010			mg/L	0.0001	0.0005	12/07/13 4:08	pmc
Cadmium, total	M200.8 ICP-MS	1	0.0010			mg/L	0.0001	0.0005	12/12/13 3:28	pmc
Calcium, dissolved	M200.7 ICP	1	24.3			mg/L	0.2	1	12/05/13 15:01	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	12/07/13 4:08	pmc
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	12/12/13 3:28	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	12/16/13 9:05	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0029	B		mg/L	0.0005	0.003	12/07/13 4:08	pmc
Copper, total	M200.8 ICP-MS	1	0.0031			mg/L	0.0005	0.003	12/12/13 3:28	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	12/05/13 15:01	aeb
Iron, total	M200.7 ICP	1		U		mg/L	0.02	0.05	12/06/13 18:30	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0016			mg/L	0.0001	0.0005	12/07/13 4:08	pmc
Lead, total	M200.8 ICP-MS	1	0.0023			mg/L	0.0001	0.0005	12/12/13 3:28	pmc
Magnesium, dissolved	M200.7 ICP	1	1.5			mg/L	0.2	1	12/05/13 15:01	aeb
Manganese, dissolved	M200.7 ICP	1	0.008	B		mg/L	0.005	0.03	12/05/13 15:01	aeb
Manganese, total	M200.7 ICP	1	0.007	B		mg/L	0.005	0.03	12/06/13 18:30	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	12/03/13 12:19	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 15:01	aeb
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	12/06/13 18:30	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0003			mg/L	0.0001	0.0003	12/07/13 4:08	pmc
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	12/07/13 4:08	pmc
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	12/12/13 3:28	pmc
Uranium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	12/07/13 4:08	pmc
Uranium, total	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	12/12/13 3:28	pmc
Zinc, dissolved	M200.7 ICP	1	0.27			mg/L	0.01	0.05	12/05/13 15:01	aeb
Zinc, total	M200.7 ICP	1	0.28			mg/L	0.01	0.05	12/06/13 18:30	aeb

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-C

ACZ Sample ID: **L15777-03**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	37			mg/L	2	20	12/07/13 0:00	khw
Carbonate as CaCO ₃		1		U		mg/L	2	20	12/07/13 0:00	khw
Hydroxide as CaCO ₃		1		U		mg/L	2	20	12/07/13 0:00	khw
Total Alkalinity		1	37			mg/L	2	20	12/07/13 0:00	khw
Chloride	SM4500Cl-E	1		U	*	mg/L	1	5	12/09/13 14:34	bsu
Conductivity @25C	SM2510B	1	153			umhos/cm	1	10	12/07/13 15:55	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/07/13 2:08	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/10/13 16:34	mpb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	11/27/13 13:54	abm
Hardness as CaCO ₃	SM2340B - Calculation		67			mg/L	1	7	12/16/13 9:05	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/05/13 12:19	dcw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							12/03/13 16:05	mfm
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.19			mg/L	0.02	0.1	12/16/13 9:05	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.19		*	mg/L	0.02	0.1	11/27/13 23:53	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	11/27/13 23:53	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	12/09/13 17:50	mpb
pH (lab)	SM4500H+ B									
pH		1	7.9	H		units	0.1	0.1	12/07/13 0:00	khw
pH measured at		1	22			C	0.1	0.1	12/07/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	80			mg/L	10	20	12/02/13 16:44	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	12/03/13 15:26	abm
Sulfate	D516-02 - Turbidimetric	1	35.9			mg/L	1	5	12/10/13 12:29	mla
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	12/03/13 11:17	khw

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L15777-04**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								12/09/13 15:00	tcd
Cyanide, WAD	SM4500-CN I- distillation								12/10/13 10:01	mla
Total Hot Plate Digestion	M200.2 ICP-MS								12/10/13 15:16	las
Total Hot Plate Digestion	M200.2 ICP								12/06/13 12:25	aeb
Total Recoverable Digestion	M200.2 ICP-MS								12/06/13 10:34	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.071			mg/L	0.001	0.005	12/10/13 4:12	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	12/07/13 4:11	pmc
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0009	B		mg/L	0.0002	0.001	12/10/13 4:12	pmc
Barium, dissolved	M200.7 ICP	1	0.021			mg/L	0.003	0.02	12/05/13 15:04	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 15:04	aeb
Boron, dissolved	M200.7 ICP	1	0.03	B		mg/L	0.01	0.05	12/05/13 15:04	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0009			mg/L	0.0001	0.0005	12/07/13 4:11	pmc
Cadmium, total	M200.8 ICP-MS	1	0.0009			mg/L	0.0001	0.0005	12/12/13 3:37	pmc
Calcium, dissolved	M200.7 ICP	1	278			mg/L	0.2	1	12/05/13 15:04	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	12/07/13 4:11	pmc
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	12/12/13 3:37	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	12/16/13 9:05	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0019	B		mg/L	0.0005	0.003	12/07/13 4:11	pmc
Copper, total	M200.8 ICP-MS	1	0.0074			mg/L	0.0005	0.003	12/12/13 3:37	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	12/05/13 15:04	aeb
Iron, total	M200.7 ICP	1	0.17			mg/L	0.02	0.05	12/06/13 18:33	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	12/07/13 4:11	pmc
Lead, total	M200.8 ICP-MS	1	0.0038			mg/L	0.0001	0.0005	12/12/13 3:37	pmc
Magnesium, dissolved	M200.7 ICP	1	3.4			mg/L	0.2	1	12/05/13 15:04	aeb
Manganese, dissolved	M200.7 ICP	1	0.101			mg/L	0.005	0.03	12/05/13 15:04	aeb
Manganese, total	M200.7 ICP	1	0.104			mg/L	0.005	0.03	12/06/13 18:33	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	12/03/13 12:21	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 15:04	aeb
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	12/06/13 18:33	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0004			mg/L	0.0001	0.0003	12/07/13 4:11	pmc
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	12/07/13 4:11	pmc
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	12/12/13 3:37	pmc
Uranium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	12/07/13 4:11	pmc
Uranium, total	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0005	12/12/13 3:37	pmc
Zinc, dissolved	M200.7 ICP	1	0.20			mg/L	0.01	0.05	12/05/13 15:04	aeb
Zinc, total	M200.7 ICP	1	0.22			mg/L	0.01	0.05	12/06/13 18:33	aeb

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L15777-04**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	46			mg/L	2	20	12/07/13 0:00	khw
Carbonate as CaCO ₃		1		U		mg/L	2	20	12/07/13 0:00	khw
Hydroxide as CaCO ₃		1		U		mg/L	2	20	12/07/13 0:00	khw
Total Alkalinity		1	46			mg/L	2	20	12/07/13 0:00	khw
Chloride	SM4500Cl-E	1	1	B	*	mg/L	1	5	12/09/13 14:54	bsu
Conductivity @25C	SM2510B	1	1240			umhos/cm	1	10	12/07/13 16:03	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/10/13 15:46	mpb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/10/13 16:35	mpb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	11/27/13 13:57	abm
Hardness as CaCO ₃	SM2340B - Calculation		709			mg/L	1	7	12/16/13 9:05	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/07/13 10:55	id
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							12/03/13 16:05	mfm
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂			U		mg/L	0.02	0.1	12/16/13 9:05	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.02	0.1	11/27/13 23:55	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	11/27/13 23:55	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	12/09/13 17:51	mpb
pH (lab)	SM4500H+ B									
pH		1	8	H		units	0.1	0.1	12/07/13 0:00	khw
pH measured at		1	22			C	0.1	0.1	12/07/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	1050			mg/L	10	20	12/02/13 16:47	dcw
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	12/03/13 15:27	abm
Sulfate	D516-02 - Turbidimetric	20	676		*	mg/L	20	100	12/10/13 13:08	mia
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	12/03/13 11:20	khw

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-E

ACZ Sample ID: **L15777-05**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								12/09/13 15:00	tcd
Cyanide, WAD	SM4500-CN I- distillation								12/10/13 10:07	mla
Total Hot Plate Digestion	M200.2 ICP-MS								12/10/13 15:27	las
Total Hot Plate Digestion	M200.2 ICP								12/06/13 12:36	aeb
Total Recoverable Digestion	M200.2 ICP-MS								12/06/13 10:43	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.021			mg/L	0.001	0.005	12/10/13 4:15	pmc
Arsenic, dissolved	M200.8 ICP-MS	1	0.0006	B		mg/L	0.0002	0.001	12/07/13 4:14	pmc
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0009	B		mg/L	0.0002	0.001	12/10/13 4:15	pmc
Barium, dissolved	M200.7 ICP	1	0.020			mg/L	0.003	0.02	12/05/13 15:07	aeb
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 15:07	aeb
Boron, dissolved	M200.7 ICP	1	0.03	B		mg/L	0.01	0.05	12/05/13 15:07	aeb
Cadmium, dissolved	M200.8 ICP-MS	1	0.0008			mg/L	0.0001	0.0005	12/07/13 4:14	pmc
Cadmium, total	M200.8 ICP-MS	1	0.0008			mg/L	0.0001	0.0005	12/12/13 3:41	pmc
Calcium, dissolved	M200.7 ICP	1	276			mg/L	0.2	1	12/05/13 15:07	aeb
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	12/07/13 4:14	pmc
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	12/12/13 3:41	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	12/16/13 9:05	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0018	B		mg/L	0.0005	0.003	12/07/13 4:14	pmc
Copper, total	M200.8 ICP-MS	1	0.0076			mg/L	0.0005	0.003	12/12/13 3:41	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	12/05/13 15:07	aeb
Iron, total	M200.7 ICP	1	0.19			mg/L	0.02	0.05	12/06/13 18:36	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	12/07/13 4:14	pmc
Lead, total	M200.8 ICP-MS	1	0.0047			mg/L	0.0001	0.0005	12/12/13 3:41	pmc
Magnesium, dissolved	M200.7 ICP	1	3.4			mg/L	0.2	1	12/05/13 15:07	aeb
Manganese, dissolved	M200.7 ICP	1	0.100			mg/L	0.005	0.03	12/05/13 15:07	aeb
Manganese, total	M200.7 ICP	1	0.110			mg/L	0.005	0.03	12/06/13 18:36	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	12/03/13 12:28	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	12/05/13 15:07	aeb
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	12/06/13 18:36	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0004			mg/L	0.0001	0.0003	12/07/13 4:14	pmc
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	12/07/13 4:14	pmc
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	12/12/13 3:41	pmc
Uranium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	12/07/13 4:14	pmc
Uranium, total	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0005	12/12/13 3:41	pmc
Zinc, dissolved	M200.7 ICP	1	0.17			mg/L	0.01	0.05	12/05/13 15:07	aeb
Zinc, total	M200.7 ICP	1	0.19			mg/L	0.01	0.05	12/06/13 18:36	aeb

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-E

ACZ Sample ID: **L15777-05**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	46			mg/L	2	20	12/07/13 0:00	khw
Carbonate as CaCO ₃		1		U		mg/L	2	20	12/07/13 0:00	khw
Hydroxide as CaCO ₃		1		U		mg/L	2	20	12/07/13 0:00	khw
Total Alkalinity		1	46			mg/L	2	20	12/07/13 0:00	khw
Chloride	SM4500Cl-E	1	1	B	*	mg/L	1	5	12/09/13 14:54	bsu
Conductivity @25C	SM2510B	1	1240			umhos/cm	1	10	12/07/13 16:10	khw
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/10/13 15:48	mpb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/10/13 16:36	mpb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	11/27/13 13:59	abm
Hardness as CaCO ₃	SM2340B - Calculation		704			mg/L	1	7	12/16/13 9:05	calc
Lab Filtration (0.45um filter)	SOPWC050	1							12/07/13 10:58	id
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							12/03/13 16:06	mfm
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂			U		mg/L	0.02	0.1	12/16/13 9:05	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.02	0.1	11/27/13 23:56	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.01	0.05	11/27/13 23:56	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	12/09/13 17:52	mpb
pH (lab)	SM4500H+ B									
pH		1	8	H		units	0.1	0.1	12/07/13 0:00	khw
pH measured at		1	22			C	0.1	0.1	12/07/13 0:00	khw
Residue, Filterable (TDS) @180C	SM2540C	1	1050			mg/L	10	20	12/03/13 16:22	mss3
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	12/03/13 15:29	abm
Sulfate	D516-02 - Turbidimetric	20	705		*	mg/L	20	100	12/10/13 13:08	mia
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	12/03/13 11:24	khw

Caldera Mineral Resources LLC

Project ID:

Sample ID: CNTB072913-2

ACZ Sample ID: **L15777-06**

Date Sampled: 11/26/13 00:00

Date Received: 11/27/13

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								12/09/13 15:01	tcd
Cyanide, WAD	SM4500-CN I- distillation		-						12/10/13 10:14	mla

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/10/13 15:49	mpb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	12/10/13 16:36	mpb

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356078													
WG356078PBW1	PBW	12/07/13 15:04				6.9	mg/L		-20	20			
WG356078LCSW2	LCSW	12/07/13 15:17	WC131126-	820.0001		777.5	mg/L	94.8	90	110			
L15788-02DUP	DUP	12/07/13 16:36			76	73.1	mg/L				3.9	20	
WG356078LCSW5	LCSW	12/07/13 18:20	WC131126-	820.0001		797.9	mg/L	97.3	90	110			
WG356078PBW2	PBW	12/07/13 18:28				3.1	mg/L		-20	20			
WG356078LCSW8	LCSW	12/07/13 21:31	WC131126-	820.0001		787.5	mg/L	96	90	110			
WG356078PBW3	PBW	12/07/13 21:39				2.3	mg/L		-20	20			
WG356078LCSW11	LCSW	12/08/13 1:00	WC131126-	820.0001		794.3	mg/L	96.9	90	110			
WG356078PBW4	PBW	12/08/13 1:09				2.5	mg/L		-20	20			
WG356078LCSW14	LCSW	12/08/13 4:26	WC131126-	820.0001		813.1	mg/L	99.2	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356148													
WG356148ICV	ICV	12/10/13 3:17	MS131202-2	.1		.0989	mg/L	98.9	90	110			
WG356148ICB	ICB	12/10/13 3:20				U	mg/L		-0.003	0.003			
WG356003LRB	LRB	12/10/13 3:23				U	mg/L		-0.0022	0.0022			
WG356003LFB	LFB	12/10/13 3:27	MS131118-2	.050055		.0499	mg/L	99.7	85	115			
L15725-01LFM	LFM	12/10/13 3:43	MS131118-2	.050055	.028	.0746	mg/L	93.1	70	130			
L15725-01LFMD	LFMD	12/10/13 3:46	MS131118-2	.050055	.028	.0756	mg/L	95.1	70	130	1.33	20	
L15855-05LFM	LFM	12/10/13 4:41	MS131118-2	.050055	.054	.1091	mg/L	110.1	70	130			
L15855-05LFMD	LFMD	12/10/13 4:44	MS131118-2	.050055	.054	.1002	mg/L	92.3	70	130	8.5	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355999													
WG355999ICV	ICV	12/07/13 3:04	MS131202-2	.05		.05233	mg/L	104.7	90	110			
WG355999ICB	ICB	12/07/13 3:07				U	mg/L		-0.0006	0.0006			
WG355999LFB	LFB	12/07/13 3:10	MS131118-2	.05005		.04927	mg/L	98.4	85	115			
L15800-04AS	AS	12/07/13 4:37	MS131118-2	.05005	.0003	.05679	mg/L	112.9	70	130			
L15800-04ASD	ASD	12/07/13 4:40	MS131118-2	.05005	.0003	.0554	mg/L	110.1	70	130	2.48	20	

Arsenic, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356148													
WG356148ICV	ICV	12/10/13 3:17	MS131202-2	.05		.05338	mg/L	106.8	90	110			
WG356148ICB	ICB	12/10/13 3:20				U	mg/L		-0.0006	0.0006			
WG356003LRB	LRB	12/10/13 3:23				U	mg/L		-0.00044	0.00044			
WG356003LFB	LFB	12/10/13 3:27	MS131118-2	.05005		.05075	mg/L	101.4	85	115			
L15725-01LFM	LFM	12/10/13 3:43	MS131118-2	.05005	.0006	.05084	mg/L	100.4	70	130			
L15725-01LFMD	LFMD	12/10/13 3:46	MS131118-2	.05005	.0006	.05177	mg/L	102.2	70	130	1.81	20	
L15855-05LFM	LFM	12/10/13 4:41	MS131118-2	.05005	.0015	.05205	mg/L	101	70	130			
L15855-05LFMD	LFMD	12/10/13 4:44	MS131118-2	.05005	.0015	.05156	mg/L	100	70	130	0.95	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355942													
WG355942ICV	ICV	12/05/13 13:20	II131113-1	2		1.9827	mg/L	99.1	95	105			
WG355942ICB	ICB	12/05/13 13:26				U	mg/L		-0.009	0.009			
WG355942LFB	LFB	12/05/13 13:39	II131119-3	.5		.4972	mg/L	99.4	85	115			
L15777-02AS	AS	12/05/13 14:54	II131119-3	.5	.046	.5462	mg/L	100	85	115			
L15777-02ASD	ASD	12/05/13 14:57	II131119-3	.5	.046	.5482	mg/L	100.4	85	115	0.37	20	

Beryllium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355942													
WG355942ICV	ICV	12/05/13 13:20	II131113-1	2		1.964	mg/L	98.2	95	105			
WG355942ICB	ICB	12/05/13 13:26				U	mg/L		-0.03	0.03			
WG355942LFB	LFB	12/05/13 13:39	II131119-3	.5		.506	mg/L	101.2	85	115			
L15777-02AS	AS	12/05/13 14:54	II131119-3	.5	U	.501	mg/L	100.2	85	115			
L15777-02ASD	ASD	12/05/13 14:57	II131119-3	.5	U	.505	mg/L	101	85	115	0.8	20	

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355942													
WG355942ICV	ICV	12/05/13 13:20	II131113-1	2		2.05	mg/L	102.5	95	105			
WG355942ICB	ICB	12/05/13 13:26				U	mg/L		-0.03	0.03			
WG355942LFB	LFB	12/05/13 13:39	II131119-3	.5005		.521	mg/L	104.1	85	115			
L15777-02AS	AS	12/05/13 14:54	II131119-3	.5005	U	.524	mg/L	104.7	85	115			
L15777-02ASD	ASD	12/05/13 14:57	II131119-3	.5005	U	.53	mg/L	105.9	85	115	1.14	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355999													
WG355999ICV	ICV	12/07/13 3:04	MS131202-2	.05		.04874	mg/L	97.5	90	110			
WG355999ICB	ICB	12/07/13 3:07				U	mg/L		-0.0003	0.0003			
WG355999LFB	LFB	12/07/13 3:10	MS131118-2	.0501		.04993	mg/L	99.7	85	115			
L15800-04AS	AS	12/07/13 4:37	MS131118-2	.0501	.0065	.05909	mg/L	105	70	130			
L15800-04ASD	ASD	12/07/13 4:40	MS131118-2	.0501	.0065	.05738	mg/L	101.6	70	130	2.94	20	

Cadmium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356307													
WG356307ICV	ICV	12/12/13 2:56	MS131202-2	.05		.05032	mg/L	100.6	90	110			
WG356307ICB	ICB	12/12/13 2:59				U	mg/L		-0.0003	0.0003			
WG356154LRB	LRB	12/12/13 3:02				U	mg/L		-0.00022	0.00022			
WG356154LFB	LFB	12/12/13 3:05	MS131118-2	.0501		.05034	mg/L	100.5	85	115			
L15800-01LFM	LFM	12/12/13 3:47	MS131118-2	.0501	.0036	.0532	mg/L	99	70	130			
L15800-01LFMD	LFMD	12/12/13 3:50	MS131118-2	.0501	.0036	.05341	mg/L	99.4	70	130	0.39	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355942													
WG355942ICV	ICV	12/05/13 13:20	II131113-1	100		98.87	mg/L	98.9	95	105			
WG355942ICB	ICB	12/05/13 13:26				U	mg/L		-0.6	0.6			
WG355942LFB	LFB	12/05/13 13:39	II131119-3	68.00225		69.58	mg/L	102.3	85	115			
L15777-02AS	AS	12/05/13 14:54	II131119-3	68.00225	35	102.5	mg/L	99.3	85	115			
L15777-02ASD	ASD	12/05/13 14:57	II131119-3	68.00225	35	104.1	mg/L	101.6	85	115	1.55	20	

Chloride

SM4500CI-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356125													
WG356125ICB	ICB	12/09/13 9:37				U	mg/L		-3	3			
WG356125ICV	ICV	12/09/13 9:37	WI130722-5	54.945		57.4	mg/L	104.5	90	110			
WG356125LFB1	LFB	12/09/13 14:33	WI131010-1	30		31.9	mg/L	106.3	90	110			
L15765-02AS	AS	12/09/13 14:33	WI131010-1	30	22	52.5	mg/L	101.7	90	110			
L15765-03DUP	DUP	12/09/13 14:33			17	17.4	mg/L				2.3	20	
L15777-04AS	AS	12/09/13 14:54	WI131010-1	30	1	36.2	mg/L	117.3	90	110			M1
L15777-05DUP	DUP	12/09/13 14:54			1	1.2	mg/L				18.2	20	RA
WG356125LFB2	LFB	12/09/13 16:03	WI131010-1	30		33	mg/L	110	90	110			

Chromium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355999													
WG355999ICV	ICV	12/07/13 3:04	MS131202-2	.05		.04915	mg/L	98.3	90	110			
WG355999ICB	ICB	12/07/13 3:07				U	mg/L		-0.0015	0.0015			
WG355999LFB	LFB	12/07/13 3:10	MS131118-2	.05005		.05034	mg/L	100.6	85	115			
L15800-04AS	AS	12/07/13 4:37	MS131118-2	.05005	.0007	.05088	mg/L	100.3	70	130			
L15800-04ASD	ASD	12/07/13 4:40	MS131118-2	.05005	.0007	.05088	mg/L	100.3	70	130	0	20	

Chromium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356307													
WG356307ICV	ICV	12/12/13 2:56	MS131202-2	.05		.05016	mg/L	100.3	90	110			
WG356307ICB	ICB	12/12/13 2:59				U	mg/L		-0.0015	0.0015			
WG356154LRB	LRB	12/12/13 3:02				U	mg/L		-0.0011	0.0011			
WG356154LFB	LFB	12/12/13 3:05	MS131118-2	.05005		.0501	mg/L	100.1	85	115			
L15800-01LFM	LFM	12/12/13 3:47	MS131118-2	.05005	.0006	.04948	mg/L	97.7	70	130			
L15800-01LFMD	LFMD	12/12/13 3:50	MS131118-2	.05005	.0006	.04947	mg/L	97.6	70	130	0.02	20	

Conductivity @25C

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356078													
WG356078LCSW1	LCSW	12/07/13 15:05	PCN42442	1408.8		1436.6	µmhos/crr	102	90	110			
L15788-02DUP	DUP	12/07/13 16:36			6270	6260	µmhos/crr				0.2	20	
WG356078LCSW4	LCSW	12/07/13 18:08	PCN42442	1408.8		1412	µmhos/crr	100.2	90	110			
WG356078LCSW7	LCSW	12/07/13 21:19	PCN42442	1408.8		1398.6	µmhos/crr	99.3	90	110			
WG356078LCSW10	LCSW	12/08/13 0:48	PCN42442	1408.8		1384.2	µmhos/crr	98.3	90	110			
WG356078LCSW13	LCSW	12/08/13 4:13	PCN42442	1408.8		1377.1	µmhos/crr	97.7	90	110			

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Copper, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355999													
WG355999ICV	ICV	12/07/13 3:04	MS131202-2	.05		.04893	mg/L	97.9	90	110			
WG355999ICB	ICB	12/07/13 3:07				U	mg/L		-0.0015	0.0015			
WG355999LFB	LFB	12/07/13 3:10	MS131118-2	.05005		.04954	mg/L	99	85	115			
L15800-04AS	AS	12/07/13 4:37	MS131118-2	.05005	.0345	.08426	mg/L	99.4	70	130			
L15800-04ASD	ASD	12/07/13 4:40	MS131118-2	.05005	.0345	.0844	mg/L	99.7	70	130	0.17	20	

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356307													
WG356307ICV	ICV	12/12/13 2:56	MS131202-2	.05		.04972	mg/L	99.4	90	110			
WG356307ICB	ICB	12/12/13 2:59				U	mg/L		-0.0015	0.0015			
WG356154LRB	LRB	12/12/13 3:02				U	mg/L		-0.0011	0.0011			
WG356154LFB	LFB	12/12/13 3:05	MS131118-2	.05005		.04994	mg/L	99.8	85	115			
L15800-01LFM	LFM	12/12/13 3:47	MS131118-2	.05005	.0181	.06606	mg/L	95.8	70	130			
L15800-01LFMD	LFMD	12/12/13 3:50	MS131118-2	.05005	.0181	.06588	mg/L	95.5	70	130	0.27	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356072													
WG356072ICV	ICV	12/07/13 1:13	WI131202-6	.3		.2972	mg/L	99.1	90	110			
WG356072ICB	ICB	12/07/13 1:14				U	mg/L		-0.003	0.003			
WG356074													
WG356038LRB	LRB	12/07/13 1:49				U	mg/L		-0.003	0.003			
WG356038LFB	LFB	12/07/13 1:50	WI131202-2	.2		.2005	mg/L	100.3	90	110			
L15768-03DUP	DUP	12/07/13 2:04			U	U	mg/L				0	20	RA
L15777-01LFM	LFM	12/07/13 2:06	WI131202-2	.2	U	.2018	mg/L	100.9	90	110			
WG356204													
WG356204ICV	ICV	12/10/13 15:42	WI131202-6	.3		.2961	mg/L	98.7	90	110			
WG356204ICB	ICB	12/10/13 15:43				U	mg/L		-0.003	0.003			
WG356130LRB	LRB	12/10/13 15:44				U	mg/L		-0.003	0.003			
WG356130LFB	LFB	12/10/13 15:45	WI131202-2	.2		.1966	mg/L	98.3	90	110			
L15777-04DUP	DUP	12/10/13 15:47			U	U	mg/L				0	20	RA
L15777-05LFM	LFM	12/10/13 15:48	WI131202-2	.2	U	.1873	mg/L	93.7	90	110			

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356209													
WG356156LRB	LRB	12/10/13 16:29				U	mg/L		-0.003	0.003			
WG356156LFB	LFB	12/10/13 16:29	WI131202-4	.2		.1967	mg/L	98.4	90	110			
L15777-01DUP	DUP	12/10/13 16:31			U	U	mg/L				0	20	RA
L15777-02LFM	LFM	12/10/13 16:33	WI131202-4	.2	U	.1929	mg/L	96.5	90	110			

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Dissolved Chromium, Hexavalent

SM3500Cr-B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355604													
WG355604ICV	ICV	11/27/13 13:10	WC130531-	.05		.0543	mg/L	108.6	90	110			
WG355604ICB	ICB	11/27/13 13:12				U	mg/L		-0.015	0.015			
WG355604LFB	LFB	11/27/13 13:15	WC130523-	.05		.0525	mg/L	105	90	110			
L15777-02AS	AS	11/27/13 13:49	WC130523-	.05	U	.052	mg/L	104	90	110			
L15777-02DUP	DUP	11/27/13 13:51			U	U	mg/L				0	20	RA
L15777-05AS	AS	11/27/13 14:02	WC130523-	.05	U	.0513	mg/L	102.6	90	110			
L15777-05DUP	DUP	11/27/13 14:04			U	U	mg/L				0	20	RA

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355942													
WG355942ICV	ICV	12/05/13 13:20	II131113-1	2		2.025	mg/L	101.3	95	105			
WG355942ICB	ICB	12/05/13 13:26				U	mg/L		-0.06	0.06			
WG355942LFB	LFB	12/05/13 13:39	II131119-3	1.0014		1.04	mg/L	103.9	85	115			
L15777-02AS	AS	12/05/13 14:54	II131119-3	1.0014	U	1.027	mg/L	102.6	85	115			
L15777-02ASD	ASD	12/05/13 14:57	II131119-3	1.0014	U	1.035	mg/L	103.4	85	115	0.78	20	

Iron, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356050													
WG356050ICV	ICV	12/06/13 17:11	II131111-1	2		1.962	mg/L	98.1	95	105			
WG356050ICB	ICB	12/06/13 17:17				U	mg/L		-0.06	0.06			
WG356006LRB	LRB	12/06/13 17:30				U	mg/L		-0.044	0.044			
WG356006LFB	LFB	12/06/13 17:33	II131119-3	1.0014		.976	mg/L	97.5	85	115			
L15800-01LFM	LFM	12/06/13 18:49	II131119-3	1.0014	.38	1.278	mg/L	89.7	70	130			
L15800-01LFMD	LFMD	12/06/13 18:52	II131119-3	1.0014	.38	1.281	mg/L	90	70	130	0.23	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355999													
WG355999ICV	ICV	12/07/13 3:04	MS131202-2	.05		.04998	mg/L	100	90	110			
WG355999ICB	ICB	12/07/13 3:07				U	mg/L		-0.0003	0.0003			
WG355999LFB	LFB	12/07/13 3:10	MS131118-2	.05005		.05008	mg/L	100.1	85	115			
L15800-04AS	AS	12/07/13 4:37	MS131118-2	.05005	U	.051	mg/L	101.9	70	130			
L15800-04ASD	ASD	12/07/13 4:40	MS131118-2	.05005	U	.0514	mg/L	102.7	70	130	0.78	20	

Lead, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356307													
WG356307ICV	ICV	12/12/13 2:56	MS131202-2	.05		.05153	mg/L	103.1	90	110			
WG356307ICB	ICB	12/12/13 2:59				U	mg/L		-0.0003	0.0003			
WG356154LRB	LRB	12/12/13 3:02				U	mg/L		-0.00022	0.00022			
WG356154LFB	LFB	12/12/13 3:05	MS131118-2	.05005		.05002	mg/L	99.9	85	115			
L15800-01LFM	LFM	12/12/13 3:47	MS131118-2	.05005	.0001	.0499	mg/L	99.5	70	130			
L15800-01LFMD	LFMD	12/12/13 3:50	MS131118-2	.05005	.0001	.04984	mg/L	99.4	70	130	0.12	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355942													
WG355942ICV	ICV	12/05/13 13:20	II131113-1	100		97.24	mg/L	97.2	95	105			
WG355942ICB	ICB	12/05/13 13:26				U	mg/L		-0.6	0.6			
WG355942LFB	LFB	12/05/13 13:39	II131119-3	49.99695		48.88	mg/L	97.8	85	115			
L15777-02AS	AS	12/05/13 14:54	II131119-3	49.99695	2.5	50.84	mg/L	96.7	85	115			
L15777-02ASD	ASD	12/05/13 14:57	II131119-3	49.99695	2.5	51.85	mg/L	98.7	85	115	1.97	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355942													
WG355942ICV	ICV	12/05/13 13:20	II131113-1	2		1.9672	mg/L	98.4	95	105			
WG355942ICB	ICB	12/05/13 13:26				U	mg/L		-0.015	0.015			
WG355942LFB	LFB	12/05/13 13:39	II131119-3	.501		.5068	mg/L	101.2	85	115			
L15777-02AS	AS	12/05/13 14:54	II131119-3	.501	.02	.5222	mg/L	100.2	85	115			
L15777-02ASD	ASD	12/05/13 14:57	II131119-3	.501	.02	.5247	mg/L	100.7	85	115	0.48	20	

Manganese, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356050													
WG356050ICV	ICV	12/06/13 17:11	II131111-1	2		1.94	mg/L	97	95	105			
WG356050ICB	ICB	12/06/13 17:17				U	mg/L		-0.015	0.015			
WG356006LRB	LRB	12/06/13 17:30				U	mg/L		-0.011	0.011			
WG356006LFB	LFB	12/06/13 17:33	II131119-3	.501		.4728	mg/L	94.4	85	115			
L15800-01LFM	LFM	12/06/13 18:49	II131119-3	.501	6.53	6.897	mg/L	73.3	70	130			
L15800-01LFMD	LFMD	12/06/13 18:52	II131119-3	.501	6.53	6.911	mg/L	76	70	130	0.2	20	

Mercury, total

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355685													
WG355685ICV	ICV	12/03/13 11:38	II131118-6	.005025		.00507	mg/L	100.9	95	105			
WG355685ICB	ICB	12/03/13 11:40				U	mg/L		-0.0002	0.0002			
WG355685LRB	LRB	12/03/13 11:42				U	mg/L		-0.00044	0.00044			
WG355685LFB	LFB	12/03/13 11:45	II131118-4	.002002		.00199	mg/L	99.4	85	115			
L15745-01LFM	LFM	12/03/13 11:54	II131118-4	.002002	U	.00196	mg/L	97.9	85	115			
L15745-01LFMD	LFMD	12/03/13 11:56	II131118-4	.002002	U	.00198	mg/L	98.9	85	115	1.02	20	
L15777-04LFM	LFM	12/03/13 12:23	II131118-4	.002002	U	.00201	mg/L	100.4	85	115			
L15777-04LFMD	LFMD	12/03/13 12:25	II131118-4	.002002	U	.00198	mg/L	98.9	85	115	1.5	20	

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355942													
WG355942ICV	ICV	12/05/13 13:20	II131113-1	2		2.05	mg/L	102.5	95	105			
WG355942ICB	ICB	12/05/13 13:26				U	mg/L		-0.03	0.03			
WG355942LFB	LFB	12/05/13 13:39	II131119-3	.5		.503	mg/L	100.6	85	115			
L15777-02AS	AS	12/05/13 14:54	II131119-3	.5	U	.496	mg/L	99.2	85	115			
L15777-02ASD	ASD	12/05/13 14:57	II131119-3	.5	U	.498	mg/L	99.6	85	115	0.4	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Nickel, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356050													
WG356050ICV	ICV	12/06/13 17:11	II131111-1	2		2.028	mg/L	101.4	95	105			
WG356050ICB	ICB	12/06/13 17:17				U	mg/L		-0.03	0.03			
WG356006LRB	LRB	12/06/13 17:30				U	mg/L		-0.022	0.022			
WG356006LFB	LFB	12/06/13 17:33	II131119-3	.5		.478	mg/L	95.6	85	115			
L15800-01LFM	LFM	12/06/13 18:49	II131119-3	.5	.07	.552	mg/L	96.4	70	130			
L15800-01LFMD	LFMD	12/06/13 18:52	II131119-3	.5	.07	.554	mg/L	96.8	70	130	0.36	20	

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355630													
WG355630ICV	ICV	11/27/13 23:20	WI131015-1	2.416		2.375	mg/L	98.3	90	110			
WG355630ICB	ICB	11/27/13 23:22				U	mg/L		-0.06	0.06			
WG355630LFB	LFB	11/27/13 23:25	WI130816-3	2		2.037	mg/L	101.9	90	110			
L15773-03AS	AS	11/27/13 23:44	WI130816-3	2	.19	2.309	mg/L	106	90	110			
L15773-04DUP	DUP	11/27/13 23:46			U	U	mg/L				0	20	RA

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355630													
WG355630ICV	ICV	11/27/13 23:20	WI131015-1	.609		.592	mg/L	97.2	90	110			
WG355630ICB	ICB	11/27/13 23:22				U	mg/L		-0.03	0.03			
WG355630LFB	LFB	11/27/13 23:25	WI130816-3	1		1.009	mg/L	100.9	90	110			
L15773-03AS	AS	11/27/13 23:44	WI130816-3	1	U	1.122	mg/L	112.2	90	110			M1
L15773-04DUP	DUP	11/27/13 23:46			U	U	mg/L				0	20	RA

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356136													
WG356136ICV	ICV	12/09/13 17:05	WI131021-1	1.003		1.01	mg/L	100.7	90	110			
WG356136ICB	ICB	12/09/13 17:08				U	mg/L		-0.15	0.15			
WG356136LFB1	LFB	12/09/13 17:09	WI121218-3	1		.988	mg/L	98.8	90	110			
WG356136LFB2	LFB	12/09/13 17:40	WI121218-3	1		1.018	mg/L	101.8	90	110			
L15770-03DUP	DUP	12/09/13 17:45			.09	.093	mg/L				3.3	20	RA
L15770-02AS	AS	12/09/13 18:01	WI121218-3	1	U	1.069	mg/L	106.9	90	110			

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356078													
WG356078LCSW3	LCSW	12/07/13 15:20	PCN41777	6		6.03	units	100.5	5.9	6.1			
L15788-02DUP	DUP	12/07/13 16:36			6	5.91	units				1.5	20	
WG356078LCSW6	LCSW	12/07/13 18:23	PCN41777	6		6.05	units	100.8	5.9	6.1			
WG356078LCSW9	LCSW	12/07/13 21:34	PCN41777	6		6.05	units	100.8	5.9	6.1			
WG356078LCSW12	LCSW	12/08/13 1:04	PCN41777	6		6.05	units	100.8	5.9	6.1			
WG356078LCSW15	LCSW	12/08/13 4:29	PCN41777	6		6.06	units	101	5.9	6.1			

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355700													
WG355700PBW	PBW	12/02/13 16:00				U	mg/L		-20	20			
WG355700LCSW	LCSW	12/02/13 16:02	PCN44257	260		244	mg/L	93.8	80	120			
L15785-04DUP	DUP	12/02/13 17:00			1550	1576	mg/L				1.7	10	
WG355806													
WG355806PBW	PBW	12/03/13 16:15				U	mg/L		-20	20			
WG355806LCSW	LCSW	12/03/13 16:16	PCN44257	260		246	mg/L	94.6	80	120			
L15848-03DUP	DUP	12/03/13 16:34			190	198	mg/L				4.1	10	

Residue, Non-Filterable (TSS) @105C SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355790													
WG355790PBW	PBW	12/03/13 15:20				U	mg/L		-15	15			
WG355790LCSW	LCSW	12/03/13 15:21	PCN44257	160		149	mg/L	93.1	80	120			
L15844-04DUP	DUP	12/03/13 15:35			13	11	mg/L				16.7	10	RA

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355999													
WG355999ICV	ICV	12/07/13 3:04	MS131202-2	.05		.05077	mg/L	101.5	90	110			
WG355999ICB	ICB	12/07/13 3:07				U	mg/L		-0.0003	0.0003			
WG355999LFB	LFB	12/07/13 3:10	MS131118-2	.05005		.05087	mg/L	101.6	85	115			
L15800-04AS	AS	12/07/13 4:37	MS131118-2	.05005	.0002	.05745	mg/L	114.4	70	130			
L15800-04ASD	ASD	12/07/13 4:40	MS131118-2	.05005	.0002	.0572	mg/L	113.9	70	130	0.44	20	

Silver, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355999													
WG355999ICV	ICV	12/07/13 3:04	MS131202-2	.02002		.01816	mg/L	90.7	90	110			
WG355999ICB	ICB	12/07/13 3:07				U	mg/L		-0.00015	0.00015			
WG355999LFB	LFB	12/07/13 3:10	MS131118-2	.01001		.009291	mg/L	92.8	85	115			
L15800-04AS	AS	12/07/13 4:37	MS131118-2	.01001	U	.008693	mg/L	86.8	70	130			
L15800-04ASD	ASD	12/07/13 4:40	MS131118-2	.01001	U	.008428	mg/L	84.2	70	130	3.1	20	

Silver, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356307													
WG356307ICV	ICV	12/12/13 2:56	MS131202-2	.02002		.0191	mg/L	95.4	90	110			
WG356307ICB	ICB	12/12/13 2:59				U	mg/L		-0.00015	0.00015			
WG356154LRB	LRB	12/12/13 3:02				U	mg/L		-0.00011	0.00011			
WG356154LFB	LFB	12/12/13 3:05	MS131118-2	.01001		.008845	mg/L	88.4	85	115			
L15800-01LFM	LFM	12/12/13 3:47	MS131118-2	.01001	U	.008529	mg/L	85.2	70	130			
L15800-01LFMD	LFMD	12/12/13 3:50	MS131118-2	.01001	U	.008502	mg/L	84.9	70	130	0.32	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356170													
WG356170ICB	ICB	12/10/13 12:17				U	mg/L		-3	3			
WG356170ICV	ICV	12/10/13 12:17	WI131127-2	20		20	mg/L	100	90	110			
WG356170LFB	LFB	12/10/13 12:58	WI131010-2	9.99		10.3	mg/L	103.1	90	110			
L15777-04DUP	DUP	12/10/13 13:08			676	702	mg/L				3.8	20	
L15777-05AS	AS	12/10/13 13:08	SO4TURB20	10	705	647	mg/L	-580	90	110			M3
WG356169													
WG356169ICB	ICB	12/10/13 12:17				U	mg/L		-3	3			
WG356169ICV	ICV	12/10/13 12:17	WI131127-2	20		20	mg/L	100	90	110			
WG356169LFB	LFB	12/10/13 12:25	WI131010-2	9.99		10.2	mg/L	102.1	90	110			
L15766-02AS	AS	12/10/13 12:35	SO4TURB5	10	141	152	mg/L	110	90	110			
L15765-05DUP	DUP	12/10/13 12:39			343	341	mg/L				0.6	20	

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355743													
WG355743ICV	ICV	12/03/13 10:50	WC131202-	.328		.335	mg/L	102.1	90	110			
WG355743ICB	ICB	12/03/13 10:53				U	mg/L		-0.06	0.06			
WG355743LFB	LFB	12/03/13 10:56	WC131202-	.2533333		.3	mg/L	118.4	80	120			
L15810-02AS	AS	12/03/13 11:41	WC131202-	.2533333	U	.044	mg/L	17.4	75	125			M2
L15810-02DUP	DUP	12/03/13 11:44			U	U	mg/L				0	20	RA

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355999													
WG355999ICV	ICV	12/07/13 3:04	MS131202-2	.05		.05071	mg/L	101.4	90	110			
WG355999ICB	ICB	12/07/13 3:07				U	mg/L		-0.0003	0.0003			
WG355999LFB	LFB	12/07/13 3:10	MS131118-2	.05		.05103	mg/L	102.1	85	115			
L15800-04AS	AS	12/07/13 4:37	MS131118-2	.05	.0009	.05261	mg/L	103.4	70	130			
L15800-04ASD	ASD	12/07/13 4:40	MS131118-2	.05	.0009	.05295	mg/L	104.1	70	130	0.64	20	

Uranium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356307													
WG356307ICV	ICV	12/12/13 2:56	MS131202-2	.05		.05147	mg/L	102.9	90	110			
WG356307ICB	ICB	12/12/13 2:59				U	mg/L		-0.0003	0.0003			
WG356154LRB	LRB	12/12/13 3:02				U	mg/L		-0.00022	0.00022			
WG356154LFB	LFB	12/12/13 3:05	MS131118-2	.05		.05047	mg/L	100.9	85	115			
L15800-01LFM	LFM	12/12/13 3:47	MS131118-2	.05	.0006	.05206	mg/L	102.9	70	130			
L15800-01LFMD	LFMD	12/12/13 3:50	MS131118-2	.05	.0006	.05093	mg/L	100.7	70	130	2.19	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG355942													
WG355942ICV	ICV	12/05/13 13:20	II131113-1	2		1.921	mg/L	96.1	95	105			
WG355942ICB	ICB	12/05/13 13:26				U	mg/L		-0.03	0.03			
WG355942LFB	LFB	12/05/13 13:39	II131119-3	.5		.498	mg/L	99.6	85	115			
L15777-02AS	AS	12/05/13 14:54	II131119-3	.5	.1	.579	mg/L	95.8	85	115			
L15777-02ASD	ASD	12/05/13 14:57	II131119-3	.5	.1	.588	mg/L	97.6	85	115	1.54	20	

Zinc, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG356050													
WG356050ICV	ICV	12/06/13 17:11	II131111-1	2		1.904	mg/L	95.2	95	105			
WG356050ICB	ICB	12/06/13 17:17				U	mg/L		-0.03	0.03			
WG356006LRB	LRB	12/06/13 17:30				U	mg/L		-0.022	0.022			
WG356006LFB	LFB	12/06/13 17:33	II131119-3	.5		.484	mg/L	96.8	85	115			
L15800-01LFM	LFM	12/06/13 18:49	II131119-3	.5	.31	.778	mg/L	93.6	70	130			
L15800-01LFMD	LFMD	12/06/13 18:52	II131119-3	.5	.31	.78	mg/L	94	70	130	0.26	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L15777-01	WG356074	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356209	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355604	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355630	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356136	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355790	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355743	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L15777-02	WG356074	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356209	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355604	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355630	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356136	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355790	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355743	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L15777-03	WG356125	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356074	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356209	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355604	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355630	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356136	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355790	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355743	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L15777-04	WG356125	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356204	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356209	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355604	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355630	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356136	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355790	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356170	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG355743	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L15777-05	WG356125	Chloride	SM4500CI-E	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356204	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356209	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355604	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355630	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356136	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG355790	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356170	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L15777-06	WG355743	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356204	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG356209	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-A

ACZ Sample ID: **L15777-01**

Date Sampled: 11/26/13 0:00

Date Received: 11/27/13

Sample Matrix: *Surface Water*

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG356115

Analyst: RJV

Extract Date:

Analysis Date: 12/09/13 13:47

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.02	*	mg/L	2.04	10.2

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-B

ACZ Sample ID: **L15777-02**

Date Sampled: 11/26/13 0:00

Date Received: 11/27/13

Sample Matrix: *Surface Water*

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG356115

Analyst: RJV

Extract Date:

Analysis Date: 12/09/13 14:05

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.02	*	mg/L	2.04	10.2

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-C

ACZ Sample ID: **L15777-03**

Date Sampled: 11/26/13 0:00

Date Received: 11/27/13

Sample Matrix: *Surface Water*

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG356115

Analyst: RJV

Extract Date:

Analysis Date: 12/09/13 14:22

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.02	*	mg/L	2.04	10.2

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L15777-04**

Date Sampled: 11/26/13 0:00

Date Received: 11/27/13

Sample Matrix: *Surface Water*

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG356115

Analyst: RJV

Extract Date:

Analysis Date: 12/09/13 14:40

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.02	*	mg/L	2.04	10.2

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-E

ACZ Sample ID: **L15777-05**

Date Sampled: 11/26/13 0:00

Date Received: 11/27/13

Sample Matrix: *Surface Water*

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG356115

Analyst: RJV

Extract Date:

Analysis Date: 12/09/13 14:57

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.01	*	mg/L	2.02	10.1



Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
- (3) EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Excluding Oil & Grease, solid & biological matrices for organic analyses are reported on a wet weight basis.
- (3) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (4) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Oil & Grease, Total Recoverable

1664A - Gravimetric

WG356115

LCSW	Sample ID: WG356115LCSW			PCN/SCN: OP131202-2			Analyzed: 12/09/13 16:42			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		38.5	mg/L	96.3	78	114			

LCSWD	Sample ID: WG356115LCSWD			PCN/SCN: OP131202-2			Analyzed: 12/09/13 17:00			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		38.1	mg/L	95.3	78	114	1	18	

PBW		Sample ID: WG356115PBW						Analyzed: 12/09/13 13:30		
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE			U	mg/L		-5	5			

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L15777-01	WG356115	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L15777-02	WG356115	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L15777-03	WG356115	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L15777-04	WG356115	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.
L15777-05	WG356115	Oil and Grease	1664A - Gravimetric	Q9	Insufficient sample received to meet method QC requirements.

Caldera Mineral Resources LLC

ACZ Project ID: **L15777**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Caldera Mineral Resources LLC

ACZ Project ID: L15777

Date Received: 11/27/2013 11:04

Received By: mtb

Date Printed: 11/27/2013

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?	X		
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples? A change was made in the sample information 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?	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? Some parameters were received past hold time.		X	

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
2985	1.9	13	N/A
4217	4.3	15	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

Caldera Mineral Resources LLC

ACZ Project ID: L15777
Date Received: 11/27/2013 11:04
Received By: mtb
Date Printed: 11/27/2013



Laboratories, Inc.

L15777

CHAIN of CUSTODY

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

Report to:

Name: Mike Thompson
 Company: Caldera Mineral Resources LLC
 E-mail: mt@reardonsteel.us

Address: PO Box 549, 4900 County Road 361
 Ouray, CO 81427
 Telephone: (970) 426-2924

Copy of Report to:

Name: Karmen King
 Company:

E-mail: kking@aquafax.us
 Telephone: (970) 565-0278

Invoice to:

Name: Mike Thompson
 Company: Caldera Mineral Resources LLC
 E-mail: mt@reardonsteel.us

Address: PO Box 549, 4900 County Road 361
 Ouray, CO 81427
 Telephone: (970) 426-2924

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

YES ☒
 NO ☐

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

Are samples for SDWA Compliance Monitoring?

Yes ☐ No ☒

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

Sampler's Name: MJ Sampler's site Information State: CO Zip code 81427 Time Zone MST

Check box if observe Daylight Savings Time ☒

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #: 3030414

PO#:

Reporting state for compliance testing:

Check box if samples include NRC licensed material? ☐

SAMPLE IDENTIFICATION DATE:TIME Matrix

CB-A 11/26/2013 SW 8

CB-B 11/26/2013 SW 8

CB-C 11/26/2013 SW 8

CB-D 11/26/2013 SW 8

CB-E 11/26/2013 SW 8

~~CB-F 11/26/2013 SW 8~~ - 10K

of Containers

Please refer
to quote.

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

MARKS

2 coolers
=

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

MJ

11/26/2013

CB

11/27/13 11:04

February 17, 2014

Report to:

Mike Thompson
Caldera Mineral Resources LLC
P.O. Box 549, 4900 County Road 361
Ouary, CO 81427

Bill to:

Mike Thompson
Caldera Mineral Resources LLC
P.O. Box 549, 4900 County Road 361
Ouary, CO 81427

cc: Karmen King

Project ID:

ACZ Project ID: L16679

Mike Thompson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on February 04, 2014. This project has been assigned to ACZ's project number, L16679. Please reference this number in all future inquiries.

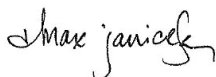
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L16679. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 March 19, 2014. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Max Janicek has reviewed and
approved this report.



Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-A

ACZ Sample ID: **L16679-01**

Date Sampled: 01/31/14 00:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								02/10/14 10:24	mss2
Cyanide, WAD	SM4500-CN I- distillation								02/07/14 16:26	mpb
Total Hot Plate Digestion	M200.2 ICP								02/05/14 18:33	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								02/11/14 14:20	las
Total Recoverable Digestion	M200.2 ICP-MS								02/05/14 18:06	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.013			mg/L	0.001	0.005	02/06/14 14:20	las
Arsenic, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0002	0.001	02/12/14 0:01	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0012			mg/L	0.0002	0.001	02/06/14 14:20	las
Barium, dissolved	M200.7 ICP	1	0.019	B		mg/L	0.003	0.02	02/12/14 11:34	jjc
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	02/12/14 11:34	jjc
Boron, dissolved	M200.7 ICP	1	0.04	B		mg/L	0.01	0.05	02/12/14 11:34	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0008			mg/L	0.0001	0.0005	02/12/14 0:01	msh
Cadmium, total	M200.8 ICP-MS	1	0.0009			mg/L	0.0001	0.0005	02/13/14 21:16	pmc
Calcium, dissolved	M200.7 ICP	1	289			mg/L	0.1	0.5	02/12/14 11:34	jjc
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	02/12/14 0:01	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	02/13/14 21:16	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	02/17/14 14:59	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0009	B		mg/L	0.0005	0.003	02/12/14 0:01	msh
Copper, total	M200.8 ICP-MS	1	0.0040			mg/L	0.0005	0.003	02/13/14 21:16	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	02/12/14 11:34	jjc
Iron, total	M200.7 ICP	1	0.19			mg/L	0.02	0.05	02/06/14 15:46	aeb
Lead, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	02/12/14 0:01	msh
Lead, total	M200.8 ICP-MS	1	0.0046			mg/L	0.0001	0.0005	02/13/14 21:16	pmc
Magnesium, dissolved	M200.7 ICP	1	3.4			mg/L	0.2	1	02/12/14 11:34	jjc
Manganese, dissolved	M200.7 ICP	1	0.115			mg/L	0.005	0.03	02/12/14 11:34	jjc
Manganese, total	M200.7 ICP	1	0.133			mg/L	0.005	0.03	02/06/14 15:46	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	02/06/14 11:30	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	02/12/14 11:34	jjc
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	02/06/14 15:46	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0003			mg/L	0.0001	0.0003	02/12/14 0:01	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	02/12/14 23:12	msh
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	02/13/14 21:16	pmc
Uranium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	02/12/14 0:01	msh
Uranium, total	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0005	02/13/14 21:16	pmc
Zinc, dissolved	M200.7 ICP	1	0.20			mg/L	0.01	0.05	02/12/14 11:34	jjc
Zinc, total	M200.7 ICP	1	0.23			mg/L	0.01	0.05	02/06/14 15:46	aeb

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-A

ACZ Sample ID: **L16679-01**

Date Sampled: 01/31/14 00:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	46			mg/L	2	20	02/06/14 0:00	abd
Carbonate as CaCO ₃		1		U		mg/L	2	20	02/06/14 0:00	abd
Hydroxide as CaCO ₃		1		U		mg/L	2	20	02/06/14 0:00	abd
Total Alkalinity		1	46			mg/L	2	20	02/06/14 0:00	abd
Chloride	SM4500Cl-E	1	1	B		mg/L	1	5	02/11/14 12:24	tcd
Conductivity @25C	SM2510B	1	1310			umhos/cm	1	10	02/06/14 17:30	abd
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	02/11/14 23:59	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	02/07/14 19:41	pjb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	02/04/14 15:08	dcw
Hardness as CaCO ₃	SM2340B - Calculation		736			mg/L	1	7	02/17/14 14:59	calc
Lab Filtration (0.45um filter)	SOPWC050	1							02/07/14 12:35	dcw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							02/10/14 13:04	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂			UH		mg/L	0.02	0.1	02/17/14 14:59	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.02	0.1	02/04/14 22:33	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.01	0.05	02/04/14 22:33	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	02/11/14 17:00	mpb
pH (lab)	SM4500H+ B									
pH		1	8	H		units	0.1	0.1	02/06/14 0:00	abd
pH measured at		1	21			C	0.1	0.1	02/06/14 0:00	abd
Residue, Filterable (TDS) @180C	SM2540C	1	1180			mg/L	10	20	02/06/14 15:14	abd
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	02/06/14 17:49	khw
Sulfate	D516-02 - Turbidimetric	20	694		*	mg/L	20	100	02/11/14 15:37	tcd
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	02/06/14 13:31	dcw

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-B

ACZ Sample ID: **L16679-02**

Date Sampled: 01/31/14 00:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								02/10/14 10:48	mss2
Cyanide, WAD	SM4500-CN I- distillation								02/07/14 16:33	mpb
Total Hot Plate Digestion	M200.2 ICP								02/05/14 18:45	aeb
Total Hot Plate Digestion	M200.2 ICP-MS								02/11/14 14:32	las
Total Recoverable Digestion	M200.2 ICP-MS								02/05/14 18:15	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.013			mg/L	0.001	0.005	02/06/14 14:24	las
Arsenic, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0002	0.001	02/12/14 0:04	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0011			mg/L	0.0002	0.001	02/06/14 14:24	las
Barium, dissolved	M200.7 ICP	1	0.020			mg/L	0.003	0.02	02/12/14 11:43	jjc
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	02/12/14 11:43	jjc
Boron, dissolved	M200.7 ICP	1	0.03	B		mg/L	0.01	0.05	02/12/14 11:43	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0008			mg/L	0.0001	0.0005	02/12/14 0:04	msh
Cadmium, total	M200.8 ICP-MS	1	0.0009			mg/L	0.0001	0.0005	02/13/14 21:19	pmc
Calcium, dissolved	M200.7 ICP	1	293			mg/L	0.1	0.5	02/12/14 11:43	jjc
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	02/12/14 0:04	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	02/13/14 21:19	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	02/17/14 14:59	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0008	B		mg/L	0.0005	0.003	02/12/14 0:04	msh
Copper, total	M200.8 ICP-MS	1	0.0044			mg/L	0.0005	0.003	02/13/14 21:19	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	02/12/14 11:43	jjc
Iron, total	M200.7 ICP	1	0.19			mg/L	0.02	0.05	02/06/14 15:49	aeb
Lead, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	02/12/14 0:04	msh
Lead, total	M200.8 ICP-MS	1	0.0068			mg/L	0.0001	0.0005	02/13/14 21:19	pmc
Magnesium, dissolved	M200.7 ICP	1	3.5			mg/L	0.2	1	02/12/14 11:43	jjc
Manganese, dissolved	M200.7 ICP	1	0.106			mg/L	0.005	0.03	02/12/14 11:43	jjc
Manganese, total	M200.7 ICP	1	0.158			mg/L	0.005	0.03	02/06/14 15:49	aeb
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	02/06/14 11:33	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	02/12/14 11:43	jjc
Nickel, total	M200.7 ICP	1		U		mg/L	0.01	0.05	02/06/14 15:49	aeb
Selenium, dissolved	M200.8 ICP-MS	1	0.0003			mg/L	0.0001	0.0003	02/12/14 0:04	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	02/12/14 23:15	msh
Silver, total	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	02/13/14 21:19	pmc
Uranium, dissolved	M200.8 ICP-MS	1	0.0005			mg/L	0.0001	0.0005	02/12/14 0:04	msh
Uranium, total	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0005	02/13/14 21:19	pmc
Zinc, dissolved	M200.7 ICP	1	0.19			mg/L	0.01	0.05	02/12/14 11:43	jjc
Zinc, total	M200.7 ICP	1	0.23			mg/L	0.01	0.05	02/06/14 15:49	aeb

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-B

ACZ Sample ID: **L16679-02**

Date Sampled: 01/31/14 00:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	46			mg/L	2	20	02/06/14 0:00	abd
Carbonate as CaCO ₃		1		U		mg/L	2	20	02/06/14 0:00	abd
Hydroxide as CaCO ₃		1		U		mg/L	2	20	02/06/14 0:00	abd
Total Alkalinity		1	46			mg/L	2	20	02/06/14 0:00	abd
Chloride	SM4500Cl-E	1	1	B		mg/L	1	5	02/11/14 12:24	tcd
Conductivity @25C	SM2510B	1	1300			umhos/cm	1	10	02/06/14 17:38	abd
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	02/12/14 0:01	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	02/07/14 19:42	pjb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	02/04/14 15:11	dcw
Hardness as CaCO ₃	SM2340B - Calculation		747			mg/L	1	7	02/17/14 14:59	calc
Lab Filtration (0.45um filter)	SOPWC050	1							02/07/14 12:40	dcw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							02/10/14 13:09	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂			UH		mg/L	0.02	0.1	02/17/14 14:59	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.02	0.1	02/04/14 22:34	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.01	0.05	02/04/14 22:34	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	02/11/14 17:04	mpb
pH (lab)	SM4500H+ B									
pH		1	8	H		units	0.1	0.1	02/06/14 0:00	abd
pH measured at		1	21			C	0.1	0.1	02/06/14 0:00	abd
Residue, Filterable (TDS) @180C	SM2540C	1	1080			mg/L	10	20	02/06/14 15:16	abd
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	02/06/14 17:51	khw
Sulfate	D516-02 - Turbidimetric	20	693		*	mg/L	20	100	02/11/14 15:37	tcd
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	02/06/14 13:38	dcw

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-C

ACZ Sample ID: **L16679-03**

Date Sampled: 01/31/14 00:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								02/10/14 11:12	mss2
Cyanide, WAD	SM4500-CN I- distillation								02/07/14 16:40	mpb
Total Hot Plate Digestion	M200.2 ICP								02/06/14 17:58	jjc
Total Hot Plate Digestion	M200.2 ICP-MS								02/11/14 14:44	las
Total Recoverable Digestion	M200.2 ICP-MS								02/05/14 18:25	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.045			mg/L	0.001	0.005	02/06/14 14:27	las
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	02/12/14 0:08	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0011			mg/L	0.0002	0.001	02/06/14 14:27	las
Barium, dissolved	M200.7 ICP	1	0.050			mg/L	0.003	0.02	02/12/14 11:46	jjc
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	02/12/14 11:46	jjc
Boron, dissolved	M200.7 ICP	1	0.01	B		mg/L	0.01	0.05	02/12/14 11:46	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	02/12/14 0:08	msh
Cadmium, total	M200.8 ICP-MS	1	0.0002	B		mg/L	0.0001	0.0005	02/13/14 21:22	pmc
Calcium, dissolved	M200.7 ICP	1	39			mg/L	0.1	0.5	02/12/14 11:46	jjc
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	02/12/14 0:08	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	02/13/14 21:22	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	02/17/14 14:59	calc
Copper, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.003	02/12/14 0:08	msh
Copper, total	M200.8 ICP-MS	1	0.0006	B		mg/L	0.0005	0.003	02/13/14 21:22	pmc
Iron, dissolved	M200.7 ICP	1		U		mg/L	0.02	0.05	02/12/14 11:46	jjc
Iron, total	M200.7 ICP	1	0.02	B		mg/L	0.02	0.05	02/07/14 17:31	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0017			mg/L	0.0001	0.0005	02/12/14 0:08	msh
Lead, total	M200.8 ICP-MS	1	0.0028			mg/L	0.0001	0.0005	02/13/14 21:22	pmc
Magnesium, dissolved	M200.7 ICP	1	2.7			mg/L	0.2	1	02/12/14 11:46	jjc
Manganese, dissolved	M200.7 ICP	1		U		mg/L	0.005	0.03	02/12/14 11:46	jjc
Manganese, total	M200.7 ICP	1		U		mg/L	0.005	0.03	02/07/14 17:31	jjc
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	02/06/14 11:35	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	02/12/14 11:46	jjc
Nickel, total	M200.7 ICP	1		U		mg/L	0.008	0.04	02/07/14 17:31	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0004			mg/L	0.0001	0.0003	02/12/14 0:08	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	02/12/14 23:19	msh
Silver, total	M200.8 ICP-MS	1	0.00005	B		mg/L	0.00005	0.0003	02/13/14 21:22	pmc
Uranium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0001	0.0005	02/12/14 0:08	msh
Uranium, total	M200.8 ICP-MS	1	0.0001	B		mg/L	0.0001	0.0005	02/13/14 21:22	pmc
Zinc, dissolved	M200.7 ICP	1	0.08			mg/L	0.01	0.05	02/12/14 11:46	jjc
Zinc, total	M200.7 ICP	1	0.08			mg/L	0.01	0.05	02/07/14 17:31	jjc

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-C

ACZ Sample ID: **L16679-03**

Date Sampled: 01/31/14 00:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	46			mg/L	2	20	02/06/14 0:00	abd
Carbonate as CaCO ₃		1		U		mg/L	2	20	02/06/14 0:00	abd
Hydroxide as CaCO ₃		1		U		mg/L	2	20	02/06/14 0:00	abd
Total Alkalinity		1	46			mg/L	2	20	02/06/14 0:00	abd
Chloride	SM4500Cl-E	1		U		mg/L	1	5	02/11/14 12:25	tcd
Conductivity @25C	SM2510B	1	246			umhos/cm	1	10	02/06/14 17:45	abd
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	02/12/14 0:03	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	02/07/14 19:42	pjb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	02/04/14 15:14	dcw
Hardness as CaCO ₃	SM2340B - Calculation		109			mg/L	1	7	02/17/14 14:59	calc
Lab Filtration (0.45um filter)	SOPWC050	1							02/07/14 12:46	dcw
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							02/10/14 13:13	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.31	H		mg/L	0.02	0.1	02/17/14 14:59	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.31	H	*	mg/L	0.02	0.1	02/04/14 22:37	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.01	0.05	02/04/14 22:37	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	02/11/14 17:06	mpb
pH (lab)	SM4500H+ B									
pH		1	8.1	H		units	0.1	0.1	02/06/14 0:00	abd
pH measured at		1	21			C	0.1	0.1	02/06/14 0:00	abd
Residue, Filterable (TDS) @180C	SM2540C	1	160			mg/L	10	20	02/06/14 15:18	abd
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	02/06/14 17:55	khw
Sulfate	D516-02 - Turbidimetric	5	71.0		*	mg/L	5	25	02/11/14 15:34	tcd
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	02/06/14 13:44	dcw

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L16679-04**

Date Sampled: 01/31/14 00:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Cyanide, total	M335.4 - Manual Distillation								02/11/14 11:30	mss2
Cyanide, WAD	SM4500-CN I- distillation								02/07/14 16:55	mpb
Total Hot Plate Digestion	M200.2 ICP-MS								02/11/14 14:56	las
Total Hot Plate Digestion	M200.2 ICP								02/06/14 18:10	jjc
Total Recoverable Digestion	M200.2 ICP-MS								02/05/14 18:35	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum, total recoverable	M200.8 ICP-MS	1	0.037			mg/L	0.001	0.005	02/06/14 14:31	las
Arsenic, dissolved	M200.8 ICP-MS	1	0.0005	B		mg/L	0.0002	0.001	02/12/14 0:11	msh
Arsenic, total recoverable	M200.8 ICP-MS	1	0.0013			mg/L	0.0002	0.001	02/06/14 14:31	las
Barium, dissolved	M200.7 ICP	1	0.033			mg/L	0.003	0.02	02/12/14 11:50	jjc
Beryllium, dissolved	M200.7 ICP	1		U		mg/L	0.01	0.05	02/12/14 11:50	jjc
Boron, dissolved	M200.7 ICP	1	0.02	B		mg/L	0.01	0.05	02/12/14 11:50	jjc
Cadmium, dissolved	M200.8 ICP-MS	1	0.0006			mg/L	0.0001	0.0005	02/12/14 0:11	msh
Cadmium, total	M200.8 ICP-MS	1	0.0008			mg/L	0.0001	0.0005	02/13/14 21:25	pmc
Calcium, dissolved	M200.7 ICP	1	176			mg/L	0.1	0.5	02/12/14 11:50	jjc
Chromium, dissolved	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	02/12/14 0:11	msh
Chromium, total	M200.8 ICP-MS	1		U		mg/L	0.0005	0.002	02/13/14 21:25	pmc
Chromium, Trivalent	Calculation (Total - Hexavalent)			U		mg/L	0.0005	0.002	02/17/14 15:00	calc
Copper, dissolved	M200.8 ICP-MS	1	0.0018	B		mg/L	0.0005	0.003	02/12/14 0:11	msh
Copper, total	M200.8 ICP-MS	1	0.0074			mg/L	0.0005	0.003	02/13/14 21:25	pmc
Iron, dissolved	M200.7 ICP	1	0.05			mg/L	0.02	0.05	02/12/14 11:50	jjc
Iron, total	M200.7 ICP	1	0.24			mg/L	0.02	0.05	02/07/14 17:34	jjc
Lead, dissolved	M200.8 ICP-MS	1	0.0023			mg/L	0.0001	0.0005	02/12/14 0:11	msh
Lead, total	M200.8 ICP-MS	1	0.0169			mg/L	0.0001	0.0005	02/13/14 21:25	pmc
Magnesium, dissolved	M200.7 ICP	1	3.1			mg/L	0.2	1	02/12/14 11:50	jjc
Manganese, dissolved	M200.7 ICP	1	0.059			mg/L	0.005	0.03	02/12/14 11:50	jjc
Manganese, total	M200.7 ICP	1	0.127			mg/L	0.005	0.03	02/07/14 17:34	jjc
Mercury, total	M245.1 CVAA	1		U		mg/L	0.0002	0.001	02/06/14 11:37	mfm
Nickel, dissolved	M200.7 ICP	1		U		mg/L	0.008	0.04	02/12/14 11:50	jjc
Nickel, total	M200.7 ICP	1		U		mg/L	0.008	0.04	02/07/14 17:34	jjc
Selenium, dissolved	M200.8 ICP-MS	1	0.0003			mg/L	0.0001	0.0003	02/12/14 0:11	msh
Silver, dissolved	M200.8 ICP-MS	1		U		mg/L	0.00005	0.0003	02/12/14 23:29	msh
Silver, total	M200.8 ICP-MS	1	0.00006	B		mg/L	0.00005	0.0003	02/13/14 21:25	pmc
Uranium, dissolved	M200.8 ICP-MS	1	0.0003	B		mg/L	0.0001	0.0005	02/12/14 0:11	msh
Uranium, total	M200.8 ICP-MS	1	0.0004	B		mg/L	0.0001	0.0005	02/13/14 21:25	pmc
Zinc, dissolved	M200.7 ICP	1	0.19			mg/L	0.01	0.05	02/12/14 11:50	jjc
Zinc, total	M200.7 ICP	1	0.23			mg/L	0.01	0.05	02/07/14 17:34	jjc

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L16679-04**

Date Sampled: 01/31/14 00:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Alkalinity as CaCO ₃	SM2320B - Titration									
Bicarbonate as CaCO ₃		1	46			mg/L	2	20	02/06/14 0:00	abd
Carbonate as CaCO ₃		1		U		mg/L	2	20	02/06/14 0:00	abd
Hydroxide as CaCO ₃		1		U		mg/L	2	20	02/06/14 0:00	abd
Total Alkalinity		1	46			mg/L	2	20	02/06/14 0:00	abd
Chloride	SM4500Cl-E	1	1	B	*	mg/L	1	5	02/11/14 12:25	tcd
Conductivity @25C	SM2510B	1	863			umhos/cm	1	10	02/06/14 17:55	abd
Cyanide, total	M335.4 - Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	02/12/14 0:35	pjb
Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	0.5		U	*	mg/L	0.003	0.01	02/07/14 19:44	pjb
Dissolved Chromium, Hexavalent	SM3500Cr-B	1		UH	*	mg/L	0.005	0.02	02/04/14 15:16	dcw
Hardness as CaCO ₃	SM2340B - Calculation		453			mg/L	1	7	02/17/14 15:00	calc
Lab Filtration (0.45um filter)	SOPWC050	1							02/17/14 8:43	id
Lab Filtration (0.45um) & Acidification	M200.7/200.8	1							02/10/14 13:18	las
Nitrate as N, dissolved	Calculation: NO ₃ NO ₂ minus NO ₂		0.13	H		mg/L	0.02	0.1	02/17/14 15:00	calc
Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1	0.13	H	*	mg/L	0.02	0.1	02/04/14 22:39	pjb
Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	1		UH	*	mg/L	0.01	0.05	02/04/14 22:39	pjb
Nitrogen, ammonia	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	02/11/14 17:07	mpb
pH (lab)	SM4500H+ B									
pH		1	8	H		units	0.1	0.1	02/06/14 0:00	abd
pH measured at		1	21			C	0.1	0.1	02/06/14 0:00	abd
Residue, Filterable (TDS) @180C	SM2540C	1	680			mg/L	10	20	02/06/14 15:19	abd
Residue, Non-Filterable (TSS) @105C	SM2540D	1		U	*	mg/L	5	20	02/06/14 17:57	khw
Sulfate	D516-02 - Turbidimetric	20	407		*	mg/L	20	100	02/11/14 15:37	tcd
Sulfide as S	SM4500S2-D	1		U	*	mg/L	0.02	0.1	02/06/14 13:50	dcw


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Alkalinity as CaCO3

SM2320B - Titration

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358968													
WG358968PBW1	PBW	02/06/14 15:03				U	mg/L		-20	20			
WG358968LCSW2	LCSW	02/06/14 15:14	WC140204-	820.0001		781.7	mg/L	95.3	90	110			
L16679-04DUP	DUP	02/06/14 18:02			46	46.2	mg/L				0.4	20	
WG358968LCSW5	LCSW	02/06/14 18:13	WC140204-	820.0001		812.5	mg/L	99.1	90	110			
WG358968PBW2	PBW	02/06/14 18:21				U	mg/L		-20	20			
WG358968LCSW8	LCSW	02/06/14 21:17	WC140204-	820.0001		815.2	mg/L	99.4	90	110			

Aluminum, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358953													
WG358953ICV	ICV	02/06/14 12:46	MS140106-2	.1		.1022	mg/L	102.2	90	110			
WG358953ICB	ICB	02/06/14 12:49				U	mg/L		-0.003	0.003			
WG358865LRB	LRB	02/06/14 12:53				U	mg/L		-0.0022	0.0022			
WG358865LFB	LFB	02/06/14 12:56	MS140128-2	.050055		.0515	mg/L	102.9	85	115			
L16673-01LFM	LFM	02/06/14 14:00	MS140128-2	.050055	.099	.1433	mg/L	88.5	70	130			
L16673-01LFMD	LFMD	02/06/14 14:10	MS140128-2	.050055	.099	.1429	mg/L	87.7	70	130	0.28	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359170													
WG359170ICV	ICV	02/11/14 22:32	MS140106-2	.05		.05422	mg/L	108.4	90	110			
WG359170ICB	ICB	02/11/14 22:36				U	mg/L		-0.0006	0.0006			
WG359170LFB	LFB	02/11/14 22:39	MS140128-2	.0501		.04799	mg/L	95.8	85	115			
L16660-03AS	AS	02/11/14 23:37	MS140128-2	.2505	U	.2489	mg/L	99.4	70	130			
L16660-03ASD	ASD	02/11/14 23:40	MS140128-2	.2505	U	.2614	mg/L	104.4	70	130	4.9	20	

Arsenic, total recoverable

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358953													
WG358953ICV	ICV	02/06/14 12:46	MS140106-2	.05		.05171	mg/L	103.4	90	110			
WG358953ICB	ICB	02/06/14 12:49				U	mg/L		-0.0006	0.0006			
WG358865LRB	LRB	02/06/14 12:53				U	mg/L		-0.00044	0.00044			
WG358865LFB	LFB	02/06/14 12:56	MS140128-2	.0501		.05172	mg/L	103.2	85	115			
L16673-01LFM	LFM	02/06/14 14:00	MS140128-2	.0501	U	.05171	mg/L	103.2	70	130			
L16673-01LFMD	LFMD	02/06/14 14:10	MS140128-2	.0501	U	.05259	mg/L	105	70	130	1.69	20	

Barium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359185													
WG359185ICV	ICV	02/12/14 11:09	II131218-1	2		1.9562	mg/L	97.8	95	105			
WG359185ICB	ICB	02/12/14 11:15				U	mg/L		-0.009	0.009			
WG359185LFB	LFB	02/12/14 11:27	II140117-2	.5		.5033	mg/L	100.7	85	115			
L16679-01AS	AS	02/12/14 11:37	II140117-2	.5	.019	.525	mg/L	101.2	85	115			
L16679-01ASD	ASD	02/12/14 11:40	II140117-2	.5	.019	.522	mg/L	100.6	85	115	0.57	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Beryllium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359185													
WG359185ICV	ICV	02/12/14 11:09	II131218-1	2		1.956	mg/L	97.8	95	105			
WG359185ICB	ICB	02/12/14 11:15				U	mg/L		-0.03	0.03			
WG359185LFB	LFB	02/12/14 11:27	II140117-2	.5		.515	mg/L	103	85	115			
L16679-01AS	AS	02/12/14 11:37	II140117-2	.5	U	.509	mg/L	101.8	85	115			
L16679-01ASD	ASD	02/12/14 11:40	II140117-2	.5	U	.507	mg/L	101.4	85	115	0.39	20	

Boron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359185													
WG359185ICV	ICV	02/12/14 11:09	II131218-1	2		2.025	mg/L	101.3	95	105			
WG359185ICB	ICB	02/12/14 11:15				.011	mg/L		-0.03	0.03			
WG359185LFB	LFB	02/12/14 11:27	II140117-2	.5005		.525	mg/L	104.9	85	115			
L16679-01AS	AS	02/12/14 11:37	II140117-2	.5005	.04	.573	mg/L	106.5	85	115			
L16679-01ASD	ASD	02/12/14 11:40	II140117-2	.5005	.04	.565	mg/L	104.9	85	115	1.41	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359170													
WG359170ICV	ICV	02/11/14 22:32	MS140106-2	.05		.04833	mg/L	96.7	90	110			
WG359170ICB	ICB	02/11/14 22:36				U	mg/L		-0.0003	0.0003			
WG359170LFB	LFB	02/11/14 22:39	MS140128-2	.0501		.04697	mg/L	93.8	85	115			
L16660-03AS	AS	02/11/14 23:37	MS140128-2	.2505	U	.22025	mg/L	87.9	70	130			
L16660-03ASD	ASD	02/11/14 23:40	MS140128-2	.2505	U	.2329	mg/L	93	70	130	5.58	20	

Cadmium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359293													
WG359293ICV	ICV	02/13/14 20:18	MS140106-2	.05		.0497	mg/L	99.4	90	110			
WG359293ICB	ICB	02/13/14 20:21				U	mg/L		-0.0003	0.0003			
WG359129LRB	LRB	02/13/14 20:24				U	mg/L		-0.00022	0.00022			
WG359129LFB	LFB	02/13/14 20:28	MS140128-2	.0501		.05105	mg/L	101.9	85	115			
L16703-01LFM	LFM	02/13/14 21:41	MS140128-2	.0501	U	.04983	mg/L	99.5	70	130			
L16703-01LFMD	LFMD	02/13/14 21:44	MS140128-2	.0501	U	.05116	mg/L	102.1	70	130	2.63	20	

Calcium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359185													
WG359185ICV	ICV	02/12/14 11:09	II131218-1	100		99.11	mg/L	99.1	95	105			
WG359185ICB	ICB	02/12/14 11:15				U	mg/L		-0.3	0.3			
WG359185LFB	LFB	02/12/14 11:27	II140117-2	68.00225		71.36	mg/L	104.9	85	115			
L16679-01AS	AS	02/12/14 11:37	II140117-2	68.00225	289	348	mg/L	86.8	85	115			
L16679-01ASD	ASD	02/12/14 11:40	II140117-2	68.00225	289	349.3	mg/L	88.7	85	115	0.37	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Chloride SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359142													
WG359142ICB	ICB	02/11/14 11:50				U	mg/L		-3	3			
WG359142ICV	ICV	02/11/14 11:50	WI130722-5	54.945		57.4	mg/L	104.5	90	110			
WG359142LFB1	LFB	02/11/14 12:14	WI131010-1	30		31.6	mg/L	105.3	90	110			
L16620-02AS	AS	02/11/14 12:24	WI131010-1	30	50	78.2	mg/L	94	90	110			
L16620-03DUP	DUP	02/11/14 12:24			28	29.2	mg/L				4.2	20	
WG359142LFB2	LFB	02/11/14 12:25	WI131010-1	30		32.1	mg/L	107	90	110			

Chromium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359170													
WG359170ICV	ICV	02/11/14 22:32	MS140106-2	.05		.05063	mg/L	101.3	90	110			
WG359170ICB	ICB	02/11/14 22:36				U	mg/L		-0.0015	0.0015			
WG359170LFB	LFB	02/11/14 22:39	MS140128-2	.05005		.04768	mg/L	95.3	85	115			
L16660-03AS	AS	02/11/14 23:37	MS140128-2	.25025	U	.2341	mg/L	93.5	70	130			
L16660-03ASD	ASD	02/11/14 23:40	MS140128-2	.25025	U	.2434	mg/L	97.3	70	130	3.9	20	

Chromium, total M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359293													
WG359293ICV	ICV	02/13/14 20:18	MS140106-2	.05		.05008	mg/L	100.2	90	110			
WG359293ICB	ICB	02/13/14 20:21				U	mg/L		-0.0015	0.0015			
WG359129LRB	LRB	02/13/14 20:24				U	mg/L		-0.0011	0.0011			
WG359129LFB	LFB	02/13/14 20:28	MS140128-2	.05005		.0503	mg/L	100.5	85	115			
L16703-01LFM	LFM	02/13/14 21:41	MS140128-2	.05005	U	.04927	mg/L	98.4	70	130			
L16703-01LFMD	LFMD	02/13/14 21:44	MS140128-2	.05005	U	.04868	mg/L	97.3	70	130	1.2	20	

Conductivity @25C SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358968													
WG358968LCSW1	LCSW	02/06/14 15:04	PCN42442	1408.8		1355	µmhos/crr	96.2	90	110			
L16679-04DUP	DUP	02/06/14 18:02			863	862	µmhos/crr				0.1	20	
WG358968LCSW4	LCSW	02/06/14 18:04	PCN42442	1408.8		1353	µmhos/crr	96	90	110			
WG358968LCSW7	LCSW	02/06/14 21:07	PCN42442	1408.8		1339	µmhos/crr	95	90	110			

Copper, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359170													
WG359170ICV	ICV	02/11/14 22:32	MS140106-2	.05		.04916	mg/L	98.3	90	110			
WG359170ICB	ICB	02/11/14 22:36				U	mg/L		-0.0015	0.0015			
WG359170LFB	LFB	02/11/14 22:39	MS140128-2	.05005		.04663	mg/L	93.2	85	115			
L16660-03AS	AS	02/11/14 23:37	MS140128-2	.25025	U	.2169	mg/L	86.7	70	130			
L16660-03ASD	ASD	02/11/14 23:40	MS140128-2	.25025	U	.2233	mg/L	89.2	70	130	2.91	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Copper, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359293													
WG359293ICV	ICV	02/13/14 20:18	MS140106-2	.05		.04925	mg/L	98.5	90	110			
WG359293ICB	ICB	02/13/14 20:21				U	mg/L		-0.0015	0.0015			
WG359129LRB	LRB	02/13/14 20:24				U	mg/L		-0.0011	0.0011			
WG359129LFB	LFB	02/13/14 20:28	MS140128-2	.05005		.05025	mg/L	100.4	85	115			
L16703-01LFM	LFM	02/13/14 21:41	MS140128-2	.05005	.1065	.1533	mg/L	93.5	70	130			
L16703-01LFMD	LFMD	02/13/14 21:44	MS140128-2	.05005	.1065	.1519	mg/L	90.7	70	130	0.92	20	

Cyanide, total

M335.4 - Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359174													
WG359174ICV	ICV	02/11/14 23:56	WI140205-6	.3		.2878	mg/L	95.9	90	110			
WG359174ICB	ICB	02/11/14 23:57				U	mg/L		-0.003	0.003			
WG359064LRB	LRB	02/11/14 23:58				U	mg/L		-0.003	0.003			
WG359064LFB	LFB	02/11/14 23:58	WI140205-2	.2		.2036	mg/L	101.8	90	110			
L16679-01LFM	LFM	02/12/14 0:00	WI140205-2	.2	U	.1911	mg/L	95.6	90	110			
L16679-02DUP	DUP	02/12/14 0:02			U	U	mg/L				0	20	RA
WG359175													
WG359140LRB	LRB	02/12/14 0:33				U	mg/L		-0.003	0.003			
WG359140LFB	LFB	02/12/14 0:34	WI140205-2	.2		.2055	mg/L	102.8	90	110			
L16679-04LFM	LFM	02/12/14 0:36	WI140205-2	.2	U	.207	mg/L	103.5	90	110			
L16702-01DUP	DUP	02/12/14 0:37			U	U	mg/L				0	20	RA

Cyanide, WAD

SM4500-CN I-Colorimetric w/ distillation

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359022													
WG359022ICV	ICV	02/07/14 14:15	WI140205-6	.3		.299	mg/L	99.7	90	110			
WG359022ICB	ICB	02/07/14 14:16				U	mg/L		-0.003	0.003			
WG359039													
WG359035LRB	LRB	02/07/14 19:28				U	mg/L		-0.003	0.003			
WG359035LFB	LFB	02/07/14 19:29	WI140205-4	.2		.1872	mg/L	93.6	90	110			
L16618-02DUP	DUP	02/07/14 19:31			U	U	mg/L				0	20	RA
L16618-03LFM	LFM	02/07/14 19:33	WI140205-4	.2	U	.1898	mg/L	94.9	90	110			
L16679-03DUP	DUP	02/07/14 19:43			U	U	mg/L				0	20	RA
L16679-04LFM	LFM	02/07/14 19:45	WI140205-4	.2	U	.1828	mg/L	91.4	90	110			

Dissolved Chromium, Hexavalent

SM3500Cr-B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358823													
WG358823ICV	ICV	02/04/14 15:00	WC131202-	.05		.0525	mg/L	105	90	110			
WG358823ICB	ICB	02/04/14 15:02				U	mg/L		-0.015	0.015			
WG358823LFB	LFB	02/04/14 15:05	WC131202-	.05		.0543	mg/L	108.6	90	110			
L16679-04AS	AS	02/04/14 15:19	WC131202-	.05	U	.0494	mg/L	98.8	90	110			
L16679-04DUP	DUP	02/04/14 15:22			U	U	mg/L				0	20	RA

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Iron, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359185													
WG359185ICV	ICV	02/12/14 11:09	II131218-1	2		2.006	mg/L	100.3	95	105			
WG359185ICB	ICB	02/12/14 11:15				U	mg/L		-0.06	0.06			
WG359185LFB	LFB	02/12/14 11:27	II140117-2	1.0014		1.047	mg/L	104.6	85	115			
L16679-01AS	AS	02/12/14 11:37	II140117-2	1.0014	U	1.042	mg/L	104.1	85	115			
L16679-01ASD	ASD	02/12/14 11:40	II140117-2	1.0014	U	1.034	mg/L	103.3	85	115	0.77	20	

Iron, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358941													
WG358941ICV	ICV	02/06/14 14:01	II140123-2	2		1.992	mg/L	99.6	95	105			
WG358941ICB	ICB	02/06/14 14:07				U	mg/L		-0.06	0.06			
WG358883LRB	LRB	02/06/14 14:19				U	mg/L		-0.044	0.044			
WG358883LFB	LFB	02/06/14 14:22	II140117-2	1.0014		1.059	mg/L	105.8	85	115			
L16666-03LFM	LFM	02/06/14 15:21	II140117-2	1.0014	.53	1.605	mg/L	107.3	70	130			
L16666-03LFMD	LFMD	02/06/14 15:24	II140117-2	1.0014	.53	1.609	mg/L	107.7	70	130	0.25	20	

WG359033

WG359033ICV	ICV	02/07/14 16:14	II140123-2	2		1.967	mg/L	98.4	95	105			
WG359033ICB	ICB	02/07/14 16:20				U	mg/L		-0.06	0.06			
WG358974LRB	LRB	02/07/14 16:32				U	mg/L		-0.044	0.044			
WG358974LFB	LFB	02/07/14 16:35	II140117-2	1.0014		1.074	mg/L	107.2	85	115			
L16682-01LFM	LFM	02/07/14 17:46	II140117-2	1.0014	U	1.063	mg/L	106.2	70	130			
L16682-01LFMD	LFMD	02/07/14 17:49	II140117-2	1.0014	U	1.062	mg/L	106.1	70	130	0.09	20	

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359170													
WG359170ICV	ICV	02/11/14 22:32	MS140106-2	.05		.05222	mg/L	104.4	90	110			
WG359170ICB	ICB	02/11/14 22:36				U	mg/L		-0.0003	0.0003			
WG359170LFB	LFB	02/11/14 22:39	MS140128-2	.05005		.04861	mg/L	97.1	85	115			
L16660-03AS	AS	02/11/14 23:37	MS140128-2	.25025	U	.24955	mg/L	99.7	70	130			
L16660-03ASD	ASD	02/11/14 23:40	MS140128-2	.25025	U	.2595	mg/L	103.7	70	130	3.91	20	

Lead, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359293													
WG359293ICV	ICV	02/13/14 20:18	MS140106-2	.05		.0511	mg/L	102.2	90	110			
WG359293ICB	ICB	02/13/14 20:21				.00015	mg/L		-0.0003	0.0003			
WG359129LRB	LRB	02/13/14 20:24				U	mg/L		-0.00022	0.00022			
WG359129LFB	LFB	02/13/14 20:28	MS140128-2	.05005		.0511	mg/L	102.1	85	115			
L16703-01LFM	LFM	02/13/14 21:41	MS140128-2	.05005	.002	.05285	mg/L	101.6	70	130			
L16703-01LFMD	LFMD	02/13/14 21:44	MS140128-2	.05005	.002	.05301	mg/L	101.9	70	130	0.3	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359185													
WG359185ICV	ICV	02/12/14 11:09	II131218-1	100		97.36	mg/L	97.4	95	105			
WG359185ICB	ICB	02/12/14 11:15				U	mg/L		-0.6	0.6			
WG359185LFB	LFB	02/12/14 11:27	II140117-2	49.99695		50.18	mg/L	100.4	85	115			
L16679-01AS	AS	02/12/14 11:37	II140117-2	49.99695	3.4	52.97	mg/L	99.1	85	115			
L16679-01ASD	ASD	02/12/14 11:40	II140117-2	49.99695	3.4	53.23	mg/L	99.7	85	115	0.49	20	

Manganese, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359185													
WG359185ICV	ICV	02/12/14 11:09	II131218-1	2		1.9458	mg/L	97.3	95	105			
WG359185ICB	ICB	02/12/14 11:15				U	mg/L		-0.015	0.015			
WG359185LFB	LFB	02/12/14 11:27	II140117-2	.501		.5124	mg/L	102.3	85	115			
L16679-01AS	AS	02/12/14 11:37	II140117-2	.501	.115	.6187	mg/L	100.5	85	115			
L16679-01ASD	ASD	02/12/14 11:40	II140117-2	.501	.115	.6173	mg/L	100.3	85	115	0.23	20	

Manganese, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358941													
WG358941ICV	ICV	02/06/14 14:01	II140123-2	2		1.968	mg/L	98.4	95	105			
WG358941ICB	ICB	02/06/14 14:07				U	mg/L		-0.015	0.015			
WG358883LRB	LRB	02/06/14 14:19				U	mg/L		-0.011	0.011			
WG358883LFB	LFB	02/06/14 14:22	II140117-2	.501		.5244	mg/L	104.7	85	115			
L16666-03LFM	LFM	02/06/14 15:21	II140117-2	.501	1.99	2.538	mg/L	109.4	70	130			
L16666-03LFMD	LFMD	02/06/14 15:24	II140117-2	.501	1.99	2.552	mg/L	112.2	70	130	0.55	20	
WG359033													
WG359033ICV	ICV	02/07/14 16:14	II140123-2	2		1.9498	mg/L	97.5	95	105			
WG359033ICB	ICB	02/07/14 16:20				U	mg/L		-0.015	0.015			
WG358974LRB	LRB	02/07/14 16:32				U	mg/L		-0.011	0.011			
WG358974LFB	LFB	02/07/14 16:35	II140117-2	.501		.5295	mg/L	105.7	85	115			
L16682-01LFM	LFM	02/07/14 17:46	II140117-2	.501	U	.5219	mg/L	104.2	70	130			
L16682-01LFMD	LFMD	02/07/14 17:49	II140117-2	.501	U	.5238	mg/L	104.6	70	130	0.36	20	

Mercury, total

M245.1 CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358847													
WG358847ICV	ICV	02/06/14 10:28	II140128-3	.005005		.00488	mg/L	97.5	95	105			
WG358847ICB	ICB	02/06/14 10:30				U	mg/L		-0.0002	0.0002			
WG358847LRB	LRB	02/06/14 10:32				U	mg/L		-0.00044	0.00044			
WG358847LFB	LFB	02/06/14 10:34	II140203-2	.002002		.00191	mg/L	95.4	85	115			
L16660-03LFM	LFM	02/06/14 11:15	II140203-2	.002002	U	.00195	mg/L	97.4	85	115			
L16660-03LFMD	LFMD	02/06/14 11:17	II140203-2	.002002	U	.00193	mg/L	96.4	85	115	1.03	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Nickel, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359185													
WG359185ICV	ICV	02/12/14 11:09	II131218-1	2		2.0378	mg/L	101.9	95	105			
WG359185ICB	ICB	02/12/14 11:15				U	mg/L		-0.024	0.024			
WG359185LFB	LFB	02/12/14 11:27	II140117-2	.5		.5083	mg/L	101.7	85	115			
L16679-01AS	AS	02/12/14 11:37	II140117-2	.5	U	.5052	mg/L	101	85	115			
L16679-01ASD	ASD	02/12/14 11:40	II140117-2	.5	U	.4959	mg/L	99.2	85	115	1.86	20	

Nickel, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358941													
WG358941ICV	ICV	02/06/14 14:01	II140123-2	2		1.991	mg/L	99.6	95	105			
WG358941ICB	ICB	02/06/14 14:07				U	mg/L		-0.03	0.03			
WG358883LRB	LRB	02/06/14 14:19				U	mg/L		-0.022	0.022			
WG358883LFB	LFB	02/06/14 14:22	II140117-2	.5		.517	mg/L	103.4	85	115			
L16666-03LFM	LFM	02/06/14 15:21	II140117-2	.5	.07	.597	mg/L	105.4	70	130			
L16666-03LFMD	LFMD	02/06/14 15:24	II140117-2	.5	.07	.586	mg/L	103.2	70	130	1.86	20	

WG359033

WG359033ICV	ICV	02/07/14 16:14	II140123-2	2		2.0067	mg/L	100.3	95	105			
WG359033ICB	ICB	02/07/14 16:20				U	mg/L		-0.024	0.024			
WG358974LRB	LRB	02/07/14 16:32				U	mg/L		-0.0176	0.0176			
WG358974LFB	LFB	02/07/14 16:35	II140117-2	.5		.5302	mg/L	106	85	115			
L16682-01LFM	LFM	02/07/14 17:46	II140117-2	.5	.013	.5339	mg/L	104.2	70	130			
L16682-01LFMD	LFMD	02/07/14 17:49	II140117-2	.5	.013	.534	mg/L	104.2	70	130	0.02	20	

Nitrate/Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358856													
WG358856ICV	ICV	02/04/14 22:12	WI140116-3	2.416		2.426	mg/L	100.4	90	110			
WG358856ICB	ICB	02/04/14 22:13				U	mg/L		-0.06	0.06			
WG358856LFB	LFB	02/04/14 22:17	WI130816-3	2		1.921	mg/L	96.1	90	110			
L16647-01AS	AS	02/04/14 22:19	WI130816-3	2	U	1.921	mg/L	96.1	90	110			
L16647-02DUP	DUP	02/04/14 22:21			.02	U	mg/L				200	20	RA
L16679-02AS	AS	02/04/14 22:36	WI130816-3	2	U	1.921	mg/L	96.1	90	110			
L16679-03DUP	DUP	02/04/14 22:38			.31	.3	mg/L				3.3	20	

Nitrite as N, dissolved

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358856													
WG358856ICV	ICV	02/04/14 22:12	WI140116-3	.609		.633	mg/L	103.9	90	110			
WG358856ICB	ICB	02/04/14 22:13				U	mg/L		-0.03	0.03			
WG358856LFB	LFB	02/04/14 22:17	WI130816-3	1		.981	mg/L	98.1	90	110			
L16647-01AS	AS	02/04/14 22:19	WI130816-3	1	U	.99	mg/L	99	90	110			
L16647-02DUP	DUP	02/04/14 22:21			U	U	mg/L				0	20	RA
L16679-02AS	AS	02/04/14 22:36	WI130816-3	1	U	.976	mg/L	97.6	90	110			
L16679-03DUP	DUP	02/04/14 22:38			U	U	mg/L				0	20	RA

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Nitrogen, ammonia

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359152													
WG359152ICV	ICV	02/11/14 16:21	WI131021-1	1.003		.978	mg/L	97.5	90	110			
WG359152ICB	ICB	02/11/14 16:24				U	mg/L		-0.15	0.15			
WG359152LFB2	LFB	02/11/14 16:57	WI140113-8	1		1.036	mg/L	103.6	90	110			
L16676-19AS	AS	02/11/14 16:59	WI140113-8	1	.09	1.141	mg/L	105.1	90	110			
L16679-01DUP	DUP	02/11/14 17:01			U	U	mg/L				0	20	RA
WG359152LFB1	LFB	02/11/14 17:13	WI140113-8	1		.997	mg/L	99.7	90	110			

pH (lab)

SM4500H+ B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358968													
WG358968LCSW3	LCSW	02/06/14 15:17	PCN40852	6		6.02	units	100.3					
L16679-04DUP	DUP	02/06/14 18:02			8	8.03	units				0.4	20	
WG358968LCSW6	LCSW	02/06/14 18:15	PCN40852	6		6.03	units	100.5					
WG358968LCSW9	LCSW	02/06/14 21:20	PCN40852	6		6.03	units	100.5					

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358980													
WG358980PBW	PBW	02/06/14 15:00				U	mg/L		-20	20			
WG358980LCSW	LCSW	02/06/14 15:01	PCN44089	260		256	mg/L	98.5	80	120			
L16679-01DUP	DUP	02/06/14 15:15			1180	1168	mg/L				1	10	
L16709-02DUP	DUP	02/06/14 15:29			790	802	mg/L				1.5	10	

Residue, Non-Filterable (TSS) @105C

SM2540D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358988													
WG358988PBW	PBW	02/06/14 17:30				U	mg/L		-15	15			
WG358988LCSW	LCSW	02/06/14 17:31	PCN44089	160		152	mg/L	95	80	120			
L16679-02DUP	DUP	02/06/14 17:53			U	U	mg/L				0	10	RA
L16709-02DUP	DUP	02/06/14 18:14			U	6	mg/L				200	10	RA

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359170													
WG359170ICV	ICV	02/11/14 22:32	MS140106-2	.05		.05107	mg/L	102.1	90	110			
WG359170ICB	ICB	02/11/14 22:36				U	mg/L		-0.0003	0.0003			
WG359170LFB	LFB	02/11/14 22:39	MS140128-2	.05005		.0479	mg/L	95.7	85	115			
L16660-03AS	AS	02/11/14 23:37	MS140128-2	.25025	U	.2399	mg/L	95.9	70	130			
L16660-03ASD	ASD	02/11/14 23:40	MS140128-2	.25025	U	.25805	mg/L	103.1	70	130	7.29	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Silver, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359212													
WG359212ICV	ICV	02/12/14 23:02	MS140106-2	.02002		.01997	mg/L	99.8	90	110			
WG359212ICB	ICB	02/12/14 23:05				U	mg/L		-0.00015	0.00015			
WG359212LFB	LFB	02/12/14 23:09	MS140128-2	.01001		.0093	mg/L	92.9	85	115			
L16679-03AS	AS	02/12/14 23:22	MS140128-2	.01001	U	.009193	mg/L	91.8	70	130			
L16679-03ASD	ASD	02/12/14 23:26	MS140128-2	.01001	U	.009348	mg/L	93.4	70	130	1.67	20	

Silver, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359293													
WG359293ICV	ICV	02/13/14 20:18	MS140106-2	.02002		.01979	mg/L	98.9	90	110			
WG359293ICB	ICB	02/13/14 20:21				U	mg/L		-0.00015	0.00015			
WG359129LRB	LRB	02/13/14 20:24				U	mg/L		-0.00011	0.00011			
WG359129LFB	LFB	02/13/14 20:28	MS140128-2	.01001		.009664	mg/L	96.5	85	115			
L16703-01LFM	LFM	02/13/14 21:41	MS140128-2	.01001	.0011	.01017	mg/L	90.6	70	130			
L16703-01LFMD	LFMD	02/13/14 21:44	MS140128-2	.01001	.0011	.01026	mg/L	91.5	70	130	0.88	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359154													
WG359154ICB	ICB	02/11/14 14:32				U	mg/L		-3	3			
WG359154ICV	ICV	02/11/14 14:32	WI140128-2	20		19.7	mg/L	98.5	90	110			
WG359154LFB	LFB	02/11/14 14:59	WI131010-2	9.99		9.8	mg/L	98.1	90	110			
L16762-01AS	AS	02/11/14 15:48	SO4TURB20	10	207	229	mg/L	220	90	110			M3
L16762-01DUP	DUP	02/11/14 15:48			207	224	mg/L				7.9	20	

Sulfide as S

SM4500S2-D

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358954													
WG358954ICV	ICV	02/06/14 11:38	WC140206-	.34534		.322	mg/L	93.2	90	110			
WG358954ICB	ICB	02/06/14 11:44				U	mg/L		-0.06	0.06			
WG358954LFB	LFB	02/06/14 11:50	WC140206-	.2453333		.258	mg/L	105.2	80	120			
L16709-02AS	AS	02/06/14 14:41	WC140206-	.2453333	.06	.182	mg/L	49.7	75	125			M2
L16709-02DUP	DUP	02/06/14 14:47			.06	.063	mg/L				4.9	20	RA

Uranium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359170													
WG359170ICV	ICV	02/11/14 22:32	MS140106-2	.05		.05184	mg/L	103.7	90	110			
WG359170ICB	ICB	02/11/14 22:36				U	mg/L		-0.0003	0.0003			
WG359170LFB	LFB	02/11/14 22:39	MS140128-2	.05		.04919	mg/L	98.4	85	115			
L16660-03AS	AS	02/11/14 23:37	MS140128-2	.25	.0176	.29165	mg/L	109.6	70	130			
L16660-03ASD	ASD	02/11/14 23:40	MS140128-2	.25	.0176	.29765	mg/L	112	70	130	2.04	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Uranium, total

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359293													
WG359293ICV	ICV	02/13/14 20:18	MS140106-2	.05		.05071	mg/L	101.4	90	110			
WG359293ICB	ICB	02/13/14 20:21				U	mg/L		-0.0003	0.0003			
WG359129LRB	LRB	02/13/14 20:24				U	mg/L		-0.00022	0.00022			
WG359129LFB	LFB	02/13/14 20:28	MS140128-2	.05		.05146	mg/L	102.9	85	115			
L16703-01LFM	LFM	02/13/14 21:41	MS140128-2	.05	.0296	.08132	mg/L	103.4	70	130			
L16703-01LFMD	LFMD	02/13/14 21:44	MS140128-2	.05	.0296	.08249	mg/L	105.8	70	130	1.43	20	

Zinc, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359185													
WG359185ICV	ICV	02/12/14 11:09	II131218-1	2		1.958	mg/L	97.9	95	105			
WG359185ICB	ICB	02/12/14 11:15				U	mg/L		-0.03	0.03			
WG359185LFB	LFB	02/12/14 11:27	II140117-2	.5		.514	mg/L	102.8	85	115			
L16679-01AS	AS	02/12/14 11:37	II140117-2	.5	.2	.713	mg/L	102.6	85	115			
L16679-01ASD	ASD	02/12/14 11:40	II140117-2	.5	.2	.7	mg/L	100	85	115	1.84	20	

Zinc, total

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG358941													
WG358941ICV	ICV	02/06/14 14:01	II140123-2	2		1.934	mg/L	96.7	95	105			
WG358941ICB	ICB	02/06/14 14:07				U	mg/L		-0.03	0.03			
WG358883LRB	LRB	02/06/14 14:19				U	mg/L		-0.022	0.022			
WG358883LFB	LFB	02/06/14 14:22	II140117-2	.5		.492	mg/L	98.4	85	115			
L16666-03LFM	LFM	02/06/14 15:21	II140117-2	.5	.11	.58	mg/L	96	70	130			
L16666-03LFMD	LFMD	02/06/14 15:24	II140117-2	.5	.11	.591	mg/L	98.2	70	130	1.88	20	
WG359033													
WG359033ICV	ICV	02/07/14 16:14	II140123-2	2		1.922	mg/L	96.1	95	105			
WG359033ICB	ICB	02/07/14 16:20				U	mg/L		-0.03	0.03			
WG358974LRB	LRB	02/07/14 16:32				U	mg/L		-0.022	0.022			
WG358974LFB	LFB	02/07/14 16:35	II140117-2	.5		.519	mg/L	103.8	85	115			
L16682-01LFM	LFM	02/07/14 17:46	II140117-2	.5	U	.507	mg/L	101.4	70	130			
L16682-01LFMD	LFMD	02/07/14 17:49	II140117-2	.5	U	.504	mg/L	100.8	70	130	0.59	20	

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16679-01	WG359174	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359039	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358823	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358856	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359152	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358988	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359154	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG358954	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16679-02	WG359174	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359039	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358823	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358856	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359152	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358988	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359154	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
L16679-03	WG358954	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359174	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359039	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358823	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358856	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359152	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L16679-04	WG358954	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359174	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359039	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358823	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358856	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359152	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L16679-05	WG358954	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359174	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359039	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358823	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358856	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359152	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16679-04	WG359142	Chloride	SM4500CI-E	ZU	Analysis date/time preceeds filter date/time. A portion of sample was filtered and analyzed prior to the creation of a Filter workgroup.
	WG359175	Cyanide, total	M335.4 - Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359039	Cyanide, WAD	SM4500-CN I-Colorimetric w/ distillation	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358823	Dissolved Chromium, Hexavalent	SM3500Cr-B	H3	Sample was received and analyzed past holding time.
			SM3500Cr-B	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358856	Nitrate/Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
		Nitrite as N, dissolved	M353.2 - Automated Cadmium Reduction	H3	Sample was received and analyzed past holding time.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359152	Nitrogen, ammonia	M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG358988	Residue, Non-Filterable (TSS) @105C	SM2540D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359154	Sulfate	D516-02 - Turbidimetric	M3	The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to the spike level. The recovery of the associated control sample (LCS or LFB) was acceptable.
	WG358954	Sulfide as S	SM4500S2-D	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			SM4500S2-D	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-A

ACZ Sample ID: **L16679-01**

Date Sampled: 01/31/14 0:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG359088

Analyst: RJV

Extract Date:

Analysis Date: 02/10/14 14:32

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.03		mg/L	2.06	10.3

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-B

ACZ Sample ID: **L16679-02**

Date Sampled: 01/31/14 0:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG359088

Analyst: RJV

Extract Date:

Analysis Date: 02/10/14 14:43

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.03		mg/L	2.06	10.3

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-C

ACZ Sample ID: **L16679-03**

Date Sampled: 01/31/14 0:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG359088

Analyst: RJV

Extract Date:

Analysis Date: 02/10/14 14:53

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.02		mg/L	2.04	10.2

Caldera Mineral Resources LLC

Project ID:

Sample ID: CB-D

ACZ Sample ID: **L16679-04**

Date Sampled: 01/31/14 0:00

Date Received: 02/04/14

Sample Matrix: Surface Water

Oil & Grease, Total Recoverable

Analysis Method: **1664A - Gravimetric**

Extract Method:

Workgroup: WG359088

Analyst: RJV

Extract Date:

Analysis Date: 02/10/14 15:03

Compound	CAS	Result	QUAL	Dilution	XQ	Units	MDL	PQL
Oil and Grease			U	1.02		mg/L	2.04	10.2



Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>LCL</i>	Lower Control Limit
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. Allows for instrument and annual fluctuations.
<i>PCN/SCN</i>	A number assigned to reagents/standards to trace to the manufacturer's certificate of analysis
<i>PQL</i>	Practical Quantitation Limit, typically 5 times the MDL.
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>Upper</i>	Upper Recovery Limit, in % (except for LCSS, mg/Kg)
<i>UCL</i>	Upper Control Limit
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>SURR</i>	Surrogate	<i>LFM</i>	Laboratory Fortified Matrix
<i>INTS</i>	Internal Standard	<i>LFMD</i>	Laboratory Fortified Matrix Duplicate
<i>DUP</i>	Sample Duplicate	<i>LRB</i>	Laboratory Reagent Blank
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBS</i>	Prep Blank - Soil
<i>LFB</i>	Laboratory Fortified Blank	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

- (1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.
- (2) EPA 600/4-90/020. Methods for the Determination of Organic Compounds in Drinking Water (I), July 1990.
- (3) EPA 600/R-92/129. Methods for the Determination of Organic Compounds in Drinking Water (II), July 1990.
- (4) EPA SW-846. Test Methods for Evaluating Solid Waste.
- (5) Standard Methods for the Examination of Water and Wastewater.

Comments

- (1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (2) Excluding Oil & Grease, solid & biological matrices for organic analyses are reported on a wet weight basis.
- (3) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.
- (4) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click:

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

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Oil & Grease, Total Recoverable

1664A - Gravimetric

WG359088

MS	Sample ID: L16676-01MS			PCN/SCN: OP140116-2			Analyzed: 02/10/14 14:22			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40	U	36.6	mg/L	91.5	78	114			

LCSW	Sample ID: WG359088LCSW			PCN/SCN: OP140116-2			Analyzed: 02/10/14 17:19			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		36.5	mg/L	91.3	78	114			

LCSWD	Sample ID: WG359088LCSWD			PCN/SCN: OP140116-2			Analyzed: 02/10/14 17:30			
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE	40		35.5	mg/L	88.8	78	114	2.8	18	

PBW		Sample ID: WG359088PBW						Analyzed: 02/10/14 13:30		
Compound	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
OIL AND GREASE			U	mg/L		-5	5			

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
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No extended qualifiers associated with this analysis

Caldera Mineral Resources LLC

ACZ Project ID: **L16679**

Wet Chemistry

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

Sulfide as S

SM4500S2-D

Caldera Mineral Resources LLC

ACZ Project ID: L16679

Date Received: 02/04/2014 11:48

Received By: mtb

Date Printed: 2/4/2014

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples? A change was made in the Copy Report to: section prior to ACZ custody.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
4205	4.4	13	Yes

Was ice present in the shipment container(s)?

Yes - Wet ice was present in the shipment container(s).

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

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

Report to:

Name: Mike Thompson	Address: P.O. Box 297
Company: Reardon Steel LLC	4 River Street, Silverton, CO 81433
E-mail: mtk@reardonsteel.us	Telephone: 970-426-2924

Copy of Report to:

Name: <i>Karmen King</i>	E-mail: <i>kking@aquatox.us</i>
Company: <i>Grayling LLC</i>	Telephone:

Invoice to:

Name: Mike Thompson	Address: P.O. Box 297
Company: Reardon Steel LLC	4 River St., Silverton, CO 81433
E-mail: mtk@reardonsteel.us	Telephone: 970-426-2924

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	<input checked="" type="checkbox"/>
NO	<input type="checkbox"/>

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

Are samples for SDWA Compliance Monitoring?

Yes		No	<i>✓</i>
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If yes, please include state forms. Results will be reported to PQL for Colorado.

Sampler's Name: WJF
 Sampler's site Information
 State: CO
 Zip code 81433
 Time Zone MST

☒ Check box if observe Daylight Savings Time

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

[illegible]

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

REMARKS

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
<i>ML</i>	<i>1/31/14</i>		
		<i>LRC</i>	<i>2.4.14 1148</i>

March 12, 2014

Report to:

Mike Thompson
Reardon Steel LLC
4 River Street
Silverton, CO 81433

Bill to:

Mike Thompson
Reardon Steel LLC
4 River Street
Silverton, CO 81433

cc: Karmen King

Project ID:

ACZ Project ID: L16884

Mike Thompson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on February 18, 2014. This project has been assigned to ACZ's project number, L16884. 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 L16884. 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 April 11, 2014. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Sue Webber has reviewed and
approved this report.



Reardon Steel LLC

Project ID:

Sample ID: POND FILL #1

ACZ Sample ID: **L16884-01**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP								02/21/14 11:32	jjc
Total Hot Plate Digestion	M3010A ICP-MS								02/25/14 12:05	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	M6010B ICP	1	0.46		*	mg/L	0.03	0.2	02/24/14 16:26	jjc
Antimony (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:26	jjc
Arsenic (1312)	M6010B ICP	1		U	*	mg/L	0.04	0.2	02/24/14 16:26	jjc
Barium (1312)	M6010B ICP	1	0.011	B		mg/L	0.003	0.02	02/24/14 16:26	jjc
Beryllium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:26	jjc
Cadmium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.02	02/24/14 16:26	jjc
Chromium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:26	jjc
Copper (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:26	jjc
Iron (1312)	M6010B ICP	1	0.08		*	mg/L	0.02	0.05	02/24/14 16:26	jjc
Lead (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:26	jjc
Manganese (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:26	jjc
Mercury (1312)	M7470A CVAA	1		U	*	mg/L	0.0002	0.001	02/24/14 13:04	mfm
Molybdenum (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.1	02/24/14 16:26	jjc
Nickel (1312)	M6010B ICP	1		U	*	mg/L	0.008	0.04	02/24/14 16:26	jjc
Selenium (1312)	M6010B ICP	1		U	*	mg/L	0.05	0.3	02/24/14 16:26	jjc
Silver (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.03	02/24/14 16:26	jjc
Thallium (1312)	M6010B ICP	1		U	*	mg/L	0.1	0.5	02/24/14 16:26	jjc
Uranium (1312)	M6020 ICP-MS	1		U	*	mg/L	0.0001	0.0005	03/03/14 22:56	pmc
Vanadium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:26	jjc
Zinc (1312)	M6010B ICP	1		U		mg/L	0.01	0.05	02/24/14 16:26	jjc

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #1

ACZ Sample ID: **L16884-01**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

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		0			t CaCO3/Kt	1	5	03/12/14 13:08	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		51			t CaCO3/Kt	1	5	03/12/14 13:08	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		51			t CaCO3/Kt	1	5	03/12/14 13:08	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 3.2.3	1	5.1		*	%	0.1	0.5	03/06/14 10:40	cdb
	EPA 600/2-78-054, section 3.2.2									
Max Particle Size		1	2000		*	um			03/06/14 0:00	spl
pH		1	8.5		*	units	0.1	0.1	03/06/14 0:00	spl
Sulfur Forms	M600/2-78-054 3.2.4									
Sulfur Organic Residual		1	0.01	B	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Pyritic Sulfide		1		U	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Sulfate		1	0.02	B	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Total		1	0.02	B	*	%	0.01	0.1	03/06/14 0:00	cra
Total Sulfur minus Sulfate		1		U	*	%	0.01	0.1	03/06/14 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								02/21/14 12:09	spl
Crush and Pulverize	EPA-600/2-78-054 3.1.3								03/04/14 14:05	cdb
Saturated Paste Extraction	USDA No. 60 (2)								03/06/14 10:10	spl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								03/04/14 14:05	cdb
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2								03/04/14 14:05	cdb
Synthetic Precip. Leaching Procedure	M1312-RC								02/20/14 6:19	cdb
Synthetic Precip. Leaching Procedure	M1312								02/20/14 9:33	cdb
Synthetic Precip. Leaching Procedure	M1312, DI Water								02/28/14 2:00	spl

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #1

ACZ Sample ID: **L16884-01**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chloride (1312 DI)	SM4500Cl-E	1	1	B	*	mg/L	1	5	03/05/14 20:32	mpb
Conductivity @25C (1312-DI)	SM2510B	1	57		*	umhos/cm	1	10	03/04/14 13:21	abd
Fluoride (1312 DI)	SM4500F-C	1	0.3	B	*	mg/L	0.1	0.5	03/04/14 12:00	abd
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.02	0.1	02/28/14 23:22	pjb
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	03/07/14 11:27	bsu
Sulfate (1312 DI)	D516-02 - Turbidimetric	1	9.4		*	mg/L	1	5	03/07/14 13:29	mpb

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #2

ACZ Sample ID: **L16884-02**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP								02/21/14 11:50	jjc
Total Hot Plate Digestion	M3010A ICP-MS								02/25/14 12:20	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	M6010B ICP	1	0.32		*	mg/L	0.03	0.2	02/24/14 16:36	jjc
Antimony (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:36	jjc
Arsenic (1312)	M6010B ICP	1		U	*	mg/L	0.04	0.2	02/24/14 16:36	jjc
Barium (1312)	M6010B ICP	1	0.023			mg/L	0.003	0.02	02/24/14 16:36	jjc
Beryllium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:36	jjc
Cadmium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.02	02/24/14 16:36	jjc
Chromium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:36	jjc
Copper (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:36	jjc
Iron (1312)	M6010B ICP	1	0.02	B	*	mg/L	0.02	0.05	02/24/14 16:36	jjc
Lead (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:36	jjc
Manganese (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:36	jjc
Mercury (1312)	M7470A CVAA	1		U	*	mg/L	0.0002	0.001	02/24/14 13:06	mfm
Molybdenum (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.1	02/24/14 16:36	jjc
Nickel (1312)	M6010B ICP	1		U	*	mg/L	0.008	0.04	02/24/14 16:36	jjc
Selenium (1312)	M6010B ICP	1		U	*	mg/L	0.05	0.3	02/24/14 16:36	jjc
Silver (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.03	02/24/14 16:36	jjc
Thallium (1312)	M6010B ICP	1		U	*	mg/L	0.1	0.5	02/24/14 16:36	jjc
Uranium (1312)	M6020 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	03/03/14 23:01	pmc
Vanadium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:36	jjc
Zinc (1312)	M6010B ICP	1		U		mg/L	0.01	0.05	02/24/14 16:36	jjc

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #2

ACZ Sample ID: **L16884-02**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

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		0			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		44			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		44			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 3.2.3	1	4.4		*	%	0.1	0.5	03/06/14 10:50	cdb
Max Particle Size	EPA 600/2-78-054, section 3.2.2	1	2000		*	um			03/06/14 0:00	spl
pH		1	8.4		*	units	0.1	0.1	03/06/14 0:00	spl
Sulfur Forms	M600/2-78-054 3.2.4									
Sulfur Organic Residual		1	0.02	B	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Pyritic Sulfide		1		U	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Sulfate		1	0.01	B	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Total		1	0.03	B	*	%	0.01	0.1	03/06/14 0:00	cra
Total Sulfur minus Sulfate		1	0.02	B	*	%	0.01	0.1	03/06/14 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								02/21/14 12:18	spl
Crush and Pulverize	EPA-600/2-78-054 3.1.3								03/04/14 14:12	cdb
Saturated Paste Extraction	USDA No. 60 (2)								03/06/14 10:12	spl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								03/04/14 14:12	cdb
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2								03/04/14 14:12	cdb
Synthetic Precip. Leaching Procedure	M1312-RC								02/20/14 9:47	cdb
Synthetic Precip. Leaching Procedure	M1312, DI Water								02/28/14 3:15	spl
Synthetic Precip. Leaching Procedure	M1312								02/20/14 10:36	cdb

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #2

ACZ Sample ID: **L16884-02**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chloride (1312 DI)	SM4500Cl-E	1		U	*	mg/L	1	5	03/05/14 20:32	mpb
Conductivity @25C (1312-DI)	SM2510B	1	57		*	umhos/cm	1	10	03/04/14 13:22	abd
Fluoride (1312 DI)	SM4500F-C	1	0.3	B	*	mg/L	0.1	0.5	03/04/14 12:04	abd
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.02	0.1	02/28/14 23:23	pjb
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	03/07/14 11:28	bsu
Sulfate (1312 DI)	D516-02 - Turbidimetric	1	3.3	B	*	mg/L	1	5	03/07/14 13:29	mpb

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #3

ACZ Sample ID: **L16884-03**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP-MS								02/25/14 12:35	las
Total Hot Plate Digestion	M3010A ICP								02/21/14 12:08	jjc

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	M6010B ICP	1	0.37		*	mg/L	0.03	0.2	02/24/14 16:39	jjc
Antimony (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:39	jjc
Arsenic (1312)	M6010B ICP	1		U	*	mg/L	0.04	0.2	02/24/14 16:39	jjc
Barium (1312)	M6010B ICP	1		U	*	mg/L	0.003	0.02	02/24/14 16:39	jjc
Beryllium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:39	jjc
Cadmium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.02	02/24/14 16:39	jjc
Chromium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:39	jjc
Copper (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:39	jjc
Iron (1312)	M6010B ICP	1	0.06		*	mg/L	0.02	0.05	02/24/14 16:39	jjc
Lead (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:39	jjc
Manganese (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:39	jjc
Mercury (1312)	M7470A CVAA	1		U	*	mg/L	0.0002	0.001	02/24/14 13:12	mfm
Molybdenum (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.1	02/24/14 16:39	jjc
Nickel (1312)	M6010B ICP	1		U	*	mg/L	0.008	0.04	02/24/14 16:39	jjc
Selenium (1312)	M6010B ICP	1		U	*	mg/L	0.05	0.3	02/24/14 16:39	jjc
Silver (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.03	02/24/14 16:39	jjc
Thallium (1312)	M6010B ICP	1		U	*	mg/L	0.1	0.5	02/24/14 16:39	jjc
Uranium (1312)	M6020 ICP-MS	1	0.0001	B	*	mg/L	0.0001	0.0005	03/03/14 23:03	pmc
Vanadium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:39	jjc
Zinc (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:39	jjc

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #3

ACZ Sample ID: **L16884-03**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

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		0			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		39			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		39			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 3.2.3	1	3.9		*	%	0.1	0.5	03/06/14 11:00	cdb
Max Particle Size	EPA 600/2-78-054, section 3.2.2	1	2000		*	um			03/06/14 0:00	spl
pH		1	8.1		*	units	0.1	0.1	03/06/14 0:00	spl
Sulfur Forms	M600/2-78-054 3.2.4									
Sulfur Organic Residual		1	0.02	B	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Pyritic Sulfide		1		U	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Sulfate		1	0.01	B	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Total		1	0.03	B	*	%	0.01	0.1	03/06/14 0:00	cra
Total Sulfur minus Sulfate		1	0.02	B	*	%	0.01	0.1	03/06/14 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								02/21/14 12:27	spl
Crush and Pulverize	EPA-600/2-78-054 3.1.3								03/04/14 14:19	cdb
Saturated Paste Extraction	USDA No. 60 (2)								03/06/14 10:15	spl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								03/04/14 14:19	cdb
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2								03/04/14 14:19	cdb
Synthetic Precip. Leaching Procedure	M1312-RC								02/20/14 10:56	cdb
Synthetic Precip. Leaching Procedure	M1312								02/20/14 11:39	cdb
Synthetic Precip. Leaching Procedure	M1312, DI Water								02/28/14 4:30	spl

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #3

ACZ Sample ID: **L16884-03**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chloride (1312 DI)	SM4500Cl-E	1	1	B	*	mg/L	1	5	03/05/14 20:32	mpb
Conductivity @25C (1312-DI)	SM2510B	1	88		*	umhos/cm	1	10	03/04/14 13:24	abd
Fluoride (1312 DI)	SM4500F-C	1	0.3	B	*	mg/L	0.1	0.5	03/04/14 12:08	abd
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	1	0.05	B	*	mg/L	0.02	0.1	02/28/14 23:24	pjb
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	03/07/14 11:29	bsu
Sulfate (1312 DI)	D516-02 - Turbidimetric	1	19.4		*	mg/L	1	5	03/07/14 13:29	mpb

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #4

ACZ Sample ID: **L16884-04**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP-MS								02/25/14 12:50	las
Total Hot Plate Digestion	M3010A ICP								02/21/14 12:27	jjc

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	M6010B ICP	1	0.38		*	mg/L	0.03	0.2	02/24/14 16:42	jjc
Antimony (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:42	jjc
Arsenic (1312)	M6010B ICP	1		U	*	mg/L	0.04	0.2	02/24/14 16:42	jjc
Barium (1312)	M6010B ICP	1	0.015	B		mg/L	0.003	0.02	02/24/14 16:42	jjc
Beryllium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:42	jjc
Cadmium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.02	02/24/14 16:42	jjc
Chromium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:42	jjc
Copper (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:42	jjc
Iron (1312)	M6010B ICP	1	0.02	B	*	mg/L	0.02	0.05	02/24/14 16:42	jjc
Lead (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:42	jjc
Manganese (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:42	jjc
Mercury (1312)	M7470A CVAA	1		U	*	mg/L	0.0002	0.001	02/24/14 13:14	mfm
Molybdenum (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.1	02/24/14 16:42	jjc
Nickel (1312)	M6010B ICP	1		U	*	mg/L	0.008	0.04	02/24/14 16:42	jjc
Selenium (1312)	M6010B ICP	1		U	*	mg/L	0.05	0.3	02/24/14 16:42	jjc
Silver (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.03	02/24/14 16:42	jjc
Thallium (1312)	M6010B ICP	1		U	*	mg/L	0.1	0.5	02/24/14 16:42	jjc
Uranium (1312)	M6020 ICP-MS	1	0.0002	B	*	mg/L	0.0001	0.0005	03/03/14 23:05	pmc
Vanadium (1312)	M6010B ICP	1	0.006	B	*	mg/L	0.005	0.03	02/24/14 16:42	jjc
Zinc (1312)	M6010B ICP	1		U		mg/L	0.01	0.05	02/24/14 16:42	jjc

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #4

ACZ Sample ID: **L16884-04**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

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		2	B		t CaCO3/Kt	1	5	03/12/14 13:09	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		58			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		56			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 3.2.3	1	5.8		*	%	0.1	0.5	03/06/14 11:10	cdb
Max Particle Size	EPA 600/2-78-054, section 3.2.2	1	2000		*	um			03/06/14 0:00	spl
pH		1	8.3		*	units	0.1	0.1	03/06/14 0:00	spl
Sulfur Forms	M600/2-78-054 3.2.4									
Sulfur Organic Residual		1	0.05	B	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Pyritic Sulfide		1	0.03	B	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Sulfate		1		U	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Total		1	0.07	B	*	%	0.01	0.1	03/06/14 0:00	cra
Total Sulfur minus Sulfate		1	0.07	B	*	%	0.01	0.1	03/06/14 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								02/21/14 12:36	spl
Crush and Pulverize	EPA-600/2-78-054 3.1.3								03/04/14 14:25	cdb
Saturated Paste Extraction	USDA No. 60 (2)								03/06/14 10:17	spl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								03/04/14 14:25	cdb
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2								03/04/14 14:25	cdb
Synthetic Precip. Leaching Procedure	M1312								02/20/14 12:42	cdb
Synthetic Precip. Leaching Procedure	M1312-RC								02/20/14 12:05	cdb
Synthetic Precip. Leaching Procedure	M1312, DI Water								02/28/14 5:45	spl

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #4

ACZ Sample ID: **L16884-04**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chloride (1312 DI)	SM4500Cl-E	1		U	*	mg/L	1	5	03/05/14 20:32	mpb
Conductivity @25C (1312-DI)	SM2510B	1	58		*	umhos/cm	1	10	03/04/14 13:25	abd
Fluoride (1312 DI)	SM4500F-C	1	0.2	B	*	mg/L	0.1	0.5	03/04/14 12:23	abd
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	1	0.03	B	*	mg/L	0.02	0.1	02/28/14 23:27	pjb
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	03/07/14 11:32	bsu
Sulfate (1312 DI)	D516-02 - Turbidimetric	1	3.0	B	*	mg/L	1	5	03/07/14 13:29	mpb

Reardon Steel LLC

Project ID:

Sample ID: SHOP 1

ACZ Sample ID: **L16884-05**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP								02/21/14 12:45	jjc
Total Hot Plate Digestion	M3010A ICP-MS								02/25/14 13:05	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	M6010B ICP	1	0.28		*	mg/L	0.03	0.2	02/24/14 16:45	jjc
Antimony (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:45	jjc
Arsenic (1312)	M6010B ICP	1		U	*	mg/L	0.04	0.2	02/24/14 16:45	jjc
Barium (1312)	M6010B ICP	1	0.040			mg/L	0.003	0.02	02/24/14 16:45	jjc
Beryllium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:45	jjc
Cadmium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.02	02/24/14 16:45	jjc
Chromium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:45	jjc
Copper (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:45	jjc
Iron (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.05	02/24/14 16:45	jjc
Lead (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:45	jjc
Manganese (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:45	jjc
Mercury (1312)	M7470A CVAA	1		U	*	mg/L	0.0002	0.001	02/24/14 13:16	mfm
Molybdenum (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.1	02/24/14 16:45	jjc
Nickel (1312)	M6010B ICP	1		U	*	mg/L	0.008	0.04	02/24/14 16:45	jjc
Selenium (1312)	M6010B ICP	1		U	*	mg/L	0.05	0.3	02/24/14 16:45	jjc
Silver (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.03	02/24/14 16:45	jjc
Thallium (1312)	M6010B ICP	1		U	*	mg/L	0.1	0.5	02/24/14 16:45	jjc
Uranium (1312)	M6020 ICP-MS	1		U	*	mg/L	0.0001	0.0005	03/03/14 23:07	pmc
Vanadium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:45	jjc
Zinc (1312)	M6010B ICP	1		U		mg/L	0.01	0.05	02/24/14 16:45	jjc

Reardon Steel LLC

Project ID:

Sample ID: SHOP 1

ACZ Sample ID: **L16884-05**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

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		16			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		64			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		48			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 3.2.3	1	6.4		*	%	0.1	0.5	03/06/14 11:30	cdb
Max Particle Size	EPA 600/2-78-054, section 3.2.2	1	2000		*	um			03/06/14 0:00	spl
pH		1	8.2		*	units	0.1	0.1	03/06/14 0:00	spl
Sulfur Forms	M600/2-78-054 3.2.4									
Sulfur Organic Residual		1	0.29		*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Pyritic Sulfide		1	0.13		*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Sulfate		1	0.09	B	*	%	0.01	0.1	03/06/14 0:00	cra
Sulfur Total		1	0.51		*	%	0.01	0.1	03/06/14 0:00	cra
Total Sulfur minus Sulfate		1	0.42		*	%	0.01	0.1	03/06/14 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								02/21/14 12:46	spl
Crush and Pulverize	EPA-600/2-78-054 3.1.3								03/04/14 14:32	cdb
Saturated Paste Extraction	USDA No. 60 (2)								03/06/14 10:20	spl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								03/04/14 14:32	cdb
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2								03/04/14 14:32	cdb
Synthetic Precip. Leaching Procedure	M1312								02/20/14 13:45	cdb
Synthetic Precip. Leaching Procedure	M1312-RC								02/20/14 13:14	cdb
Synthetic Precip. Leaching Procedure	M1312, DI Water								02/28/14 7:00	spl

Reardon Steel LLC

Project ID:

Sample ID: SHOP 1

ACZ Sample ID: **L16884-05**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chloride (1312 DI)	SM4500Cl-E	1	1	B	*	mg/L	1	5	03/05/14 20:33	mpb
Conductivity @25C (1312-DI)	SM2510B	1	83		*	umhos/cm	1	10	03/04/14 13:26	abd
Fluoride (1312 DI)	SM4500F-C	1	0.2	B	*	mg/L	0.1	0.5	03/04/14 12:27	abd
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	1	0.25		*	mg/L	0.02	0.1	02/28/14 23:29	pjb
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	03/07/14 11:33	bsu
Sulfate (1312 DI)	D516-02 - Turbidimetric	1	13.7		*	mg/L	1	5	03/07/14 13:30	mpb

Reardon Steel LLC

Project ID:

Sample ID: SHOP 2

ACZ Sample ID: **L16884-06**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP								02/21/14 13:03	jjc
Total Hot Plate Digestion	M3010A ICP-MS								02/25/14 13:20	las

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	M6010B ICP	1	0.28		*	mg/L	0.03	0.2	02/24/14 16:48	jjc
Antimony (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:48	jjc
Arsenic (1312)	M6010B ICP	1		U	*	mg/L	0.04	0.2	02/24/14 16:48	jjc
Barium (1312)	M6010B ICP	1	0.012	B		mg/L	0.003	0.02	02/24/14 16:48	jjc
Beryllium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:48	jjc
Cadmium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.02	02/24/14 16:48	jjc
Chromium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:48	jjc
Copper (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:48	jjc
Iron (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.05	02/24/14 16:48	jjc
Lead (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:48	jjc
Manganese (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:48	jjc
Mercury (1312)	M7470A CVAA	1		U	*	mg/L	0.0002	0.001	02/24/14 13:18	mfm
Molybdenum (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.1	02/24/14 16:48	jjc
Nickel (1312)	M6010B ICP	1		U	*	mg/L	0.008	0.04	02/24/14 16:48	jjc
Selenium (1312)	M6010B ICP	1		U	*	mg/L	0.05	0.3	02/24/14 16:48	jjc
Silver (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.03	02/24/14 16:48	jjc
Thallium (1312)	M6010B ICP	1		U	*	mg/L	0.1	0.5	02/24/14 16:48	jjc
Uranium (1312)	M6020 ICP-MS	1		U	*	mg/L	0.0001	0.0005	03/03/14 23:09	pmc
Vanadium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:48	jjc
Zinc (1312)	M6010B ICP	1		U		mg/L	0.01	0.05	02/24/14 16:48	jjc

Reardon Steel LLC

Project ID:

Sample ID: SHOP 2

ACZ Sample ID: **L16884-06**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

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		37			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		63			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		26			t CaCO3/Kt	1	5	03/12/14 13:09	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 3.2.3	1	6.3		*	%	0.1	0.5	03/06/14 11:40	cdb
Max Particle Size	EPA 600/2-78-054, section 3.2.2	1	2000		*	um			03/06/14 0:00	spl
pH		1	7.5		*	units	0.1	0.1	03/06/14 0:00	spl
Sulfur Forms	M600/2-78-054 3.2.4									
Sulfur Organic Residual		1	0.80		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Pyritic Sulfide		1	0.18		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Sulfate		1	0.19		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Total		1	1.17		*	%	0.01	0.1	03/07/14 0:00	cra
Total Sulfur minus Sulfate		1	0.98		*	%	0.01	0.1	03/07/14 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								02/21/14 12:55	spl
Crush and Pulverize	EPA-600/2-78-054 3.1.3								03/04/14 14:39	cdb
Saturated Paste Extraction	USDA No. 60 (2)								03/06/14 10:22	spl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								03/04/14 14:39	cdb
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2								03/04/14 14:39	cdb
Synthetic Precip. Leaching Procedure	M1312-RC								02/20/14 14:23	cdb
Synthetic Precip. Leaching Procedure	M1312								02/20/14 14:48	cdb
Synthetic Precip. Leaching Procedure	M1312, DI Water								02/28/14 9:30	spl

Reardon Steel LLC

Project ID:

Sample ID: SHOP 2

ACZ Sample ID: **L16884-06**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chloride (1312 DI)	SM4500Cl-E	1	2	B	*	mg/L	1	5	03/05/14 20:33	mpb
Conductivity @25C (1312-DI)	SM2510B	1	80		*	umhos/cm	1	10	03/04/14 13:28	abd
Fluoride (1312 DI)	SM4500F-C	1	0.2	B	*	mg/L	0.1	0.5	03/04/14 12:30	abd
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	1	0.23		*	mg/L	0.02	0.1	02/28/14 23:30	pjb
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	03/07/14 11:34	bsu
Sulfate (1312 DI)	D516-02 - Turbidimetric	1	8.7		*	mg/L	1	5	03/07/14 13:30	mpb

**Report Header Explanations**

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Reardon Steel LLC

ACZ Project ID: **L16884**

Aluminum (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.944	mg/L	97.2	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.09	0.09			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.09	0.09			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	1.0011		1.012	mg/L	101.1	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	1.0011	U	1.028	mg/L	102.7	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	1.0011	U	1.014	mg/L	101.3	75	125	1.37	20	

Antimony (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	4		3.946	mg/L	98.7	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.09	0.09			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.09	0.09			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.2002		.178	mg/L	88.9	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.2002	U	.197	mg/L	98.4	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.2002	U	.176	mg/L	87.9	75	125	11.26	20	

Arsenic (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	4		4.003	mg/L	100.1	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.12	0.12			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.12	0.12			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	1		1.037	mg/L	103.7	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	1	U	1.058	mg/L	105.8	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	1	U	1.038	mg/L	103.8	75	125	1.91	20	

Barium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.952	mg/L	97.6	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.009	0.009			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.009	0.009			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.4962	mg/L	99.2	85	115			
L16859-01DUP	DUP	02/24/14 16:08			.03	.0311	mg/L				3.6	20	
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	.027	.5249	mg/L	99.6	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	.027	.5178	mg/L	98.2	75	125	1.36	20	

Reardon Steel LLC

ACZ Project ID: **L16884**

Beryllium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.924	mg/L	96.2	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.03	0.03			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.03	0.03			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.504	mg/L	100.8	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	U	.501	mg/L	100.2	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	U	.497	mg/L	99.4	75	125	0.8	20	

Cadmium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.887	mg/L	94.4	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.015	0.015			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.015	0.015			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.4936	mg/L	98.7	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	.015	.5036	mg/L	97.9	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	.015	.4974	mg/L	96.7	75	125	1.24	20	

Chloride (1312 DI)

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360265													
WG360265ICB	ICB	03/05/14 20:13				U	mg/L		-3	3			
WG360265ICV	ICV	03/05/14 20:13	WI130722-5	54.945		53.4	mg/L	97.2	90	110			
WG360265LFB	LFB	03/05/14 20:32	WI131010-1	30		30.9	mg/L	103	90	110			
WG359992PBS	PBS	03/05/14 20:32				U	mg/L		-3	3			
L16859-01DUP	DUP	03/05/14 20:32			9	10.2	mg/L				12.5	20	RA
L16884-05AS	AS	03/05/14 20:33	WI131010-1	30	1	32.2	mg/L	104	90	110			

Chromium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.91	mg/L	95.5	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.03	0.03			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.03	0.03			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.501		.497	mg/L	99.2	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.501	U	.491	mg/L	98	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.501	U	.484	mg/L	96.6	75	125	1.44	20	

Conductivity @25C (1312-DI)

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360167													
WG360167LCSW1	LCSW	03/04/14 13:12	PCN43577	1408.8		1441	µmhos/crr	102.3	90	110			
WG359992PBS	PBS	03/04/14 13:13				10.4	µmhos/crr		-4	4			
L16859-01DUP	DUP	03/04/14 13:16			520	535	µmhos/crr				2.8	20	
WG360167LCSW2	LCSW	03/04/14 13:34	PCN43577	1408.8		1420	µmhos/crr	100.8	90	110			

Reardon Steel LLC

ACZ Project ID: **L16884**

Copper (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.942	mg/L	97.1	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.03	0.03			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.03	0.03			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.499	mg/L	99.8	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	U	.513	mg/L	102.6	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	U	.508	mg/L	101.6	75	125	0.98	20	

Fluoride (1312 DI)

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360168													
WG360168ICV	ICV	03/04/14 11:16	WC140227-	2		1.91	mg/L	95.5	95	105			
WG360168ICB	ICB	03/04/14 11:20				.12	mg/L		-0.3	0.3			
WG360168LFB	LFB	03/04/14 11:28	WC140220-	5.015		4.59	mg/L	91.5	90	110			
WG359992PBS	PBS	03/04/14 11:33				.19	mg/L		-0.3	0.3			
L16859-01DUP	DUP	03/04/14 11:40			.9	.94	mg/L				4.3	20	RA
L16859-02AS	AS	03/04/14 11:52	WC140220-	5.015	1	6.37	mg/L	107.1	90	110			

Iron (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.962	mg/L	98.1	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.06	0.06			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.06	0.06			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	1.0014		1.016	mg/L	101.5	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	.042	mg/L				200	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	1.0014	U	1.014	mg/L	101.3	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	1.0014	U	1.001	mg/L	100	75	125	1.29	20	

Lead (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	4		3.827	mg/L	95.7	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.09	0.09			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.09	0.09			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	1.001		1.025	mg/L	102.4	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	1.001	.11	1.109	mg/L	99.8	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	1.001	.11	1.085	mg/L	97.4	75	125	2.19	20	

Reardon Steel LLC

ACZ Project ID: **L16884**

Manganese (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.931	mg/L	96.6	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.015	0.015			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.015	0.015			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.501		.5038	mg/L	100.6	85	115			
L16859-01DUP	DUP	02/24/14 16:08			2.01	1.737	mg/L				14.6	20	
L16859-03MS	MS	02/24/14 16:20	II140218-5	.501	4.43	4.918	mg/L	97.4	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.501	4.43	4.785	mg/L	70.9	75	125	2.74	20	M3

Mercury (1312)

M7470A CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359693													
WG359693ICV	ICV	02/24/14 11:13	II140214-1	.005005		.00491	mg/L	98.1	95	105			
WG359693ICB	ICB	02/24/14 11:16				U	mg/L		-0.0002	0.0002			
WG359698													
WG359563PBS	PBS	02/24/14 12:46				U	mg/Kg		-0.0006	0.0006			
WG359563LFB1	LFB	02/24/14 12:48	II140203-2	.002002		.0019	mg/L	94.9	85	115			
L16859-01DUP	DUP	02/24/14 12:53			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 12:59	II140203-2	.002002	U	.00191	mg/L	95.4	85	115			
L16859-03MSD	MSD	02/24/14 13:01	II140203-2	.002002	U	.00188	mg/L	93.9	85	115	1.58	20	

Molybdenum (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.944	mg/L	97.2	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.06	0.06			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.06	0.06			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.496	mg/L	99.2	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	U	.499	mg/L	99.8	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	U	.494	mg/L	98.8	75	125	1.01	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
WG360249													
WG360249PBS	PBS	03/06/14 9:40				U	%		-0.1	0.1			
WG360249LCSS	LCSS	03/06/14 9:50	PCN33453	100		107.5	%	107.5	80	120			
L16859-01DUP	DUP	03/06/14 10:10			9.4	9.25	%				1.6	20	

Reardon Steel LLC

ACZ Project ID: **L16884**

Nickel (1312)			M6010B ICP										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.979	mg/L	99	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.024	0.024			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.024	0.024			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.51	mg/L	102	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	U	.5005	mg/L	100.1	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	U	.4959	mg/L	99.2	75	125	0.92	20	

Nitrate/Nitrite as N (1312-DI)			M353.2 - Automated Cadmium Reduction										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360067													
WG360067ICV	ICV	02/28/14 21:46	WI140116-3	2.416		2.321	mg/L	96.1	90	110			
WG360067ICB	ICB	02/28/14 21:47				U	mg/L		-0.06	0.06			
WG360072													
WG360072LFB	LFB	02/28/14 23:13	WI140215-3	2		1.984	mg/L	99.2	90	110			
WG359992PBS	PBS	02/28/14 23:14				U	mg/L		-0.06	0.06			
L16859-01DUP	DUP	02/28/14 23:17			U	U	mg/L				0	20	RA
L16859-02AS	AS	02/28/14 23:19	WI140215-3	2	U	2.003	mg/L	100.2	90	110			

Nitrogen, ammonia (1312-DI)			M350.1 - Automated Phenate										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360342													
WG360342ICV	ICV	03/07/14 11:15	WI131021-1	1.003		1.028	mg/L	102.5	90	110			
WG360342ICB	ICB	03/07/14 11:18				U	mg/L		-0.15	0.15			
WG360342LFB	LFB	03/07/14 11:19	WI140113-8	1		1.028	mg/L	102.8	90	110			
WG359992PBS	PBS	03/07/14 11:20				U	mg/L		-0.15	0.15			
L16859-01DUP	DUP	03/07/14 11:23			U	U	mg/L				0	20	RA
L16859-02AS	AS	03/07/14 11:25	WI140113-8	1	U	1	mg/L	100	90	110			

pH, Saturated Paste			EPA 600/2-78-054, section 3.2.2										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360293													
WG360293ICV	ICV	03/06/14 11:09	PCN42578	4		4	units	100	3.9	4.1			
L16859-01DUP	DUP	03/06/14 11:35			7.1	7.27	units				2.4	20	

Selenium (1312)			M6010B ICP										
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	4		4.056	mg/L	101.4	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.15	0.15			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.15	0.15			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	1.001		1.021	mg/L	102	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	1.001	U	1.019	mg/L	101.8	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	1.001	U	1.023	mg/L	102.2	75	125	0.39	20	

Reardon Steel LLC

ACZ Project ID: **L16884**

Silver (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	1.001		1.002	mg/L	100.1	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.03	0.03			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.03	0.03			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5005		.503	mg/L	100.5	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5005	U	.504	mg/L	100.7	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5005	U	.493	mg/L	98.5	75	125	2.21	20	

Sulfate (1312 DI)

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360357													
WG360357ICB	ICB	03/07/14 12:34				U	mg/L		-3	3			
WG360357ICV	ICV	03/07/14 12:34	WI140228-2	20		19	mg/L	95	90	110			
WG360357LFB	LFB	03/07/14 13:28	WI131010-2	9.99		9.2	mg/L	92.1	90	110			
WG359992PBS	PBS	03/07/14 13:28				U	mg/L		-3	3			
L16884-05AS	AS	03/07/14 13:30	WI131010-2	9.99	13.7	24.3	mg/L	106.1	90	110			
L16859-01DUP	DUP	03/07/14 13:47			195	201	mg/L				3	20	RA

Sulfur Organic Residual

M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360227													
L16859-01DUP	DUP	03/05/14 22:12			.77	.71	%				8.1	20	

Sulfur Pyritic Sulfide

M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360227													
L16859-01DUP	DUP	03/05/14 22:12			2.05	2.07	%				1	20	

Sulfur Sulfate

M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360227													
L16859-01DUP	DUP	03/05/14 22:12			.5	.58	%				14.8	20	

Sulfur Total

M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360227													
WG360227PBS	PBS	03/05/14 11:30				U	%		-0.03	0.03			
WG360227LCSS	LCSS	03/05/14 15:04	PCN44488	4.07		4.65	%	114.3					
L16859-01DUP	DUP	03/05/14 22:12			3.32	3.36	%				1.2	20	

Reardon Steel LLC

ACZ Project ID: **L16884**

Thallium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	4		3.89	mg/L	97.3	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.3	0.3			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.3	0.3			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	2		1.96	mg/L	98	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	2	U	1.93	mg/L	96.5	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	2	U	1.9	mg/L	95	75	125	1.57	20	

Total Sulfur Minus Sulfate

M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360227													
L16859-01DUP	DUP	03/05/14 22:12			2.82	2.78	%				1.4	20	

Uranium (1312)

M6020 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360134													
WG360134ICV	ICV	03/03/14 22:32	MS140218-2	.05		.05071	mg/L	101.4	90	110			
WG360134ICB	ICB	03/03/14 22:34				U	mg/L		-0.0003	0.0003			
WG359563PBS	PBS	03/03/14 22:42				U	mg/L		-0.0003	0.0003			
WG359563LFB2	LFB	03/03/14 22:43	MS140128-2	.05		.04992	mg/L	99.8	80	120			
L16859-01DUP	DUP	03/03/14 22:47			.0002	U	mg/L				200	20	RA
L16859-02MS	MS	03/03/14 22:51	MS140128-2	.05	U	.05238	mg/L	104.8	75	125			
L16859-02MSD	MSD	03/03/14 22:52	MS140128-2	.05	U	.05316	mg/L	106.3	75	125	1.48	20	

Vanadium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.95	mg/L	97.5	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.015	0.015			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.015	0.015			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.5048	mg/L	101	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	U	.5011	mg/L	100.2	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	U	.4911	mg/L	98.2	75	125	2.02	20	

Zinc (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.894	mg/L	94.7	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.03	0.03			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.03	0.03			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5005		.508	mg/L	101.5	85	115			
L16859-01DUP	DUP	02/24/14 16:08			.17	.148	mg/L				13.8	20	
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5005	1.08	1.53	mg/L	95.9	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5005	1.08	1.497	mg/L	89.3	75	125	2.18	20	

Reardon Steel LLC

ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16884-01	WG359719	Aluminum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Antimony (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Arsenic (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Beryllium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Cadmium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Chromium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Copper (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Iron (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Lead (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359698	Mercury (1312)	M7470A CVAA	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.
				RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Molybdenum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nickel (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Selenium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Thallium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360134	Uranium (1312)	M6020 ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Vanadium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360265	Chloride (1312 DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360168	Fluoride (1312 DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360072	Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium	HD	Analysis is outside the intended scope of the method,

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Reardon Steel LLC

ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			Reduction		which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360342	Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360357	Sulfate (1312 DI)	D516-02 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Reardon Steel LLC

ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16884-02	WG359719	Aluminum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Antimony (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Arsenic (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Beryllium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Cadmium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Chromium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Copper (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Iron (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Lead (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Manganese (1312)	M6010B 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.
	WG359698	Mercury (1312)	M7470A CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Molybdenum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nickel (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Selenium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Thallium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360134	Uranium (1312)	M6020 ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Vanadium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360265	Chloride (1312 DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360168	Fluoride (1312 DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360072	Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium	HD	Analysis is outside the intended scope of the method,

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ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			Reduction		which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360342	Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360357	Sulfate (1312 DI)	D516-02 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Reardon Steel LLC

ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16884-03	WG359719	Aluminum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Antimony (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Arsenic (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Beryllium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Cadmium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Chromium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Copper (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Iron (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Lead (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Manganese (1312)	M6010B 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.
	WG359698	Mercury (1312)	M7470A CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Molybdenum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nickel (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Selenium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Thallium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360134	Uranium (1312)	M6020 ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Vanadium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360265	Chloride (1312 DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360168	Fluoride (1312 DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360072	Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium	HD	Analysis is outside the intended scope of the method,

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ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			Reduction		which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360342	Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360357	Sulfate (1312 DI)	D516-02 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

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ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16884-04	WG359719	Aluminum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Antimony (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Arsenic (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Beryllium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Cadmium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Chromium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Copper (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Iron (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Lead (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Manganese (1312)	M6010B 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.
	WG359698	Mercury (1312)	M7470A CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Molybdenum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nickel (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Selenium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Thallium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360134	Uranium (1312)	M6020 ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Vanadium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360265	Chloride (1312 DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360168	Fluoride (1312 DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360072	Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium	HD	Analysis is outside the intended scope of the method,

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ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			Reduction		which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360342	Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360357	Sulfate (1312 DI)	D516-02 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

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ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16884-05	WG359719	Aluminum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Antimony (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Arsenic (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Beryllium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Cadmium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Chromium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Copper (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Iron (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Lead (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Manganese (1312)	M6010B 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.
	WG359698	Mercury (1312)	M7470A CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Molybdenum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nickel (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Selenium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Thallium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360134	Uranium (1312)	M6020 ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Vanadium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360265	Chloride (1312 DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360168	Fluoride (1312 DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360072	Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium	HD	Analysis is outside the intended scope of the method,

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			Reduction		which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360342	Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360357	Sulfate (1312 DI)	D516-02 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16884-06	WG359719	Aluminum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Antimony (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Arsenic (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Beryllium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Cadmium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Chromium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Copper (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Iron (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Lead (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359698	Mercury (1312)	M7470A CVAA	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.
				RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Molybdenum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nickel (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Selenium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Thallium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360134	Uranium (1312)	M6020 ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Vanadium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360265	Chloride (1312 DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360168	Fluoride (1312 DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360072	Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium	HD	Analysis is outside the intended scope of the method,

REPAD.15.06.05.01

Reardon Steel LLC

ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			Reduction		which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360342	Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360357	Sulfate (1312 DI)	D516-02 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #1

Locator:

ACZ Sample ID: **L16884-01**

Date Sampled: 02/09/14 0:00

Date Received: 02/18/14

Sample Matrix: Soil

Gross Alpha & Beta (1312)

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha (1312)	02/26/14 0:08		1.1	2.3	2.1	pCi/L	*	thf
Gross Beta (1312)	02/26/14 0:08		7.9	4.3	5.7	pCi/L		thf

Radium 226 (1312)

Prep Method:

M903.1

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 (1312)	03/04/14 0:07		0.25	0.37	0.62	pCi/L	*	jrd

Radium 228 (1312)

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228 (1312)	03/11/14 12:23		0.1	1.7	1.9	pCi/L		nco

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #2

Locator:

ACZ Sample ID: **L16884-02**

Date Sampled: 02/09/14 0:00

Date Received: 02/18/14

Sample Matrix: Soil

Gross Alpha & Beta (1312)

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha (1312)	02/26/14 0:10		1.2	2.2	2.2	pCi/L	*	thf
Gross Beta (1312)	02/26/14 0:10		0.09	4.3	5.6	pCi/L		thf

Radium 226 (1312)

Prep Method:

M903.1

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 (1312)	03/04/14 0:08		0.23	0.27	0.54	pCi/L	*	jrd

Radium 228 (1312)

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228 (1312)	03/11/14 12:23		-0.2	2.1	2.2	pCi/L		nco

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #3

Locator:

ACZ Sample ID: **L16884-03**

Date Sampled: 02/09/14 0:00

Date Received: 02/18/14

Sample Matrix: Soil

Gross Alpha & Beta (1312)

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha (1312)	02/26/14 0:11		-0.81	1.6	1.8	pCi/L	*	thf
Gross Beta (1312)	02/26/14 0:11		6.9	3.8	5.4	pCi/L		thf

Radium 226 (1312)

Prep Method:

M903.1

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 (1312)	03/04/14 0:10		0.96	0.38	0.4	pCi/L	*	jrd

Radium 228 (1312)

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228 (1312)	03/11/14 12:23		2.3	2.6	2.6	pCi/L		nco

Reardon Steel LLC

Project ID:

Sample ID: POND FILL #4

Locator:

ACZ Sample ID: **L16884-04**

Date Sampled: 02/09/14 0:00

Date Received: 02/18/14

Sample Matrix: Soil

Gross Alpha & Beta (1312)

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha (1312)	02/26/14 0:12		2.8	2.2	1.8	pCi/L	*	thf
Gross Beta (1312)	02/26/14 0:12		7.3	3.6	5	pCi/L		thf

Radium 226 (1312)

Prep Method:

M903.1

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 (1312)	03/04/14 0:11		0.36	0.42	0.68	pCi/L	*	jrd

Radium 228 (1312)

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228 (1312)	03/11/14 12:23		3.4	2.1	2	pCi/L		nco

Reardon Steel LLC

Project ID:

Sample ID: SHOP 1

Locator:

ACZ Sample ID: **L16884-05**

Date Sampled: 02/09/14 0:00

Date Received: 02/18/14

Sample Matrix: Soil

Gross Alpha & Beta (1312)

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha (1312)	02/26/14 0:14		0.73	1.7	1.8	pCi/L	*	thf
Gross Beta (1312)	02/26/14 0:14		2.1	3.4	4.9	pCi/L		thf

Radium 226 (1312)

Prep Method:

M903.1

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 (1312)	03/04/14 0:12		0.11	0.21	0.41	pCi/L	*	jrd

Radium 228 (1312)

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228 (1312)	03/11/14 14:07		-0.15	2.7	2.9	pCi/L		nco

Reardon Steel LLC

Project ID:

Sample ID: SHOP 2

Locator:

ACZ Sample ID: **L16884-06**

Date Sampled: 02/09/14 0:00

Date Received: 02/18/14

Sample Matrix: Soil

Gross Alpha & Beta (1312)

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha (1312)	02/26/14 0:15		3.1	2.6	2	pCi/L	*	thf
Gross Beta (1312)	02/26/14 0:15		4.4	4.5	5.5	pCi/L		thf

Radium 226 (1312)

Prep Method:

M903.1

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 (1312)	03/04/14 0:14		0.2	0.23	0.52	pCi/L	*	jrd

Radium 228 (1312)

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228 (1312)	03/11/14 14:07		1.8	1.7	1.7	pCi/L		nco

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Error(+/-)</i>	Calculated sample specific uncertainty
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>LCL</i>	Lower Control Limit, in % (except for LCSS, mg/Kg)
<i>LLD</i>	Calculated sample specific Lower Limit of Detection
<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
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RER</i>	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>UCL</i>	Upper Control Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>DUP</i>	Sample Duplicate	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBS</i>	Prep Blank - Soil
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
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Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater.
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

- (1) Solid matrices are reported on a dry weight basis.
- (2) Preparation method: "Method" indicates preparation defined in analytical method.
- (3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click:

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

Reardon Steel LLC

ACZ Project ID: **L16884**

Alpha		M9310										Units: pCi/L				
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG360086																
WG359561PBW	PBW	02/26/14						-1.3	1.4	1.8			3.6			
WG359561LCSW	LCSW	02/26/14	RC130807-3	81.06				82	8.7	1.8	101.2	83	133			
L16859-01DUP	DUP-RER	02/26/14			2.8	3	2.6	.34	2.3	2.7				0.65	2	
L16859-02DUP	DUP-RER	02/26/14			0.96	2.4	2.4	.11	1.7	2				0.29	2	
L16859-03MS	MS	02/26/14	RC130807-3	81.06	-2	2.4	3.1	60	9.4	2.7	76.5	83	133			M2
Beta		M9310										Units: pCi/L				
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG360086																
WG359561PBW	PBW	02/26/14						.36	3.3	5.4			10.8			
WG359561LCSW	LCSW	02/26/14	PCN44617	100				110	7.7	4.8	110	70	129			
L16859-01DUP	DUP-RER	02/26/14			12	5.1	5.7	2.7	4.6	5.8				1.35	2	
L16859-02DUP	DUP-RER	02/26/14			7	4.4	5.7	.83	3.7	5.2				1.07	2	
L16884-01MS	MS	02/26/14	PCN44617	100	7.9	4.3	5.7	120	8.3	5.4	112.1	70	129			
Radium 226 (1312)		M903.1										Units: pCi/L				
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG360181																
WG359561PBW	PBW	03/04/14						.46	0.42	0.86			1.72			
WG359561LCSW	LCSW	03/04/14	PCN44713	66.67				77	2	0.38	115.5	43	148			
L16859-01DUP	DUP-RER	03/04/14			0.36	0.17	0.3	.26	0.36	0.71				0.25	2	
L16859-03DUP	DUP-RER	03/04/14			-0.33	0.27	0.44	.27	0.29	0.51				1.51	2	
L16859-02MS	MS	03/04/14	PCN44713	66.67	0.21	0.35	0.57	110	3.1	0.87	164.7	43	148			M1

Reardon Steel LLC

ACZ Project ID: **L16884**

Radium 228 (1312)

M9320

Units: pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG360519																
WG359561LCSW	LCSW	03/11/14	PCN44304	63.92				34	3.2	1.7	53.2	47	123			
WG359561PBW	PBW	03/11/14						.67	2.5	2.6			5.2			
L16859-01DUP	DUP-RER	03/11/14			1.9	2.9	3	-.28	2.1	2.3				0.61	2	
L16859-02MS	MS	03/11/14	PCN44304	63.92	-0.47	1.4	1.5	41	4.2	2.3	64.9	47	123			
L16884-01DUP	DUP-RER	03/11/14			0.1	1.7	1.9	1.2	2.5	2.6				0.36	2	

Reardon Steel LLC

ACZ Project ID: **L16884**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16884-01	WG360086	Gross Alpha (1312)	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG360181	Radium 226 (1312)	M903.1	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L16884-02	WG360086	Gross Alpha (1312)	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG360181	Radium 226 (1312)	M903.1	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L16884-03	WG360086	Gross Alpha (1312)	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG360181	Radium 226 (1312)	M903.1	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L16884-04	WG360086	Gross Alpha (1312)	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG360181	Radium 226 (1312)	M903.1	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L16884-05	WG360086	Gross Alpha (1312)	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG360181	Radium 226 (1312)	M903.1	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L16884-06	WG360086	Gross Alpha (1312)	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG360181	Radium 226 (1312)	M903.1	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

Reardon Steel LLC

ACZ Project ID: **L16884**

Radiochemistry

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

Radium 226 (1312)	M903.1
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Soil Analysis

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

Neutralization Potential as CaCO ₃	M600/2-78-054 3.2.3
pH, Saturated Paste	EPA 600/2-78-054, section 3.2.2
Sulfur Organic Residual	M600/2-78-054 3.2.4
Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4
Sulfur Sulfate	M600/2-78-054 3.2.4
Sulfur Total	M600/2-78-054 3.2.4
Total Sulfur minus Sulfate	M600/2-78-054 3.2.4

Wet Chemistry

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

Chloride (1312 DI)	SM4500CI-E
Conductivity @25C (1312-DI)	SM2510B
Fluoride (1312 DI)	SM4500F-C
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate
Sulfate (1312 DI)	D516-02 - Turbidimetric

Reardon Steel LLC

ACZ Project ID: L16884

Date Received: 02/18/2014 10:04

Received By: mtb

Date Printed: 2/18/2014

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A change was made in the Date:Time Line 1 section prior to ACZ custody.			

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA19180	5.6	9	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.

Mike Thompson
Reardon Steel LLC
4 River Street
Silverton, CO 81433Page 1 of 3
2/10/2014**Quote Number: ABA-SPLP-PASTE****Matrix:** Soil

Mine Waste Samples for SPLP & ABA & Sat.Paste Analysis

Parameter	Method	Detection Limit	Cost/Sample
Inorganic Prep			
Total Hot Plate Digestion	M3010A ICP-MS		\$0.00
Total Hot Plate Digestion	M3010A ICP		\$0.00
Metals Analysis			
Aluminum (1312)	M6010B ICP	0.03 mg/L	\$0.00
Antimony (1312)	M6010B ICP	0.03 mg/L	\$0.00
Arsenic (1312)	M6010B ICP	0.04 mg/L	\$0.00
Barium (1312)	M6010B ICP	0.003 mg/L	\$0.00
Beryllium (1312)	M6010B ICP	0.01 mg/L	\$0.00
Cadmium (1312)	M6010B ICP	0.005 mg/L	\$0.00
Chromium (1312)	M6010B ICP	0.01 mg/L	\$0.00
Copper (1312)	M6010B ICP	0.01 mg/L	\$0.00
Iron (1312)	M6010B ICP	0.02 mg/L	\$0.00
Lead (1312)	M6010B ICP	0.03 mg/L	\$0.00
Manganese (1312)	M6010B ICP	0.005 mg/L	\$0.00
Mercury (1312)	M7470A CVA	0.0002 mg/L	\$23.40
Molybdenum (1312)	M6010B ICP	0.02 mg/L	\$0.00
Nickel (1312)	M6010B ICP	0.008 mg/L	\$0.00
Selenium (1312)	M6010B ICP	0.05 mg/L	\$0.00
Silver (1312)	M6010B ICP	0.01 mg/L	\$0.00
Thallium (1312)	M6010B ICP	0.1 mg/L	\$0.00
Uranium (1312)	M6020 ICP-MS	0.0001 mg/L	\$17.10
Vanadium (1312)	M6010B ICP	0.005 mg/L	\$0.00
Zinc (1312)	M6010B ICP	0.01 mg/L	\$0.00
Misc.			
Electronic Data Deliverable			\$0.00
Quality Control Summary			\$0.00
Setup charge for ICP (1312)			\$75.00
Setup Charge for ICPMS			\$20.00
Radiochemistry			
Gross Alpha & Beta (1312)	M9310	2 to 4 pCi/L	\$46.80
Radium 226 (1312)	M903.1	0.4 pCi/L	\$82.80
Radium 228 (1312)	M9320	1.5 pCi/L	\$90.00

Mike Thompson
Reardon Steel LLC
4 River Street
Silverton, CO 81433Page 2 of 3
2/10/2014**Sample Preparation**

Air Dry at 34 Degrees C	USDA No. 1, 1972	\$7.20
Crush and Pulverize	EPA-600/2-78-054 3.1.3	\$10.80
Saturated Paste Extraction	USDA No. 60 (2)	\$16.20
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2	\$10.80
Synthetic Precip. Leaching Procedure	M1312, DI Water	\$67.50
Synthetic Precip. Leaching Procedure	M1312-RC	\$67.50
Synthetic Precip. Leaching Procedure	M1312	\$67.50

Soil Analysis

Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4	Calculation	\$0.00
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	Calculation	\$0.00
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	Calculation	\$0.00
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.1 %	\$14.40
pH, Saturated Paste	EPA 600/2-78-054, section 3.2.2	0.1 units	\$7.20
Sample Weight	Rad Disposal Compliance	g	\$6.30
Sulfur Forms	M600/2-78-054 3.2.4	0.01 %	\$58.00

Wet Chemistry

Chloride (1312 DI)	SM4500CI-E	1 mg/L	\$9.90
Conductivity @25C (1312-DI)	SM2510B	1 umhos/cm	\$7.20
Fluoride (1312 DI)	SM4500F-C	0.1 mg/L	\$9.90
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Redu	0.02 mg/L	\$9.90
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	0.05 mg/L	\$9.90
Sulfate (1312 DI)	SM4500 SO4-D	10 mg/L	\$11.70

Cost/Sample: \$747.00

This quote is based on a Standard Turn Around Time of approximately 28 days for radiochemistry analysis of solid matrices. All projects received are subject to a \$125.00 Minimum Charge. Soil preparation charges may fluctuate dependant on the condition of samples upon receipt. Please note that method detection limits are estimates and may be elevated depending on sample matrix.

Mike Thompson
Reardon Steel LLC
4 River Street
Silverton, CO 81433

Page 3 of 3
2/10/2014

Quote Number: ABA-SPLP-PASTE**CONTRACT DETAILS**


Pricing includes shipment of all standard sample containers and related paperwork by UPS Ground Service. Please allow three to five days for delivery when ordering containers. ACZ must be notified prior to receiving samples of all special requests such as electronic data deliverables or special reporting requirements. The client will be charged for special sample containers or express shipping and additional charges may apply for non-standard requests.

This quotation is valid for six months from the bid date unless specified otherwise in the bid. All bids must be signed and returned to ACZ before the project(s) is received. The authorized signature represents acceptance of the pricing as well as the general terms and conditions of ACZ Laboratories, Inc. which may be downloaded from our web site at <http://www.acz.com/PDF/termsconditions.pdf>. Please note that MDL's in this quote may possibly increase due to sample matrix or samples with high TDS.

All orders that require shipping of coolers are subject to a minimum charge of \$200.00. Local orders without shipping are subject to a minimum charge of \$125.00. Samples may incur a \$11.00/sample disposal fee for any samples deemed to be hazardous.

ACZ Representative (Authorized signature and date)

Client Representative (Authorized signature and date)

 02/13/14

March 12, 2014

Report to:

Mike Thompson
Reardon Steel LLC
4 River Street
Silverton, CO 81433

Bill to:

Mike Thompson
Reardon Steel LLC
4 River Street
Silverton, CO 81433

cc: Karmen King

Project ID:

ACZ Project ID: L16885

Mike Thompson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on February 18, 2014. This project has been assigned to ACZ's project number, L16885. 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 L16885. 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 April 11, 2014. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

If you have any questions or other needs, please contact your Project Manager.



Sue Webber has reviewed and
approved this report.



Reardon Steel LLC

Project ID:

Sample ID: PDH-025

ACZ Sample ID: **L16885-01**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP-MS								02/25/14 13:35	las
Total Hot Plate Digestion	M3010A ICP								02/21/14 13:21	jjc

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:51	jjc
Antimony (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:51	jjc
Arsenic (1312)	M6010B ICP	1		U	*	mg/L	0.04	0.2	02/24/14 16:51	jjc
Barium (1312)	M6010B ICP	1	0.065			mg/L	0.003	0.02	02/24/14 16:51	jjc
Beryllium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:51	jjc
Cadmium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.02	02/24/14 16:51	jjc
Chromium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:51	jjc
Copper (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:51	jjc
Iron (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.05	02/24/14 16:51	jjc
Lead (1312)	M6010B ICP	1	0.05	B	*	mg/L	0.03	0.2	02/24/14 16:51	jjc
Manganese (1312)	M6010B ICP	1	0.707		*	mg/L	0.005	0.03	02/24/14 16:51	jjc
Mercury (1312)	M7470A CVAA	1		U	*	mg/L	0.0002	0.001	02/24/14 13:20	mfm
Molybdenum (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.1	02/24/14 16:51	jjc
Nickel (1312)	M6010B ICP	1		U	*	mg/L	0.008	0.04	02/24/14 16:51	jjc
Selenium (1312)	M6010B ICP	1		U	*	mg/L	0.05	0.3	02/24/14 16:51	jjc
Silver (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.03	02/24/14 16:51	jjc
Thallium (1312)	M6010B ICP	1		U	*	mg/L	0.1	0.5	02/24/14 16:51	jjc
Uranium (1312)	M6020 ICP-MS	1		U	*	mg/L	0.0001	0.0005	03/03/14 23:10	pmc
Vanadium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:51	jjc
Zinc (1312)	M6010B ICP	1	0.08			mg/L	0.01	0.05	02/24/14 16:51	jjc

Reardon Steel LLC

Project ID:

Sample ID: PDH-025

ACZ Sample ID: **L16885-01**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

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		56			t CaCO3/Kt	1	5	03/12/14 13:21	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		124			t CaCO3/Kt	1	5	03/12/14 13:21	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		68			t CaCO3/Kt	1	5	03/12/14 13:21	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 3.2.3	1	12.4		*	%	0.1	0.5	03/06/14 11:50	cdb
Max Particle Size	EPA 600/2-78-054, section 3.2.2	1	2000		*	um			03/06/14 0:00	spl
pH		1	7.6		*	units	0.1	0.1	03/06/14 0:00	spl
Sulfur Forms	M600/2-78-054 3.2.4									
Sulfur Organic Residual		1	0.48		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Pyritic Sulfide		1	1.16		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Sulfate		1	0.14		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Total		1	1.78		*	%	0.01	0.1	03/07/14 0:00	cra
Total Sulfur minus Sulfate		1	1.64		*	%	0.01	0.1	03/07/14 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								02/21/14 13:04	spl
Crush and Pulverize	EPA-600/2-78-054 3.1.3								03/04/14 14:46	cdb
Saturated Paste Extraction	USDA No. 60 (2)								03/06/14 10:25	spl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								03/04/14 14:46	cdb
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2								03/04/14 14:46	cdb
Synthetic Precip. Leaching Procedure	M1312-RC								02/20/14 15:32	cdb
Synthetic Precip. Leaching Procedure	M1312								02/20/14 15:51	cdb
Synthetic Precip. Leaching Procedure	M1312, DI Water								02/28/14 10:45	spl

Reardon Steel LLC

Project ID:

Sample ID: PDH-025

ACZ Sample ID: **L16885-01**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chloride (1312 DI)	SM4500Cl-E	1	6		*	mg/L	1	5	03/05/14 20:33	mpb
Conductivity @25C (1312-DI)	SM2510B	1	276		*	umhos/cm	1	10	03/04/14 13:29	abd
Fluoride (1312 DI)	SM4500F-C	1	0.7		*	mg/L	0.1	0.5	03/04/14 12:34	abd
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.02	0.1	02/28/14 23:31	pjb
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	03/07/14 11:36	bsu
Sulfate (1312 DI)	D516-02 - Turbidimetric	5	85.8		*	mg/L	5	25	03/07/14 13:37	mpb

Reardon Steel LLC

Project ID:

Sample ID: PDH-038

ACZ Sample ID: **L16885-02**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP-MS								02/25/14 13:50	las
Total Hot Plate Digestion	M3010A ICP								02/21/14 13:39	jjc

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:54	jjc
Antimony (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:54	jjc
Arsenic (1312)	M6010B ICP	1		U	*	mg/L	0.04	0.2	02/24/14 16:54	jjc
Barium (1312)	M6010B ICP	1	0.042			mg/L	0.003	0.02	02/24/14 16:54	jjc
Beryllium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:54	jjc
Cadmium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.02	02/24/14 16:54	jjc
Chromium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:54	jjc
Copper (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:54	jjc
Iron (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.05	02/24/14 16:54	jjc
Lead (1312)	M6010B ICP	1	0.08	B	*	mg/L	0.03	0.2	02/24/14 16:54	jjc
Manganese (1312)	M6010B ICP	1	2.260		*	mg/L	0.005	0.03	02/24/14 16:54	jjc
Mercury (1312)	M7470A CVAA	1		U	*	mg/L	0.0002	0.001	02/24/14 13:22	mfm
Molybdenum (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.1	02/24/14 16:54	jjc
Nickel (1312)	M6010B ICP	1		U	*	mg/L	0.008	0.04	02/24/14 16:54	jjc
Selenium (1312)	M6010B ICP	1		U	*	mg/L	0.05	0.3	02/24/14 16:54	jjc
Silver (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.03	02/24/14 16:54	jjc
Thallium (1312)	M6010B ICP	1		U	*	mg/L	0.1	0.5	02/24/14 16:54	jjc
Uranium (1312)	M6020 ICP-MS	1		U	*	mg/L	0.0001	0.0005	03/03/14 23:12	pmc
Vanadium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:54	jjc
Zinc (1312)	M6010B ICP	1	0.32			mg/L	0.01	0.05	02/24/14 16:54	jjc

Reardon Steel LLC

Project ID:

Sample ID: PDH-038

ACZ Sample ID: **L16885-02**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

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		71			t CaCO3/Kt	1	5	03/12/14 13:21	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		125			t CaCO3/Kt	1	5	03/12/14 13:21	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		54			t CaCO3/Kt	1	5	03/12/14 13:21	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 3.2.3	1	12.5		*	%	0.1	0.5	03/06/14 12:00	cdb
Max Particle Size	EPA 600/2-78-054, section 3.2.2	1	2000		*	um			03/06/14 0:00	spl
pH		1	7.6		*	units	0.1	0.1	03/06/14 0:00	spl
Sulfur Forms	M600/2-78-054 3.2.4									
Sulfur Organic Residual		1	0.17		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Pyritic Sulfide		1	1.46		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Sulfate		1	0.64		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Total		1	2.27		*	%	0.01	0.1	03/07/14 0:00	cra
Total Sulfur minus Sulfate		1	1.63		*	%	0.01	0.1	03/07/14 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								02/21/14 13:13	spl
Crush and Pulverize	EPA-600/2-78-054 3.1.3								03/04/14 14:53	cdb
Saturated Paste Extraction	USDA No. 60 (2)								03/06/14 10:27	spl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								03/04/14 14:53	cdb
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2								03/04/14 14:53	cdb
Synthetic Precip. Leaching Procedure	M1312								02/20/14 16:54	cdb
Synthetic Precip. Leaching Procedure	M1312-RC								02/20/14 16:41	cdb
Synthetic Precip. Leaching Procedure	M1312, DI Water								02/28/14 12:00	spl

Reardon Steel LLC

Project ID:

Sample ID: PDH-038

ACZ Sample ID: **L16885-02**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chloride (1312 DI)	SM4500Cl-E	1	9		*	mg/L	1	5	03/05/14 20:33	mpb
Conductivity @25C (1312-DI)	SM2510B	1	605		*	umhos/cm	1	10	03/04/14 13:31	abd
Fluoride (1312 DI)	SM4500F-C	1	0.8		*	mg/L	0.1	0.5	03/04/14 12:38	abd
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	1	0.03	B	*	mg/L	0.02	0.1	02/28/14 23:32	pjb
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	03/07/14 11:37	bsu
Sulfate (1312 DI)	D516-02 - Turbidimetric	20	236		*	mg/L	20	100	03/07/14 13:47	mpb

Reardon Steel LLC

Project ID:

Sample ID: PDH-049

ACZ Sample ID: **L16885-03**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Inorganic Prep

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Total Hot Plate Digestion	M3010A ICP-MS								02/25/14 14:05	las
Total Hot Plate Digestion	M3010A ICP								02/21/14 13:57	jjc

Metals Analysis

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Aluminum (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:57	jjc
Antimony (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:57	jjc
Arsenic (1312)	M6010B ICP	1		U	*	mg/L	0.04	0.2	02/24/14 16:57	jjc
Barium (1312)	M6010B ICP	1	0.039			mg/L	0.003	0.02	02/24/14 16:57	jjc
Beryllium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:57	jjc
Cadmium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.02	02/24/14 16:57	jjc
Chromium (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:57	jjc
Copper (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.05	02/24/14 16:57	jjc
Iron (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.05	02/24/14 16:57	jjc
Lead (1312)	M6010B ICP	1		U	*	mg/L	0.03	0.2	02/24/14 16:57	jjc
Manganese (1312)	M6010B ICP	1	0.960		*	mg/L	0.005	0.03	02/24/14 16:57	jjc
Mercury (1312)	M7470A CVAA	1		U	*	mg/L	0.0002	0.001	02/24/14 13:25	mfm
Molybdenum (1312)	M6010B ICP	1		U	*	mg/L	0.02	0.1	02/24/14 16:57	jjc
Nickel (1312)	M6010B ICP	1		U	*	mg/L	0.008	0.04	02/24/14 16:57	jjc
Selenium (1312)	M6010B ICP	1		U	*	mg/L	0.05	0.3	02/24/14 16:57	jjc
Silver (1312)	M6010B ICP	1		U	*	mg/L	0.01	0.03	02/24/14 16:57	jjc
Thallium (1312)	M6010B ICP	1		U	*	mg/L	0.1	0.5	02/24/14 16:57	jjc
Uranium (1312)	M6020 ICP-MS	1		U	*	mg/L	0.0001	0.0005	03/03/14 23:14	pmc
Vanadium (1312)	M6010B ICP	1		U	*	mg/L	0.005	0.03	02/24/14 16:57	jjc
Zinc (1312)	M6010B ICP	1	0.07			mg/L	0.01	0.05	02/24/14 16:57	jjc

Reardon Steel LLC

Project ID:

Sample ID: PDH-049

ACZ Sample ID: **L16885-03**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

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		90			t CaCO3/Kt	1	5	03/12/14 13:22	calc
Acid Neutralization Potential (calc)	M600/2-78-054 1.3		113			t CaCO3/Kt	1	5	03/12/14 13:22	calc
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3		23			t CaCO3/Kt	1	5	03/12/14 13:22	calc
Neutralization Potential as CaCO3 pH, Saturated Paste	M600/2-78-054 3.2.3	1	11.3		*	%	0.1	0.5	03/06/14 12:10	cdb
Max Particle Size	EPA 600/2-78-054, section 3.2.2	1	2000		*	um			03/06/14 0:00	spl
pH		1	7.7		*	units	0.1	0.1	03/06/14 0:00	spl
Sulfur Forms	M600/2-78-054 3.2.4									
Sulfur Organic Residual		1	0.58		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Pyritic Sulfide		1	1.84		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Sulfate		1	0.47		*	%	0.01	0.1	03/07/14 0:00	cra
Sulfur Total		1	2.89		*	%	0.01	0.1	03/07/14 0:00	cra
Total Sulfur minus Sulfate		1	2.42		*	%	0.01	0.1	03/07/14 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								02/21/14 13:23	spl
Crush and Pulverize	EPA-600/2-78-054 3.1.3								03/04/14 14:59	cdb
Saturated Paste Extraction	USDA No. 60 (2)								03/06/14 10:30	spl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2								03/04/14 14:59	cdb
Sieve-250 um (60 mesh)	ASA No.9, 15-4.2.2								03/04/14 14:59	cdb
Synthetic Precip. Leaching Procedure	M1312-RC								02/20/14 17:50	cdb
Synthetic Precip. Leaching Procedure	M1312, DI Water								02/28/14 13:15	spl
Synthetic Precip. Leaching Procedure	M1312								02/20/14 17:57	cdb

Reardon Steel LLC

Project ID:

Sample ID: PDH-049

ACZ Sample ID: **L16885-03**

Date Sampled: 02/09/14 00:00

Date Received: 02/18/14

Sample Matrix: Soil

Wet Chemistry

Parameter	EPA Method	Dilution	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Chloride (1312 DI)	SM4500Cl-E	1	8		*	mg/L	1	5	03/05/14 20:33	mpb
Conductivity @25C (1312-DI)	SM2510B	1	448		*	umhos/cm	1	10	03/04/14 13:32	abd
Fluoride (1312 DI)	SM4500F-C	1	0.8		*	mg/L	0.1	0.5	03/04/14 12:46	abd
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction	1		U	*	mg/L	0.02	0.1	02/28/14 23:53	pjb
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	1		U	*	mg/L	0.05	0.5	03/07/14 11:38	bsu
Sulfate (1312 DI)	D516-02 - Turbidimetric	5	170		*	mg/L	5	25	03/07/14 13:37	mpb


Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click:

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

Reardon Steel LLC

ACZ Project ID: **L16885**

Aluminum (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.944	mg/L	97.2	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.09	0.09			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.09	0.09			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	1.0011		1.012	mg/L	101.1	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	1.0011	U	1.028	mg/L	102.7	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	1.0011	U	1.014	mg/L	101.3	75	125	1.37	20	

Antimony (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	4		3.946	mg/L	98.7	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.09	0.09			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.09	0.09			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.2002		.178	mg/L	88.9	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.2002	U	.197	mg/L	98.4	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.2002	U	.176	mg/L	87.9	75	125	11.26	20	

Arsenic (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	4		4.003	mg/L	100.1	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.12	0.12			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.12	0.12			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	1		1.037	mg/L	103.7	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	1	U	1.058	mg/L	105.8	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	1	U	1.038	mg/L	103.8	75	125	1.91	20	

Barium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.952	mg/L	97.6	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.009	0.009			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.009	0.009			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.4962	mg/L	99.2	85	115			
L16859-01DUP	DUP	02/24/14 16:08			.03	.0311	mg/L				3.6	20	
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	.027	.5249	mg/L	99.6	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	.027	.5178	mg/L	98.2	75	125	1.36	20	

Reardon Steel LLC

ACZ Project ID: **L16885**

Beryllium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.924	mg/L	96.2	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.03	0.03			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.03	0.03			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.504	mg/L	100.8	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	U	.501	mg/L	100.2	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	U	.497	mg/L	99.4	75	125	0.8	20	

Cadmium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.887	mg/L	94.4	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.015	0.015			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.015	0.015			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.4936	mg/L	98.7	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	.015	.5036	mg/L	97.9	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	.015	.4974	mg/L	96.7	75	125	1.24	20	

Chloride (1312 DI)

SM4500Cl-E

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360265													
WG360265ICB	ICB	03/05/14 20:13				U	mg/L		-3	3			
WG360265ICV	ICV	03/05/14 20:13	WI130722-5	54.945		53.4	mg/L	97.2	90	110			
WG360265LFB	LFB	03/05/14 20:32	WI131010-1	30		30.9	mg/L	103	90	110			
WG359992PBS	PBS	03/05/14 20:32				U	mg/L		-3	3			
L16859-01DUP	DUP	03/05/14 20:32			9	10.2	mg/L				12.5	20	RA
L16884-05AS	AS	03/05/14 20:33	WI131010-1	30	1	32.2	mg/L	104	90	110			

Chromium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.91	mg/L	95.5	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.03	0.03			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.03	0.03			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.501		.497	mg/L	99.2	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.501	U	.491	mg/L	98	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.501	U	.484	mg/L	96.6	75	125	1.44	20	

Conductivity @25C (1312-DI)

SM2510B

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360167													
WG360167LCSW1	LCSW	03/04/14 13:12	PCN43577	1408.8		1441	µmhos/crr	102.3	90	110			
WG359992PBS	PBS	03/04/14 13:13				10.4	µmhos/crr		-4	4			
L16859-01DUP	DUP	03/04/14 13:16			520	535	µmhos/crr				2.8	20	
WG360167LCSW2	LCSW	03/04/14 13:34	PCN43577	1408.8		1420	µmhos/crr	100.8	90	110			

Reardon Steel LLC

ACZ Project ID: **L16885**

Copper (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.942	mg/L	97.1	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.03	0.03			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.03	0.03			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.499	mg/L	99.8	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	U	.513	mg/L	102.6	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	U	.508	mg/L	101.6	75	125	0.98	20	

Fluoride (1312 DI)

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360168													
WG360168ICV	ICV	03/04/14 11:16	WC140227-	2		1.91	mg/L	95.5	95	105			
WG360168ICB	ICB	03/04/14 11:20				.12	mg/L		-0.3	0.3			
WG360168LFB	LFB	03/04/14 11:28	WC140220-	5.015		4.59	mg/L	91.5	90	110			
WG359992PBS	PBS	03/04/14 11:33				.19	mg/L		-0.3	0.3			
L16859-01DUP	DUP	03/04/14 11:40			.9	.94	mg/L				4.3	20	RA
L16859-02AS	AS	03/04/14 11:52	WC140220-	5.015	1	6.37	mg/L	107.1	90	110			
L16885-02AS	AS	03/04/14 12:42	WC140220-	5.015	.8	5.32	mg/L	90.1	90	110			

Iron (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.962	mg/L	98.1	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.06	0.06			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.06	0.06			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	1.0014		1.016	mg/L	101.5	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	.042	mg/L				200	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	1.0014	U	1.014	mg/L	101.3	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	1.0014	U	1.001	mg/L	100	75	125	1.29	20	

Lead (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	4		3.827	mg/L	95.7	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.09	0.09			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.09	0.09			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	1.001		1.025	mg/L	102.4	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	1.001	.11	1.109	mg/L	99.8	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	1.001	.11	1.085	mg/L	97.4	75	125	2.19	20	

Reardon Steel LLC

ACZ Project ID: **L16885**

Manganese (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.931	mg/L	96.6	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.015	0.015			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.015	0.015			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.501		.5038	mg/L	100.6	85	115			
L16859-01DUP	DUP	02/24/14 16:08			2.01	1.737	mg/L				14.6	20	
L16859-03MS	MS	02/24/14 16:20	II140218-5	.501	4.43	4.918	mg/L	97.4	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.501	4.43	4.785	mg/L	70.9	75	125	2.74	20	M3

Mercury (1312)

M7470A CVAA

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359693													
WG359693ICV	ICV	02/24/14 11:13	II140214-1	.005005		.00491	mg/L	98.1	95	105			
WG359693ICB	ICB	02/24/14 11:16				U	mg/L		-0.0002	0.0002			
WG359698													
WG359563PBS	PBS	02/24/14 12:46				U	mg/Kg		-0.0006	0.0006			
WG359563LFB1	LFB	02/24/14 12:48	II140203-2	.002002		.0019	mg/L	94.9	85	115			
L16859-01DUP	DUP	02/24/14 12:53			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 12:59	II140203-2	.002002	U	.00191	mg/L	95.4	85	115			
L16859-03MSD	MSD	02/24/14 13:01	II140203-2	.002002	U	.00188	mg/L	93.9	85	115	1.58	20	

Molybdenum (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.944	mg/L	97.2	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.06	0.06			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.06	0.06			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.496	mg/L	99.2	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	U	.499	mg/L	99.8	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	U	.494	mg/L	98.8	75	125	1.01	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
WG360249													
WG360249PBS	PBS	03/06/14 9:40				U	%		-0.1	0.1			
WG360249LCSS	LCSS	03/06/14 9:50	PCN33453	100		107.5	%	107.5	80	120			
L16859-01DUP	DUP	03/06/14 10:10			9.4	9.25	%				1.6	20	

Reardon Steel LLC

ACZ Project ID: **L16885**

Nickel (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.979	mg/L	99	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.024	0.024			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.024	0.024			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.51	mg/L	102	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	U	.5005	mg/L	100.1	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	U	.4959	mg/L	99.2	75	125	0.92	20	

Nitrate/Nitrite as N (1312-DI)

M353.2 - Automated Cadmium Reduction

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360067													
WG360067ICV	ICV	02/28/14 21:46	WI140116-3	2.416		2.321	mg/L	96.1	90	110			
WG360067ICB	ICB	02/28/14 21:47				U	mg/L		-0.06	0.06			
WG360072													
WG360072LFB	LFB	02/28/14 23:13	WI140215-3	2		1.984	mg/L	99.2	90	110			
WG359992PBS	PBS	02/28/14 23:14				U	mg/L		-0.06	0.06			
L16859-01DUP	DUP	02/28/14 23:17			U	U	mg/L				0	20	RA
L16859-02AS	AS	02/28/14 23:19	WI140215-3	2	U	2.003	mg/L	100.2	90	110			

Nitrogen, ammonia (1312-DI)

M350.1 - Automated Phenate

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360342													
WG360342ICV	ICV	03/07/14 11:15	WI131021-1	1.003		1.028	mg/L	102.5	90	110			
WG360342ICB	ICB	03/07/14 11:18				U	mg/L		-0.15	0.15			
WG360342LFB	LFB	03/07/14 11:19	WI140113-8	1		1.028	mg/L	102.8	90	110			
WG359992PBS	PBS	03/07/14 11:20				U	mg/L		-0.15	0.15			
L16859-01DUP	DUP	03/07/14 11:23			U	U	mg/L				0	20	RA
L16859-02AS	AS	03/07/14 11:25	WI140113-8	1	U	1	mg/L	100	90	110			

pH, Saturated Paste

EPA 600/2-78-054, section 3.2.2

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360293													
WG360293ICV	ICV	03/06/14 11:09	PCN42578	4		4	units	100	3.9	4.1			
L16859-01DUP	DUP	03/06/14 11:35			7.1	7.27	units				2.4	20	

Selenium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	4		4.056	mg/L	101.4	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.15	0.15			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.15	0.15			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	1.001		1.021	mg/L	102	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	1.001	U	1.019	mg/L	101.8	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	1.001	U	1.023	mg/L	102.2	75	125	0.39	20	

Reardon Steel LLC

ACZ Project ID: **L16885**

Silver (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	1.001		1.002	mg/L	100.1	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.03	0.03			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.03	0.03			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5005		.503	mg/L	100.5	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5005	U	.504	mg/L	100.7	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5005	U	.493	mg/L	98.5	75	125	2.21	20	

Sulfate (1312 DI)

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360357													
WG360357ICB	ICB	03/07/14 12:34				U	mg/L		-3	3			
WG360357ICV	ICV	03/07/14 12:34	WI140228-2	20		19	mg/L	95	90	110			
WG360357LFB	LFB	03/07/14 13:28	WI131010-2	9.99		9.2	mg/L	92.1	90	110			
WG359992PBS	PBS	03/07/14 13:28				U	mg/L		-3	3			
L16884-05AS	AS	03/07/14 13:30	WI131010-2	9.99	13.7	24.3	mg/L	106.1	90	110			
L16859-01DUP	DUP	03/07/14 13:47			195	201	mg/L				3	20	RA

Sulfur Organic Residual

M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360227													
L16859-01DUP	DUP	03/05/14 22:12			.77	.71	%				8.1	20	

Sulfur Pyritic Sulfide

M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360227													
L16859-01DUP	DUP	03/05/14 22:12			2.05	2.07	%				1	20	

Sulfur Sulfate

M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360227													
L16859-01DUP	DUP	03/05/14 22:12			.5	.58	%				14.8	20	

Sulfur Total

M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360227													
WG360227PBS	PBS	03/05/14 11:30				U	%		-0.03	0.03			
WG360227LCSS	LCSS	03/05/14 15:04	PCN44488	4.07		4.65	%	114.3					
L16859-01DUP	DUP	03/05/14 22:12			3.32	3.36	%				1.2	20	

Reardon Steel LLC

ACZ Project ID: **L16885**

Thallium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	4		3.89	mg/L	97.3	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.3	0.3			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.3	0.3			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	2		1.96	mg/L	98	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	2	U	1.93	mg/L	96.5	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	2	U	1.9	mg/L	95	75	125	1.57	20	

Total Sulfur Minus Sulfate

M600/2-78-054 3.2.4

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360227													
L16859-01DUP	DUP	03/05/14 22:12			2.82	2.78	%				1.4	20	

Uranium (1312)

M6020 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG360134													
WG360134ICV	ICV	03/03/14 22:32	MS140218-2	.05		.05071	mg/L	101.4	90	110			
WG360134ICB	ICB	03/03/14 22:34				U	mg/L		-0.0003	0.0003			
WG359563PBS	PBS	03/03/14 22:42				U	mg/L		-0.0003	0.0003			
WG359563LFB2	LFB	03/03/14 22:43	MS140128-2	.05		.04992	mg/L	99.8	80	120			
L16859-01DUP	DUP	03/03/14 22:47			.0002	U	mg/L				200	20	RA
L16859-02MS	MS	03/03/14 22:51	MS140128-2	.05	U	.05238	mg/L	104.8	75	125			
L16859-02MSD	MSD	03/03/14 22:52	MS140128-2	.05	U	.05316	mg/L	106.3	75	125	1.48	20	

Vanadium (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.95	mg/L	97.5	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.015	0.015			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.015	0.015			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5		.5048	mg/L	101	85	115			
L16859-01DUP	DUP	02/24/14 16:08			U	U	mg/L				0	20	RA
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5	U	.5011	mg/L	100.2	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5	U	.4911	mg/L	98.2	75	125	2.02	20	

Zinc (1312)

M6010B ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG359719													
WG359719ICV	ICV	02/24/14 15:43	II140123-2	2		1.894	mg/L	94.7	90	110			
WG359719ICB	ICB	02/24/14 15:46				U	mg/L		-0.03	0.03			
WG359563PBS	PBS	02/24/14 15:59				U	mg/L		-0.03	0.03			
WG359563LFB1	LFB	02/24/14 16:02	II140218-5	.5005		.508	mg/L	101.5	85	115			
L16859-01DUP	DUP	02/24/14 16:08			.17	.148	mg/L				13.8	20	
L16859-03MS	MS	02/24/14 16:20	II140218-5	.5005	1.08	1.53	mg/L	95.9	75	125			
L16859-03MSD	MSD	02/24/14 16:23	II140218-5	.5005	1.08	1.497	mg/L	89.3	75	125	2.18	20	

Reardon Steel LLC

ACZ Project ID: **L16885**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16885-01	WG359719	Aluminum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Antimony (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Arsenic (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Beryllium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Cadmium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Chromium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Copper (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Iron (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Lead (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Manganese (1312)	M6010B 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.
	WG359698	Mercury (1312)	M7470A CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Molybdenum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nickel (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Selenium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Thallium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360134	Uranium (1312)	M6020 ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Vanadium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360265	Chloride (1312 DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360168	Fluoride (1312 DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360072	Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium	HD	Analysis is outside the intended scope of the method,

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Reardon Steel LLC

ACZ Project ID: **L16885**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			Reduction		which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG360342		Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M350.1 - Automated Phenate	Q6	Sample was received above recommended temperature.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG360357		Sulfate (1312 DI)	D516-02 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Reardon Steel LLC

ACZ Project ID: **L16885**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16885-02	WG359719	Aluminum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Antimony (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Arsenic (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Beryllium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Cadmium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Chromium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Copper (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Iron (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Lead (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359698	Mercury (1312)	M7470A CVAA	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.
				RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Molybdenum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nickel (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Selenium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Thallium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360134	Uranium (1312)	M6020 ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Vanadium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360265	Chloride (1312 DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360168	Fluoride (1312 DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360072	Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium	HD	Analysis is outside the intended scope of the method,

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ACZ Project ID: **L16885**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			Reduction		which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG360342		Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M350.1 - Automated Phenate	Q6	Sample was received above recommended temperature.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG360357		Sulfate (1312 DI)	D516-02 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Reardon Steel LLC

ACZ Project ID: **L16885**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16885-03	WG359719	Aluminum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Antimony (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Arsenic (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Beryllium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Cadmium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Chromium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Copper (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Iron (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Lead (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Manganese (1312)	M6010B 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.
	WG359698	Mercury (1312)	M7470A CVAA	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Molybdenum (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Nickel (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Selenium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Silver (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
		Thallium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360134	Uranium (1312)	M6020 ICP-MS	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG359719	Vanadium (1312)	M6010B ICP	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360265	Chloride (1312 DI)	SM4500CI-E	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			SM4500CI-E	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360168	Fluoride (1312 DI)	SM4500F-C	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG360072	Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium	HD	Analysis is outside the intended scope of the method,

REPAD.15.06.05.01

Reardon Steel LLC

ACZ Project ID: **L16885**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
			Reduction		which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M353.2 - Automated Cadmium Reduction	Q6	Sample was received above recommended temperature.
			M353.2 - Automated Cadmium Reduction	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG360342		Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			M350.1 - Automated Phenate	Q6	Sample was received above recommended temperature.
			M350.1 - Automated Phenate	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
WG360357		Sulfate (1312 DI)	D516-02 - Turbidimetric	HD	Analysis is outside the intended scope of the method, which does not provide hold time information for soil extracts. No hold time is observed for collection to extraction. The referenced method hold time is observed for extraction-to-analysis.
			D516-02 - Turbidimetric	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

Reardon Steel LLC

Project ID:

Sample ID: PDH-025

Locator:

ACZ Sample ID: **L16885-01**

Date Sampled: 02/09/14 0:00

Date Received: 02/18/14

Sample Matrix: Soil

Gross Alpha & Beta (1312)

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha (1312)	02/26/14 0:17		0.28	2.2	2.4	pCi/L	*	thf
Gross Beta (1312)	02/26/14 0:17		5.8	4.3	5.7	pCi/L		thf

Radium 226 (1312)

Prep Method:

M903.1

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 (1312)	03/04/14 0:15		0.43	0.35	0.58	pCi/L	*	jrd

Radium 228 (1312)

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228 (1312)	03/11/14 14:07		0.78	1.8	1.9	pCi/L		nco

Reardon Steel LLC

Project ID:

Sample ID: PDH-038

Locator:

ACZ Sample ID: **L16885-02**

Date Sampled: 02/09/14 0:00

Date Received: 02/18/14

Sample Matrix: Soil

Gross Alpha & Beta (1312)

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha (1312)	02/26/14 0:18		1.4	3.1	2.9	pCi/L	*	thf
Gross Beta (1312)	02/26/14 0:18		8.1	4.5	5.8	pCi/L		thf

Radium 226 (1312)

Prep Method:

M903.1

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 (1312)	03/04/14 0:17		0.18	0.21	0.49	pCi/L	*	jrd

Radium 228 (1312)

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228 (1312)	03/11/14 14:07		1.6	2.3	2.3	pCi/L		nco

Reardon Steel LLC

Project ID:

Sample ID: PDH-049

Locator:

ACZ Sample ID: **L16885-03**

Date Sampled: 02/09/14 0:00

Date Received: 02/18/14

Sample Matrix: Soil

Gross Alpha & Beta (1312)

Prep Method:

M9310

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Gross Alpha (1312)	02/26/14 0:20		-1.6	2	2.5	pCi/L	*	thf
Gross Beta (1312)	02/26/14 0:20		4.7	4.2	5.8	pCi/L		thf

Radium 226 (1312)

Prep Method:

M903.1

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 226 (1312)	03/04/14 0:18		0.37	0.28	0.5	pCi/L	*	jrd

Radium 228 (1312)

Prep Method:

M9320

Parameter	Measure Date	Prep Date	Result	Error(+/-)	LLD	Units	XQ	Analyst
Radium 228 (1312)	03/11/14 14:07		0.51	1.8	1.9	pCi/L		nco

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Error(+/-)</i>	Calculated sample specific uncertainty
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>LCL</i>	Lower Control Limit, in % (except for LCSS, mg/Kg)
<i>LLD</i>	Calculated sample specific Lower Limit of Detection
<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
<i>QC</i>	True Value of the Control Sample or the amount added to the Spike
<i>Rec</i>	Amount of the true value or spike added recovered, in % (except for LCSS, mg/Kg)
<i>RER</i>	Relative Error Ratio, calculation used for Dup. QC taking into account the error factor.
<i>RPD</i>	Relative Percent Difference, calculation used for Duplicate QC Types
<i>UCL</i>	Upper Control Limit, in % (except for LCSS, mg/Kg)
<i>Sample</i>	Value of the Sample of interest

QC Sample Types

<i>DUP</i>	Sample Duplicate	<i>MS/MSD</i>	Matrix Spike/Matrix Spike Duplicate
<i>LCSS</i>	Laboratory Control Sample - Soil	<i>PBS</i>	Prep Blank - Soil
<i>LCSW</i>	Laboratory Control Sample - Water	<i>PBW</i>	Prep Blank - Water

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

H	Analysis exceeded method hold time.
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Method Prefix Reference

M	EPA methodology, including those under SDWA, CWA, and RCRA
SM	Standard Methods for the Examination of Water and Wastewater.
D	ASTM
RP	DOE
ESM	DOE/ESM

Comments

- (1) Solid matrices are reported on a dry weight basis.
- (2) Preparation method: "Method" indicates preparation defined in analytical method.
- (3) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.
- (4) An asterisk in the "XQ" column indicates there is an extended qualifier and/or certification qualifier associated with the result.

For a complete list of ACZ's Extended Qualifiers, please click:

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

Reardon Steel LLC

ACZ Project ID: **L16885**

Alpha		M9310										Units: pCi/L				
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG360086																
WG359561PBW	PBW	02/26/14	RC130807-3	81.06				-1.3	1.4	1.8			3.6			
WG359561LCSW	LCSW	02/26/14						82	8.7	1.8	101.2	83	133			
L16859-01DUP	DUP-RER	02/26/14			2.8	3	2.6	.34	2.3	2.7				0.65	2	
L16859-02DUP	DUP-RER	02/26/14			0.96	2.4	2.4	.11	1.7	2				0.29	2	
L16859-03MS	MS	02/26/14	RC130807-3	81.06	-2	2.4	3.1	60	9.4	2.7	76.5	83	133			M2
Beta		M9310										Units: pCi/L				
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG360086																
WG359561PBW	PBW	02/26/14	PCN44617	100				.36	3.3	5.4			10.8			
WG359561LCSW	LCSW	02/26/14						110	7.7	4.8	110	70	129			
L16859-01DUP	DUP-RER	02/26/14			12	5.1	5.7	2.7	4.6	5.8				1.35	2	
L16859-02DUP	DUP-RER	02/26/14			7	4.4	5.7	.83	3.7	5.2				1.07	2	
L16884-01MS	MS	02/26/14	PCN44617	100	7.9	4.3	5.7	120	8.3	5.4	112.1	70	129			
Radium 226 (1312)		M903.1										Units: pCi/L				
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG360181																
WG359561PBW	PBW	03/04/14	PCN44713	66.67				.46	0.42	0.86			1.72			
WG359561LCSW	LCSW	03/04/14						77	2	0.38	115.5	43	148			
L16859-01DUP	DUP-RER	03/04/14			0.36	0.17	0.3	.26	0.36	0.71				0.25	2	
L16859-03DUP	DUP-RER	03/04/14			-0.33	0.27	0.44	.27	0.29	0.51				1.51	2	
L16859-02MS	MS	03/04/14	PCN44713	66.67	0.21	0.35	0.57	110	3.1	0.87	164.7	43	148			M1

Reardon Steel LLC

ACZ Project ID: **L16885**

Radium 228 (1312)

M9320

Units: pCi/L

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Error	LLD	Found	Error	LLD	Rec	Lower	Upper	RPD/RER	Limit	Qual
WG360519																
WG359561LCSW	LCSW	03/11/14	PCN44304	63.92				34	3.2	1.7	53.2	47	123			
WG359561PBW	PBW	03/11/14						.67	2.5	2.6			5.2			
L16859-01DUP	DUP-RER	03/11/14			1.9	2.9	3	-.28	2.1	2.3				0.61	2	
L16859-02MS	MS	03/11/14	PCN44304	63.92	-0.47	1.4	1.5	41	4.2	2.3	64.9	47	123			
L16884-01DUP	DUP-RER	03/11/14			0.1	1.7	1.9	1.2	2.5	2.6				0.36	2	

Reardon Steel LLC

ACZ Project ID: **L16885**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L16885-01	WG360086	Gross Alpha (1312)	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG360181	Radium 226 (1312)	M903.1	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L16885-02	WG360086	Gross Alpha (1312)	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG360181	Radium 226 (1312)	M903.1	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L16885-03	WG360086	Gross Alpha (1312)	M9310	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG360181	Radium 226 (1312)	M903.1	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

Reardon Steel LLC

ACZ Project ID: **L16885**

Radiochemistry

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

Radium 226 (1312)	M903.1
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Soil Analysis

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

Neutralization Potential as CaCO ₃	M600/2-78-054 3.2.3
pH, Saturated Paste	EPA 600/2-78-054, section 3.2.2
Sulfur Organic Residual	M600/2-78-054 3.2.4
Sulfur Pyritic Sulfide	M600/2-78-054 3.2.4
Sulfur Sulfate	M600/2-78-054 3.2.4
Sulfur Total	M600/2-78-054 3.2.4
Total Sulfur minus Sulfate	M600/2-78-054 3.2.4

Wet Chemistry

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

Chloride (1312 DI)	SM4500CI-E
Conductivity @25C (1312-DI)	SM2510B
Fluoride (1312 DI)	SM4500F-C
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Reduction
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate
Sulfate (1312 DI)	D516-02 - Turbidimetric

Reardon Steel LLC

ACZ Project ID: L16885

Date Received: 02/18/2014 10:03

Received By: mtb

Date Printed: 2/18/2014

Receipt Verification

	YES	NO	NA
1) Is a foreign soil permit included for applicable samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2) Is the Chain of Custody or other directive shipping papers present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Does this project require special handling procedures such as CLP protocol?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4) Are any samples NRC licensable material?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5) If samples are received past hold time, proceed with requested short hold time analyses?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Is the Chain of Custody complete and accurate?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples? A change was made in the Hold Time Question section prior to ACZ custody.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA19179	6.7	9	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.

16885 Chain of Custody

Mike Thompson
Reardon Steel LLC
4 River Street
Silverton, CO 81433Page 1 of 3
2/10/2014**Quote Number: ABA-SPLP-PASTE****Matrix:** Soil

Mine Waste Samples for SPLP & ABA & Sat.Paste Analysis

Parameter	Method	Detection Limit	Cost/Sample
Inorganic Prep			
Total Hot Plate Digestion	M3010A ICP-MS		\$0.00
Total Hot Plate Digestion	M3010A ICP		\$0.00
Metals Analysis			
Aluminum (1312)	M6010B ICP	0.03 mg/L	\$0.00
Antimony (1312)	M6010B ICP	0.03 mg/L	\$0.00
Arsenic (1312)	M6010B ICP	0.04 mg/L	\$0.00
Barium (1312)	M6010B ICP	0.003 mg/L	\$0.00
Beryllium (1312)	M6010B ICP	0.01 mg/L	\$0.00
Cadmium (1312)	M6010B ICP	0.005 mg/L	\$0.00
Chromium (1312)	M6010B ICP	0.01 mg/L	\$0.00
Copper (1312)	M6010B ICP	0.01 mg/L	\$0.00
Iron (1312)	M6010B ICP	0.02 mg/L	\$0.00
Lead (1312)	M6010B ICP	0.03 mg/L	\$0.00
Manganese (1312)	M6010B ICP	0.005 mg/L	\$0.00
Mercury (1312)	M7470A CVAA	0.0002 mg/L	\$23.40
Molybdenum (1312)	M6010B ICP	0.02 mg/L	\$0.00
Nickel (1312)	M6010B ICP	0.008 mg/L	\$0.00
Selenium (1312)	M6010B ICP	0.05 mg/L	\$0.00
Silver (1312)	M6010B ICP	0.01 mg/L	\$0.00
Thallium (1312)	M6010B ICP	0.1 mg/L	\$0.00
Uranium (1312)	M6020 ICP-MS	0.0001 mg/L	\$17.10
Vanadium (1312)	M6010B ICP	0.005 mg/L	\$0.00
Zinc (1312)	M6010B ICP	0.01 mg/L	\$0.00
Misc.			
Electronic Data Deliverable			\$0.00
Quality Control Summary			\$0.00
Setup charge for ICP (1312)			\$75.00
Setup Charge for ICPMS			\$20.00
Radiochemistry			
Gross Alpha & Beta (1312)	M9310	2 to 4 pCi/L	\$46.80
Radium 226 (1312)	M903.1	0.4 pCi/L	\$82.80
Radium 228 (1312)	M9320	1.5 pCi/L	\$90.00

Mike Thompson
Reardon Steel LLC
4 River Street
Silverton, CO 81433Page 2 of 3
2/10/2014**Sample Preparation**

Air Dry at 34 Degrees C	USDA No. 1, 1972	\$7.20
Crush and Pulverize	EPA-600/2-78-054 3.1.3	\$10.80
Saturated Paste Extraction	USDA No. 60 (2)	\$16.20
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2	\$10.80
Synthetic Precip. Leaching Procedure	M1312, DI Water	\$67.50
Synthetic Precip. Leaching Procedure	M1312-RC	\$67.50
Synthetic Precip. Leaching Procedure	M1312	\$67.50

Soil Analysis

Acid Generation Potential (calc on Sulfur total)	M600/2-78-054 3.2.4	Calculation	\$0.00
Acid Neutralization Potential (calc)	M600/2-78-054 1.3	Calculation	\$0.00
Acid-Base Potential (calc on Sulfur total)	M600/2-78-054 1.3	Calculation	\$0.00
Neutralization Potential as CaCO3	M600/2-78-054 3.2.3	0.1 %	\$14.40
pH, Saturated Paste	EPA 600/2-78-054, section 3.2.2	0.1 units	\$7.20
Sample Weight	Rad Disposal Compliance	g	\$6.30
Sulfur Forms	M600/2-78-054 3.2.4	0.01 %	\$58.00

Wet Chemistry

Chloride (1312 DI)	SM4500Cl-E	1 mg/L	\$9.90
Conductivity @25C (1312-DI)	SM2510B	1 umhos/cm	\$7.20
Fluoride (1312 DI)	SM4500F-C	0.1 mg/L	\$9.90
Nitrate/Nitrite as N (1312-DI)	M353.2 - Automated Cadmium Redu	0.02 mg/L	\$9.90
Nitrogen, ammonia (1312-DI)	M350.1 - Automated Phenate	0.05 mg/L	\$9.90
Sulfate (1312 DI)	SM4500 SO4-D	10 mg/L	\$11.70

Cost/Sample: \$747.00

This quote is based on a Standard Turn Around Time of approximately 28 days for radiochemistry analysis of solid matrices. All projects received are subject to a \$125.00 Minimum Charge. Soil preparation charges may fluctuate dependant on the condition of samples upon receipt. Please note that method detection limits are estimates and may be elevated depending on sample matrix.

Mike Thompson
Reardon Steel LLC
4 River Street
Silverton, CO 81433

Page 3 of 3
2/10/2014

Quote Number: ABA-SPLP-PASTE**CONTRACT DETAILS**

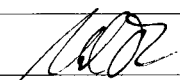
Pricing includes shipment of all standard sample containers and related paperwork by UPS Ground Service. Please allow three to five days for delivery when ordering containers. ACZ must be notified prior to receiving samples of all special requests such as electronic data deliverables or special reporting requirements. The client will be charged for special sample containers or express shipping and additional charges may apply for non-standard requests.

This quotation is valid for six months from the bid date unless specified otherwise in the bid. All bids must be signed and returned to ACZ before the project(s) is received. The authorized signature represents acceptance of the pricing as well as the general terms and conditions of ACZ Laboratories, Inc. which may be downloaded from our web site at <http://www.acz.com/PDF/termsconditions.pdf>. Please note that MDL's in this quote may possibly increase due to sample matrix or samples with high TDS.

All orders that require shipping of coolers are subject to a minimum charge of \$200.00. Local orders without shipping are subject to a minimum charge of \$125.00. Samples may incur a \$11.00/sample disposal fee for any samples deemed to be hazardous.

ACZ Representative (Authorized signature and date)

Client Representative (Authorized signature and date)

 02/13/14