



Sierrita Operations
Environment, Land & Water Department
6200 West Duval Mine Road
PO Box 527
Green Valley, Arizona 85622-0527

October 29, 2012

Via Certified Mail # 7011 1150 0000 0283 5989
Return Receipt Requested

Ms. Mindi Cross
Arizona Department of Environmental Quality
Water Quality Compliance Section
1110 West Washington Street
Phoenix, Arizona 85007-2935

Re: Semiannual Groundwater Monitoring Report for Samples Collected
During the Second and Third Quarters 2012
Mitigation Order on Consent Docket No. P-50-06

Dear Ms. Cross:

Attached please find three (3) hard copies and one (1) disc of the Semiannual Groundwater Monitoring Report for Samples Collected during Second and Third Quarters 2012, prepared by Clear Creek Associates for Freeport-McMoRan Sierrita Inc. (Sierrita). This document provides results of groundwater monitoring conducted during the second and third quarters of 2012, as agreed upon and described on letter from ADEQ to Sierrita dated April 17, 2009.

Please do not hesitate to contact me at (520) 393-2514 if you have any question regarding this submittal.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Clint D. Beck'.

Clint D. Beck, E.I.T.
Environmental Engineer
Freeport-McMoRan Sierrita Inc.

CDB/ms
Attachment
20121029_001

xc: Henry Darwin, Arizona Department of Environmental Quality
Marcia Colquitt, Arizona Department of Environmental Quality
John Broderick, Sierrita
Lana Fretz, Sierrita
Ned Hall, Freeport-McMoRan Copper & Gold
Stuart Brown, Freeport-McMoRan Copper & Gold
Jim Norris, Clear Creek Associates

**SEMIANNUAL GROUNDWATER MONITORING REPORT
FOR SAMPLES COLLECTED DURING THE SECOND AND
THIRD QUARTERS 2012**

**MITIGATION ORDER ON CONSENT DOCKET NO. P-50-06
PIMA COUNTY, ARIZONA**



Prepared for:

FREEPORT-MCMORAN SIERRITA INC.
6200 West Duval Mine Road
Green Valley, Arizona 85614

Prepared by:

CLEAR CREEK ASSOCIATES, P.L.C.
221 North Court Avenue
Tucson, Arizona 85701
(520) 622-3222

October 24, 2012


**SEMIANNUAL GROUNDWATER MONITORING REPORT
FOR SAMPLES COLLECTED DURING THE SECOND AND
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**MITIGATION ORDER ON CONSENT DOCKET NO. P-50-06
PIMA COUNTY, ARIZONA**


Prepared for:

FREEPORT-MCMORAN SIERRITA INC.
6200 West Duval Mine Road
Green Valley, Arizona 85614

Approved by:



James R. Norris
Arizona Registered Geologist No. 30842



October 24, 2012

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1. INTRODUCTION

This report provides the results of groundwater monitoring conducted in the second and third quarters of 2012 in the vicinity of the Freeport-McMoRan Sierrita Inc. (Sierrita) Tailing Impoundment (STI). Monitoring was conducted by Sierrita to characterize groundwater sulfate concentrations and groundwater elevations in the vicinity of the STI. This semiannual groundwater monitoring report was prepared by Clear Creek Associates on behalf of Sierrita.

1.1 Scope of Groundwater Monitoring

Quarterly groundwater monitoring pursuant to the Mitigation Order on Consent Docket No. P-50-06 has been conducted since the fourth quarter 2006 according to the specifications of the Work Plan (HGC, 2006a) submitted to and approved by Arizona Department of Environmental Quality (ADEQ). The purpose of the groundwater monitoring under the Work Plan was to document sulfate concentrations and water levels to determine the lateral and vertical extent of the sulfate plume and provide data for the development of conceptual and numerical models of the plume. Submittal of the Aquifer Characterization Report (HGC, 2009a), Feasibility Study (HGC, 2008), and Mitigation Plan (HGC, 2009b) fulfilled the objectives of monitoring recommended by the Work Plan.

In 2009, the groundwater monitoring requirements were revised in collaboration with ADEQ. The objectives of the revised groundwater monitoring plan are to track the location of the plume edge and monitor drinking water supply wells near the plume prior to implementation of the additional mitigation measures recommended in the Feasibility Study.

The details of the pre-implementation groundwater monitoring are outlined in letters from Sierrita to ADEQ on May 15, 2009 (Sierrita, 2009a) and June 12, 2009 (Sierrita, 2009b). Wells identified for annual, quarterly, and semiannual monitoring for pre-implementation groundwater monitoring are shown in Table 1 and Figure 1.

Groundwater sampling and analysis methods followed by Sierrita are described in the Quality Assurance Project Plan (QAPP) contained in Appendix E of the Work Plan (HGC, 2006a). Results of groundwater monitoring are presented in Section 2.1.

2. GROUNDWATER MONITORING

2.1 Monitoring Results

Analytical results and groundwater elevation data for the second and third quarters 2012 are tabulated in Table 2 and Table 3, respectively. Figure 2 shows the concentrations of dissolved sulfate in the wells sampled in the second quarter 2012. Figure 3 shows the dissolved sulfate concentrations in drinking water supply wells in the vicinity of the plume and their corresponding sentinel wells in the third quarter 2012. The highest sulfate concentration measured at co-located wells was used for concentration contouring¹. Sulfate concentrations are reported as received from the laboratory with no modifications to the number of significant figures. Groundwater elevations in the second and third quarters 2012 are presented on Figures 4 and 5, respectively. Groundwater elevations were calculated using the depth to water measurements taken under non-pumping conditions whenever possible. Groundwater elevations for the IW wells are calculated from depth to water measurements taken while the wells were pumping. For this reason, the groundwater elevations are presented but not used for contouring. Third quarter groundwater elevation data is too sparse for contouring; however, the groundwater elevations are consistent with historical data.

2.2 Quality Assurance/Quality Control Review

Pursuant to Section 6.4 of the QAPP, a data verification report was prepared for quality assurance and quality control purposes. The data verification report reviews groundwater data collected by Sierrita during the second and third quarters 2012, and is included as Appendix A. Analytical laboratory reports for samples collected in second and third quarters 2012 are provided in portable document format on the compact diskette in Appendix B. As determined by

¹ The 250 milligram per liter (mg/L) sulfate contour in the vicinity of the MO-2007-1 wells is drawn based on the calculated maximum distances of 1080 feet for second quarter 2012 and 1180 feet for third quarter 2012, and that the sulfate plume could have migrated since groundwater concentrations at MO-2007-1C exceeded 250 mg/L in the fourth quarter of 2009. The distance migrated was calculated based on groundwater velocity of 393 feet per year determined using an average hydraulic gradient of 0.00869 between MO-2007-1C and TMM-1, a hydraulic conductivity of 31 feet per day, and an assumed effective porosity of 25 percent. The distance is considered a maximum because groundwater velocity was calculated with the highest measured hydraulic gradients between the MO-2007-1 wells and TMM-1 and the highest hydraulic conductivity measured at the MO-2009-1 wells.

the analytical data verification review, all data are of acceptable quality for use in the groundwater monitoring program conducted pursuant to the Mitigation Order.

3. FINDINGS

This semiannual data report provides the results of groundwater monitoring conducted in the vicinity of the STI for the second and third quarters 2012 (Table 1). Groundwater samples were collected from 68 plume area wells and depth to water measurements were collected from 84 wells during the second quarter 2012. In the third quarter 2012, groundwater samples and depth to water measurements were collected from 14 plume area wells. All wells were sampled according to the schedule presented in the pre-implementation groundwater monitoring plan except ESP-4 and I-10 which were not operational during second quarter 2012.

Sulfate concentration data indicate that the sulfate plume from the STI (as defined by the 250 mg/L sulfate concentration contour) extends northeast from the southeastern corner of the tailing impoundment to the vicinity of co-located wells CW-3/MO-2007-5. The plume then extends north from wells CW-3/MO-2007-5 to the west of wells NP-2/MO-2007-3 and to Duval Mine Road, just north of the MO-2007-1 wells (Figures 2 and 3). Comparison of the second and third quarters 2012 sulfate concentration data with those collected in previous quarters indicates that there has not been any significant change to the overall plume geometry, although some northward migration of the plume is interpreted in the vicinity of the MO-2007-1 wells.

- Appendix C presents time series graphs of sulfate concentrations for drinking water supply wells in the vicinity of the edge of the plume, sentinel wells between the plume and the drinking supply wells, and other monitoring wells that document the edge of the plume. The time series graphs for water supply wells CW-6, CW-9, CW-10, and GV-01-GVDWID indicate that sulfate concentrations are steady over time and less than the interim action trigger level of 135 mg/L (HGC, 2006b). The time series graph for GV-02-GVDWID indicates that sulfate concentrations have been slightly declining since first quarter 2011.
- Sulfate concentrations reported for groundwater samples collected from sentinel wells are less than the 135 mg/L trigger level for more frequent monitoring at sentinel wells (Sierrita, 2009a). Since 2007, concentrations are steady over time at MO-2007-3B, MO-2007-4A, MO-2007-4B, and MO-2009-1; decrease at MO-2007-3C and MO-2007-6B; and increase at NP-2, MO-2007-4C, and MO-2007-6A.
- Data presented in the time series graphs indicate that sulfate concentrations increased in wells MO-2007-1B, MO-2007-1C, and ESP-1 along the edge of the plume. The sulfate concentrations in MO-2007-1B and MO-2007-1C are expected to increase until the mitigation measures identified by the Feasibility Study and Mitigation Plan are implemented.
- Appendix D presents time series graphs of groundwater elevation at the sentinel wells. The time series graphs show that water levels at these wells are relatively steady over

time. Groundwater elevations for the sentinel wells are generally slightly higher in the first and second quarter than during the third and fourth quarters.

4. REFERENCES

- Hydro Geo Chem, Inc. (HGC). 2006a. Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Phelps Dodge Sierrita Tailing Impoundment, Pima County, Arizona. August 11, 2006, revised October 31, 2006.
- HGC. 2006b. Interim Action Identification, Technical Memorandum for Mitigation Order on Consent Docket No. P-50-06, Pima County, Arizona. December 22, 2006.
- HGC. 2008. Feasibility Study for Mitigation of Sulfate in the Vicinity of the Freeport-McMoRan Sierrita Inc. Tailing Impoundment, Mitigation Order on Consent Docket No. P-50-06. October 22, 2008.
- HGC. 2009a. Revision 1, Aquifer Characterization Report, Task 5 of Aquifer Characterization Plan, Mitigation Order on Consent Docket No. P-50-06. Pima County, Arizona. January 30, 2009.
- HGC. 2009b. Mitigation Plan for Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Freeport-McMoRan Sierrita Inc. Tailing Impoundment, Mitigation Order on Consent Docket No. P-50-06. May 8, 2009.
- Sierrita. 2009a. Letter from Ned Hall (Sierrita) to Cynthia Campbell (ADEQ) Regarding Mitigation Order on Consent Docket P-50-06, Response to ADEQ Comments on Recommended Groundwater Monitoring for Sulfate. May 15, 2009.
- Sierrita. 2009b. Letter from Ned Hall (Sierrita) to Cynthia Campbell (ADEQ) Regarding Mitigation Order on Consent Docket P-50-06, Supplemental Information on Recommended Groundwater Monitoring for Sulfate. June 12, 2009.

TABLES

TABLE 1
Sampling Schedule for Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth Quarter	Quarterly Sampling First Quarter
CC of GV	501760	Sierrita	✓			
CW-3	627483	CWC	✓		✓	
CW-6	627485	CWC	✓	✓	✓	✓
CW-7	502546	CWC	WLO			
CW-8	543600	CWC	WLO			
CW-9	588121	CWC	✓	✓	✓	✓
CW-10	207982	CWC	✓	✓	✓	✓
ESP-1	623102	Sierrita	✓		✓	
ESP-2	623103	Sierrita	✓		✓	
ESP-3	623104	Sierrita	✓		✓	
ESP-4	623105	Sierrita	✓		✓	
ESP-5	623106	Sierrita	WLO			
GV-01-GVDWID	603428	GVDWID	✓	✓	✓	✓
GV-02-GVDWID	603429	GVDWID	✓	✓	✓	✓
GV-SI-GVDWID	208825	GVDWID	✓			
HAVEN GOLF	515867	Haven Golf	✓			
I-10	608525	TBPI	✓			
IW-1	623129	Sierrita	✓			
IW-2A	216464	Sierrita	✓			
IW-3A	623131	Sierrita	✓			
IW-4	623132	Sierrita	✓			
IW-5A	623133	Sierrita	✓			
IW-6A	545565	Sierrita	✓			
IW-8	508236	Sierrita	✓			
IW-9	508238	Sierrita	✓			
IW-10	508237	Sierrita	✓			
IW-11	508235	Sierrita	✓			
IW-12	545555	Sierrita	✓			
IW-13	545556	Sierrita	✓			
IW-14	545557	Sierrita	✓			
IW-15	545558	Sierrita	✓			
IW-16	545559	Sierrita	WLO			
IW-17	545560	Sierrita	WLO			
IW-18	545561	Sierrita	WLO			
IW-19	545562	Sierrita	✓			
IW-20	545563	Sierrita	✓			

TABLE 1
Sampling Schedule for Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth Quarter	Quarterly Sampling First Quarter
IW-21	545564	Sierrita	✓			
IW-22	200554	Sierrita	✓			
IW-23	200555	Sierrita	✓			
IW-24	200556	Sierrita	✓			
M-8	87390	TBPI	✓		✓	
M-9	501652	TBPI	✓			
M-10	501653	TBPI	✓		✓	
M-20	906595	TBPI	✓			
MH-1	803629	Sierrita	WLO			
MH-3	803630	Sierrita	WLO			
MH-5	803632	Sierrita	WLO			
MH-6	803633	Sierrita	WLO			
MH-7	803634	Sierrita	WLO			
MH-9	803635	Sierrita	WLO			
MH-10	803636	Sierrita	✓			
MH-11	803637	Sierrita	✓			
MH-13A	904071	Sierrita	✓			
MH-13B	904072	Sierrita	✓			
MH-13C	904073	Sierrita	✓			
MH-14	528098	Sierrita	WLO			
MH-15E	528094	Sierrita	WLO			
MH-15W	528093	Sierrita	WLO			
MH-16E	528100	Sierrita	WLO			
MH-16W	528099	Sierrita	WLO			
MH-24	563799	Sierrita	WLO			
MH-25A	201528	Sierrita	✓			
MH-25B	208429	Sierrita	✓			
MH-25C	208426	Sierrita	✓			
MH-26A	201527	Sierrita	✓			
MH-26B	208427	Sierrita	✓			
MH-26C	208428	Sierrita	✓			
MH-28	903648	Sierrita	✓		✓	
MH-29	903649	Sierrita	✓		✓	
MH-30	903884	Sierrita	✓			
MO-2007-1A	907342	Sierrita	✓		✓	
MO-2007-1B	907210	Sierrita	✓		✓	

TABLE 1
Sampling Schedule for Pre-Implementation Groundwater Monitoring

Well Name	ADWR 55 Well Registry No.	Owner	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth Quarter	Quarterly Sampling First Quarter
MO-2007-1C	907209	Sierrita	✓		✓	
MO-2007-2	906765	Sierrita	✓			
MO-2007-3B ¹	906816	Sierrita	✓	✓	✓	✓
MO-2007-3C ¹	906817	Sierrita	✓	✓	✓	✓
MO-2007-4A ²	907213	Sierrita	✓	✓	✓	✓
MO-2007-4B ²	907212	Sierrita	✓	✓	✓	✓
MO-2007-4C ²	907211	Sierrita	✓	✓	✓	✓
MO-2007-5B	907456	Sierrita	✓		✓	
MO-2007-5C	907457	Sierrita	✓		✓	
MO-2007-6A ³	907607	Sierrita	✓	✓	✓	✓
MO-2007-6B ³	907606	Sierrita	✓	✓	✓	✓
MO-2009-1 ⁴	910458	Sierrita	✓	✓	✓	✓
NP-2 ¹	605898	CWC	✓	✓	✓	✓
PZ-7	561870	Sierrita	✓			
PZ-8	561866	Sierrita	✓			
TMM-1	616156	Pima County	✓		✓	
1350	ND	TBPI	WLO			

Notes:

ADWR = Arizona Department of Water Resources

CC OF GV = Country Club of Green Valley

CWC = Community Water Company of Green Valley

GVDWID = Green Valley Domestic Water Improvement District

ND = No Data

Sierrita = Freeport-McMoRan Sierrita Inc.

TBPI = Twin Buttes Properties, Inc.

WLO = Water Level Only

¹ *Sentinel Well for CW-9*

² *Sentinel Well for CW-6*

³ *Sentinel Well for GV-01-GVDWID and GV-02-GVDWID*

⁴ *Sentinel Well for CW-10*

TABLE 2
Analytical Results for Second and Third Quarters 2012 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
CC of GV	501760	6/26/12	7.13	27.7	565	88.69
CW-3	627483	6/18/12	7.57	28.4	517	61.70
CW-6	627485	5/9/12	7.70	26.5	489	80.99
		8/29/12	7.44	25.2	537	82.24
CW-9	588121	5/9/12	7.67	28.3	356	44.39
		8/29/12	7.62	27.9	372	43.94
CW-10	207982	5/9/12	7.85	30.9	354	52.51
		8/29/12	7.74	31.4	369	50.95
ESP-1	623102	6/19/12	7.43	30.4	1221	395.72
ESP-2	623103	6/19/12	7.65	31.7	387	27.75
ESP-3	623104	6/19/12	7.87	30.6	390	34.98
ESP-4	623105	NS - Well is inoperable				
GV-01-GVDWID	603428	6/7/12	7.21	26.9	420	37.87
		8/29/12	7.38	27.6	409	36.15
GV-02-GVDWID	603429	6/7/12	7.14	24.0	559	71.78
		8/29/12	7.49	26.3	495	62.98
		8/29/12 DUP	7.49	26.3	495	63.26
GV-SI-GVDWID	208825	6/20/12	7.33	28.5	367	8.46
HAVEN GOLF	515867	5/29/12	6.41	279.0	633	88.05
I-10	608525	NS - Well is inoperable				
IW-1	623129	5/21/12	6.71	32.0	1689	900
IW-2A	216464	5/21/12	6.89	31.1	638	121
IW-3A	623131	6/20/12	6.51	275.0	3170	1700
IW-4	623132	5/21/12	6.57	27.5	2650	1500
IW-5A	219131	5/22/12	6.68	26.6	2880	1600
IW-6A	545565	5/22/12	6.61	27.3	2950	1800
IW-8	508236	5/21/12	6.62	28.7	2670	1700
IW-9	508238	5/21/12	6.58	29.2	2680	1700
IW-10	508237	5/22/12	6.78	26.9	2890	1700
IW-11	508235	5/22/12	6.76	25.5	2810	1600
IW-12	545555	5/22/12	6.66	27.7	2640	1600
IW-13	545556	6/20/12	6.67	25.9	3450	1900
IW-14	545557	5/22/12	6.48	31.8	2620	1800
IW-15	545558	5/22/12	6.74	29.4	2850	1800
IW-19	545562	5/22/12	6.56	30.7	2730	1300
IW-20	545563	6/20/12	6.67	28.2	3080	1600
IW-21	545564	6/20/12	6.65	29.2	3130	1700

TABLE 2
Analytical Results for Second and Third Quarters 2012 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
IW-22	200554	5/22/12	6.72	26.6	2870	1600
IW-23	200555	5/22/12	6.72	28.9	2700	1600
IW-24	200556	5/22/12	6.47	27.3	2800	1700
M-8	087390	6/29/12	7.73	27.9	417	24
M-9	501652	6/27/12	7.26	27.4	581	81
M-10	501653	6/25/12	7.61	29.8	162	162
M-20	906595	6/26/12	7.15	28.3	3050	1722.9
MH-10	803636	6/5/12	6.88	29.3	2910	1500
MH-11	803637	5/30/12	6.83	30.3	2730	1440
MH-13A	904071	6/11/12	7.10	27.6	3340	1680
MH-13B	904072	6/11/12	7.24	29.1	2310	1020
MH-13C	904073	6/11/12	8.61	30.7	411	50
MH-25A	201528	5/1/12	7.83	27.8	376	13
MH-25B	208429	5/1/12	7.31	29.3	1864	1690
MH-25C	208426	5/1/12	7.39	29.5	1667	1290
MH-26A	201527	5/2/12	7.59	27.5	386	9
MH-26B	208427	5/1/12	7.26	29.7	1912	1680
		5/1/12 DUP	7.26	29.7	1912	1750
MH-26C	208428	5/1/12	7.56	30.6	1428	820
MH-28	903548	5/21/12	6.64	28.8	3360	1600
MH-29	903649	5/21/12	6.62	26.6	3210	1600
MH-30	903884	4/26/12	7.05	28.1	1618	1738
MO-2007-1A	907342	6/12/12	7.40	27.9	371	16.98
MO-2007-1B	907210	6/12/12	6.99	29.0	1664	766.0
MO-2007-1C	907209	6/12/12	7.05	29.5	1085	406.4
MO-2007-2	906765	5/2/12	7.30	31.8	1245	543.50
MO-2007-3B	906816	5/8/12	7.88	30.8	329	37.64
		8/7/12	7.88	29.1	419	36.26
MO-2007-3C	906817	5/7/12	8.10	30.3	440	95.99
		8/7/12	7.93	30.7	553	93.25
MO-2007-4A	907213	5/7/12	7.49	24.7	381	35.62
		8/13/12	7.53	26.5	378	35.33
MO-2007-4B	907212	5/7/12	7.83	29.0	342	34.25
		8/13/12	7.75	28.2	353	34.02
MO-2007-4C	907211	5/7/12	8.32	30.6	439	91.70
		8/13/12	8.31	28.8	451	91.22
		8/13/12 DUP	8.31	28.8	451	91.48

TABLE 2
Analytical Results for Second and Third Quarters 2012 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (μS/cm)	Sulfate, Dissolved (mg/L)
MO-2007-5B	907456	6/20/12	7.62	30.0	1465	519.3
MO-2007-5C	907457	6/18/12	8.35	30.0	816	238.89
MO-2007-6A	907607	6/12/12	7.65	28.2	389	34.98
		8/13/12	7.84	29.2	362	36.91
MO-2007-6B	907606	6/12/12	7.62	31.5	399	55.99
		8/13/12	7.61	32.2	374	56.54
MO-2009-1	910458	5/9/12	8.47	25.8	479	97.69
		8/15/12	8.47	32.7	454	102.4
NP-2	605898	6/18/12	7.83	26.9	463	64.90
		8/15/12	8.01	26.3	357	65.72
PZ-7	561870	6/6/12	6.93	25.9	1458	489.1
PZ-8	561866	4/25/12	6.41	24.1	935	344.9
TMM-1	616156	5/15/12	8.28	28.8	32.8	7.93

Notes:

ADWR = Arizona Department of Water Resources

SU = Standard Units

deg C = degrees Celsius

μS/cm = microsiemens per centimeter

mg/L = milligrams per Liter

NR = not recorded

NS = not sampled

DUP = Duplicate sample

TABLE 3
Groundwater Elevation Data for Second and Third Quarters 2012

Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
CC of GV	501760	HGC	3527876.220	501635.382	2823.45	NR - No sounding port		
CW-3	627483	HGC	3523809.985	500047.663	2941.71	6/26/12	259.51	2682.20
CW-6	627485	CWC	3525794.239	500891.072	2867.00	5/9/12	255.74	2611.26
						8/29/12	258.30	2608.70
CW-7	502546	CWC	3528094.155	499659.842	2987.50	5/9/12	425.90	2561.60
CW-8	543600	CWC	3525661.191	499798.520	2957.50	5/9/12	340.12	2617.38
CW-9	588121	CWC	3528740.784	501072.040	2834.30	5/9/12	314.39	2519.91
						8/29/12	318.12	2516.18
CW-10	207982	CWC	3523455.502	500913.364	2868.50	5/9/12	197.20	2671.30
						8/29/12	201.50	2667.00
ESP-1	623102	Sierrita	3526448.677	499969.682	2953.43	6/19/12	357.76	2595.67
ESP-2	623103	Sierrita	3526924.656	500241.637	2934.60	6/19/12	346.84	2587.76
ESP-3	623104	Sierrita	3527377.239	500234.067	2935.80	6/19/12	364.50	2571.30
ESP-4	623105	Sierrita	3526132.758	499916.830	2958.60	NR - Well is inoperable		
ESP-5	623106	Sierrita	3527082.232	502007.895	2820.00	6/19/12	229.73	2590.27
GV-01-GVDWID	603428	GVDWID	3522254.157	499812.869	2942.35	6/7/12	242.28	2700.07
						8/29/12	231.00	2711.35
GV-02-GVDWID	603429	GVDWID	3521654.457	499786.207	2930.47	6/7/12	211.76	2718.71
						8/29/12	219.00	2711.47
GV-SI-GVDWID	208825	HGC	3519509.930	497227.175	3042.65	6/20/12	257.92	2784.73
HAVEN GOLF	515867	ADWR	3526386.000	501651.000	ND*	5/29/12	220.00	--
I-10	608525	Sierrita	325607.430	977264.441	3210.58	6/15/12	662.39	2548.19
IW-1	623129	Sierrita	3521277.779	496905.892	3144.69	5/21/12	438.48	2706.21
IW-2A	216464	Sierrita	3521337.953	497469.228	3112.28	5/21/12	404.32	2707.96
IW-3A	201732	Sierrita	3521722.640	497366.220	3121.45	6/20/12	401.37	2720.08
IW-4	623132	Sierrita	3522465.879	497371.700	3137.06	5/21/12	402.19	2734.87
IW-5A	219131	NO SURVEY DATA				5/22/12	468.65	--
IW-6A	545565	Sierrita	3523708.756	497381.226	3132.26	5/22/12	419.75	2712.51
IW-8	508236	Sierrita	3522020.520	497368.253	3122.19	5/21/12	438.67	2683.52
IW-9	508238	Sierrita	3522207.639	497369.791	3102.94	5/21/12	518.95	2583.99
IW-10	508237	Sierrita	3523122.199	497370.367	3129.64	5/22/12	466.57	2663.07
IW-11	508235	Sierrita	3523428.954	497371.414	3127.20	5/22/12	439.67	2687.53
IW-12	803638	Sierrita	3523969.869	497364.911	3138.18	5/22/12	411.45	2726.73

TABLE 3
Groundwater Elevation Data for Second and Third Quarters 2012

Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
IW-13	545556	Sierrita	3524166.673	497363.820	3143.35	6/20/12	405.53	2737.82
IW-14	545557	Sierrita	3526924.656	497367.126	3146.42	5/22/12	458.57	2687.85
IW-15	545558	Sierrita	3526924.656	497372.873	3152.02	5/22/12	410.54	2741.48
IW-16	545559	Sierrita	3526924.656	497370.651	3162.85	6/27/12	402.80	2760.05
IW-17	545560	Sierrita	3525002.869	497373.717	3160.76	6/27/12	424.10	2736.66
IW-18	545561	Sierrita	3525169.771	497374.056	3171.15	6/27/12	436.97	2734.18
IW-19	545562	Sierrita	3525343.392	497373.630	3155.39	5/22/12	432.62	2722.77
IW-20	545563	Sierrita	3525568.770	497364.739	3164.21	6/20/12	414.50	2749.71
IW-21	545664	Sierrita	3525773.266	497374.585	3171.37	NR - Broken sounding tube		
IW-22	200554	Sierrita	3523273.592	497369.590	3128.25	5/22/12	448.78	2679.47
IW-23	200555	Sierrita	3522970.788	497369.237	3128.53	5/22/12	523.21	2605.32
IW-24	200556	Sierrita	3522633.594	497371.670	3113.29	5/22/12	512.88	2600.41
M-8	87390	Sierrita	3529692.237	499658.916	2999.53	6/29/12	464.98	2534.55
M-9	501652	Sierrita	3530303.954	499984.173	2973.81	6/27/12	455.78	2518.03
M-10	501653	Sierrita	3530143.114	499659.027	3005.68	6/25/12	482.73	2522.95
M-20	906595	TBPI	3528491.771	499082.070	3054.00	6/26/12	500.50	2553.50
MH-1	803629	Sierrita	3525872.911	497372.392	3179.27	4/25/12	436.95	2742.32
MH-3	803630	Sierrita	3525270.181	497472.430	3155.87	4/25/12	419.53	2736.34
MH-5	803632	Sierrita	3523725.339	497477.352	3123.47	6/14/12	398.80	2724.67
MH-6	803633	Sierrita	3522770.451	497436.646	3133.97	6/7/12	382.63	2751.34
MH-7	803634	Sierrita	3522016.471	497502.475	3111.23	6/14/12	381.09	2730.14
MH-9	803635	Sierrita	3521252.607	496438.181	3162.57	4/26/12	380.49	2782.08
MH-10	803636	Sierrita	3521236.861	495717.770	3187.84	6/5/12	366.25	2821.59
MH-11	803637	Sierrita	3524463.648	498749.381	3041.76	5/24/12	376.65	2665.11
MH-13A	904071	Sierrita	3523793.443	498823.857	3026.23	6/11/12	337.90	2688.33
MH-13B	904072	Sierrita	3523787.358	498829.881	3025.63	6/11/12	342.50	2683.13
MH-13C	904073	Sierrita	3523793.032	498797.461	3028.46	6/11/12	348.75	2679.71
MH-14	528098	Sierrita	3525269.340	497517.626	3153.46	4/25/12	419.83	2733.63
MH-15E	528094	Sierrita	3523274.327	497584.800	3111.37	6/14/12	391.96	2719.41
MH-15W	528093	Sierrita	3523275.003	497524.067	3117.07	4/25/12	397.62	2719.45
MH-16E	528100	Sierrita	3521870.233	497576.673	3097.72	4/26/12	362.82	2734.90
MH-16W	528099	Sierrita	3521870.818	497516.074	3100.24	4/25/12	364.24	2736.00
MH-24	563799	Sierrita	3523709.046	497390.515	3131.16	4/25/12	396.58	2734.58

TABLE 3
Groundwater Elevation Data for Second and Third Quarters 2012

Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
MH-25A	201528	Sierrita	3526510.175	498880.349	3056.57	5/1/12	459.69	2596.88
MH-25B	208429	Sierrita	3526515.244	498870.343	3058.22	5/1/12	460.90	2597.32
MH-25C	208426	Sierrita	3526491.132	498874.666	3057.24	5/1/12	459.76	2597.48
MH-26A	201527	Sierrita	3527818.233	498852.692	3070.89	5/2/12	501.05	2569.84
MH-26B	208427	Sierrita	3527814.016	498839.900	3070.50	5/1/12	498.00	2572.50
MH-26C	208428	Sierrita	3527806.770	498865.240	3069.11	5/1/12	499.44	2569.67
MH-28	903548	Sierrita	3524609.980	497471.427	3142.18	5/21/12	398.64	2743.54
MH-29	903649	Sierrita	3522805.518	497604.326	3123.15	5/21/12	389.39	2733.76
MH-30	903884	Sierrita	3525926.812	496682.307	3232.45	4/26/12	420.61	2811.84
MO-2007-1A	907342	Sierrita	3529331.380	500016.947	2967.65	6/12/12	431.38	2536.27
MO-2007-1B	907210	Sierrita	3529325.119	500021.574	2966.82	6/12/12	431.95	2534.87
MO-2007-1C	907209	Sierrita	3529328.959	500013.405	2968.58	6/12/12	429.40	2539.18
MO-2007-2	906765	Sierrita	3527621.102	497912.410	3153.83	5/2/12	581.75	2572.08
MO-2007-3B	906816	Sierrita	3528508.801	500522.491	2912.15	5/8/12	362.09	2550.06
						8/7/12	363.87	2548.28
MO-2007-3C	906817	Sierrita	3528508.743	500529.713	2911.90	5/7/12	362.35	2549.55
						8/7/12	364.49	2547.41
MO-2007-4A	907213	Sierrita	3525634.956	500383.682	2923.63	5/7/12	310.42	2613.21
						8/13/12	313.30	2610.33
MO-2007-4B	907212	Sierrita	3525613.952	500380.947	2923.57	5/7/12	311.47	2612.10
						8/13/12	314.42	2609.15
MO-2007-4C	907211	Sierrita	3525624.484	500382.217	2923.66	5/7/12	312.37	2611.29
						8/13/12	315.55	2608.11
MO-2007-5B	907456	Sierrita	3523743.376	500013.850	2944.35	6/20/12	277.46	2666.89
MO-2007-5C	907457	Sierrita	3523736.459	500014.152	2944.91	6/18/12	281.66	2663.25
MO-2007-6A	907607	Sierrita	3521842.050	498367.161	3043.37	6/12/12	314.95	2728.42
						8/13/12	317.93	2725.44
MO-2007-6B	907606	Sierrita	3521849.495	498367.887	3043.05	6/12/12	325.69	2717.36
						8/13/12	329.12	2713.93
MO-2009-1	910458	Sierrita	3523369.438	500534.089	2890.78	5/9/12	225.63	2665.15
						8/15/12	234.23	2656.55
NP-2	605898	HGC	3528517.116	500582.904	2906.56	6/18/12	359.28	2547.28
						8/15/12	360.45	2546.11

TABLE 3
Groundwater Elevation Data for Second and Third Quarters 2012

Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
PZ-7	561870	Sierrita	3526357.485	492533.171	3549.17	6/6/12	136.67	3412.50
PZ-8	561866	Sierrita	3524196.243	492972.681	3480.36	4/25/12	229.66	3250.70
TMM-1	616156	HGC	3529736.231	500018.323	2967.08	5/15/12	438.57	2528.51
1350	1350	Sierrita	3528649.387	499296.387	3033.25	6/29/12	479.57	2553.68

Notes:

ADWR = Arizona Department of Water Resources

CWC = Community Water Company of Green Valley

ft amsl = feet above mean sea level

GVDWID = Green Valley Domestic Water Improvement District

HGC = Hydro Geo Chem, Inc.

m = meters

NR = Not Recorded

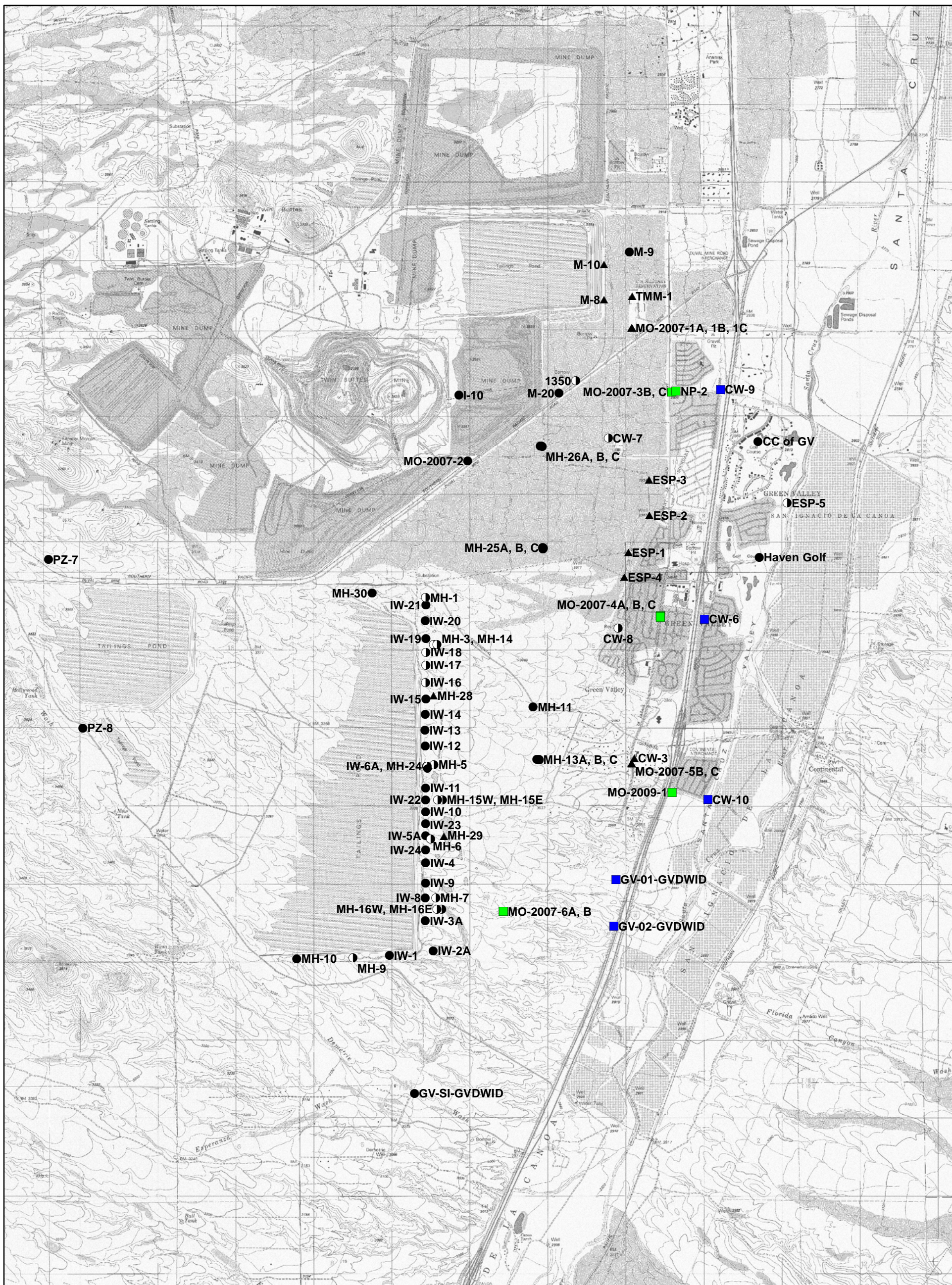
ND = No Elevation Data*

Sierrita = Freeport-McMoRan Sierrita Inc.

TBPI = Twin Buttes Properties, Inc.

UTM = Universal Transverse Mercator, Zone 12 North American Datum 1983 (NAD83)

FIGURES



Legend

- Annual Sampling (Second Quarter)
- ◐ Annual Water Level Only (Second Quarter)
- ▲ Semi-Annual Sampling (Second and Fourth Quarters)
- Quarterly Sampling - Sentinel Well
- Quarterly Sampling - Drinking Water Supply Well

A horizontal scale bar is shown. Above the bar, the word "Scale" is centered. Below the bar, the word "Feet" is centered. The bar has four major tick marks labeled "0", "2,000", "4,000", and "8,000" from left to right. The segment of the bar between the 2,000 and 4,000 marks is highlighted in white, while the rest of the bar is black.



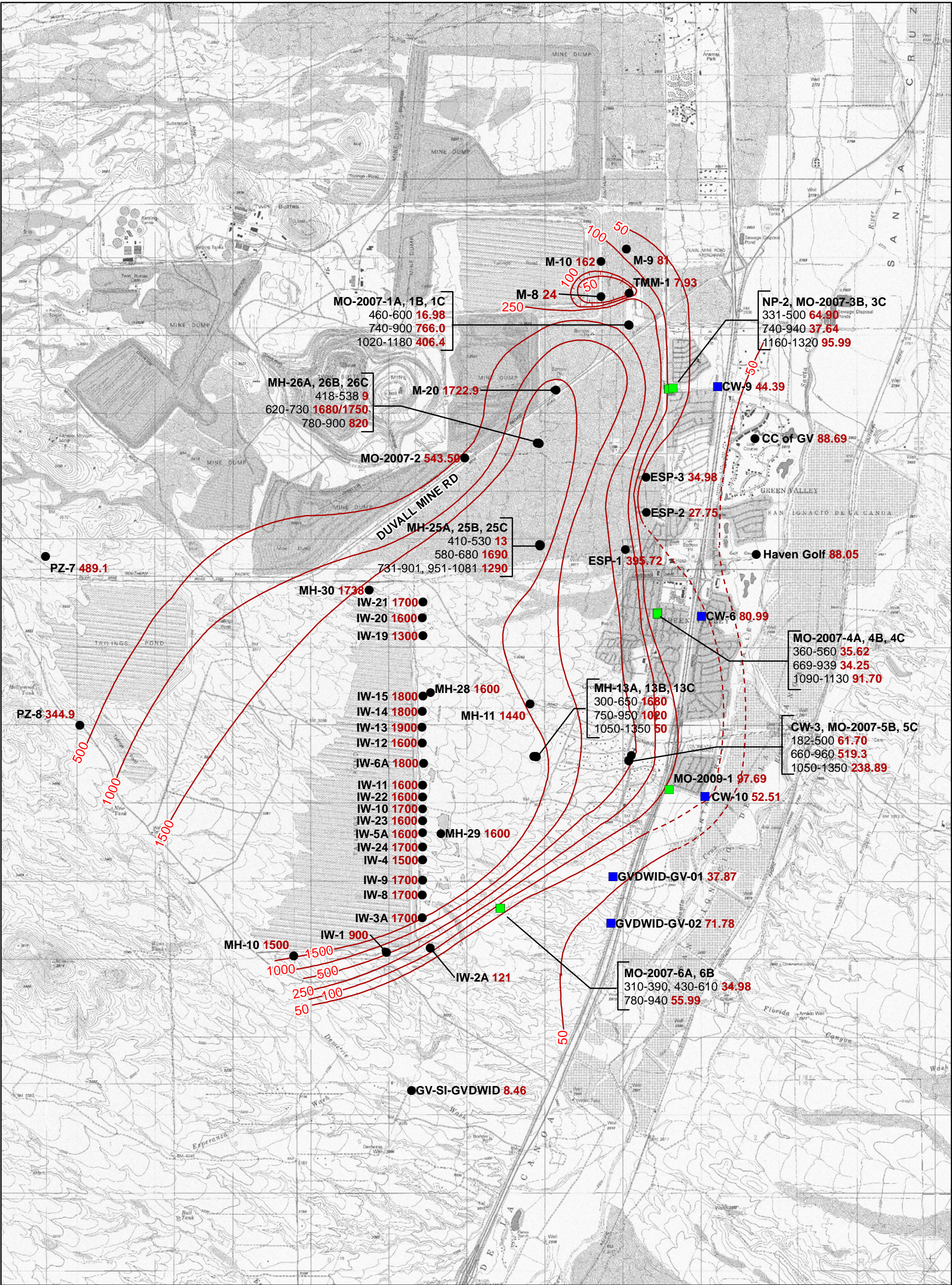
Date 10/04/12	File ID 055039-006B
	

Figure 1
Sampling Locations for
Pre-Implementation Groundwater
Monitoring



Legend

— Sulfate Concentration Contour (mg/L) (dashed where inferred)

— Sulfate Concentration Depression

● IW-10 1700 Well ID
● Sulfate Concentration (mg/L)
● Duplicate results separated by "/"

Co-Located Wells
— Screened Interval (ft bls): **Sulfate Concentration (mg/L)**

Well Symbols

● Well

■ Sentinel Well

■ Drinking Water Supply Well

Scale

0 2,000 4,000 8,000

Feet

Date: 10/01/12

File ID: 055039-072

CLEAR CREEK ASSOCIATES

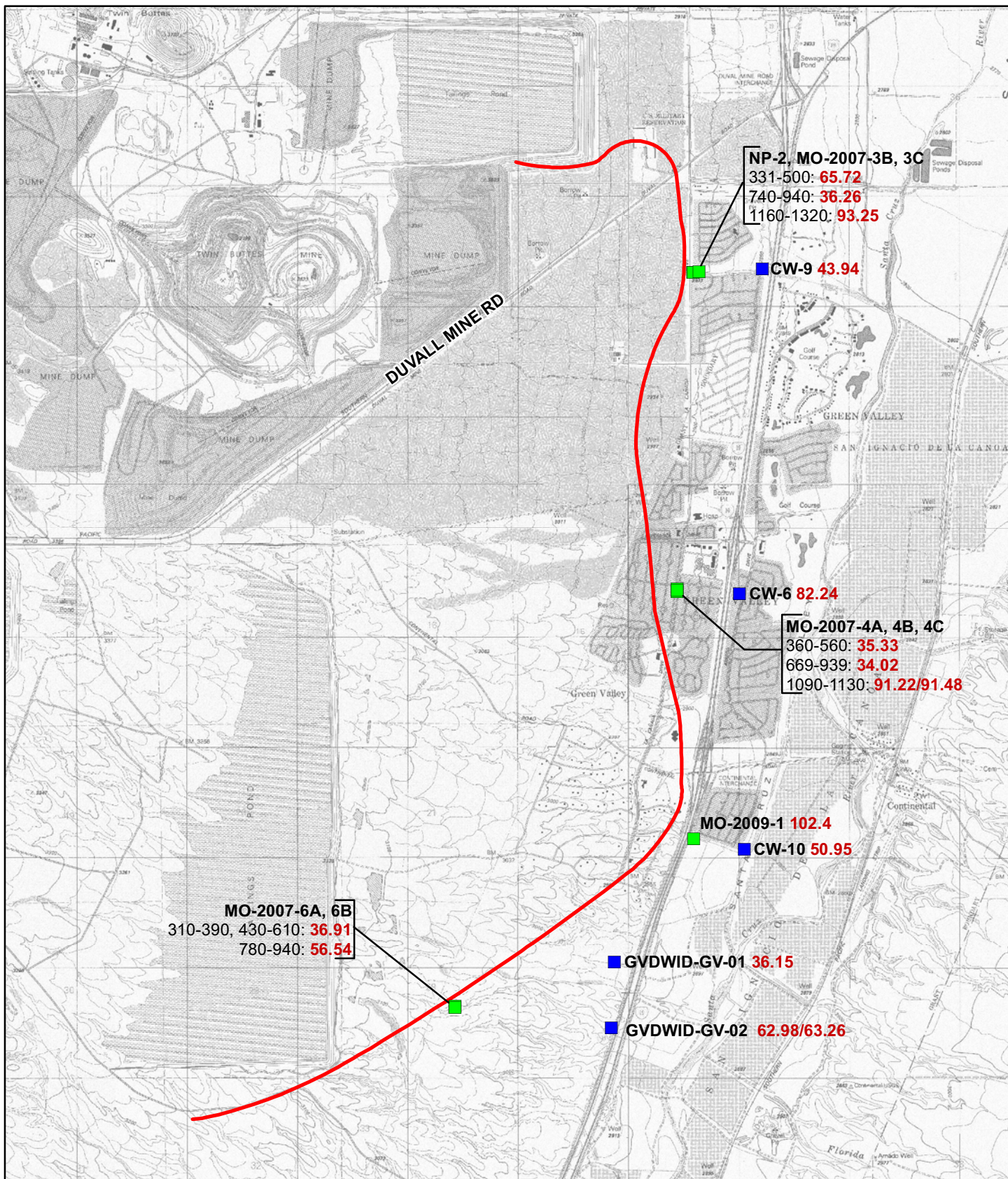
Notes:

Projection: UTM NAD83 Zone 12N

Figure 2

Sulfate Concentrations in Groundwater

Second Quarter 2012



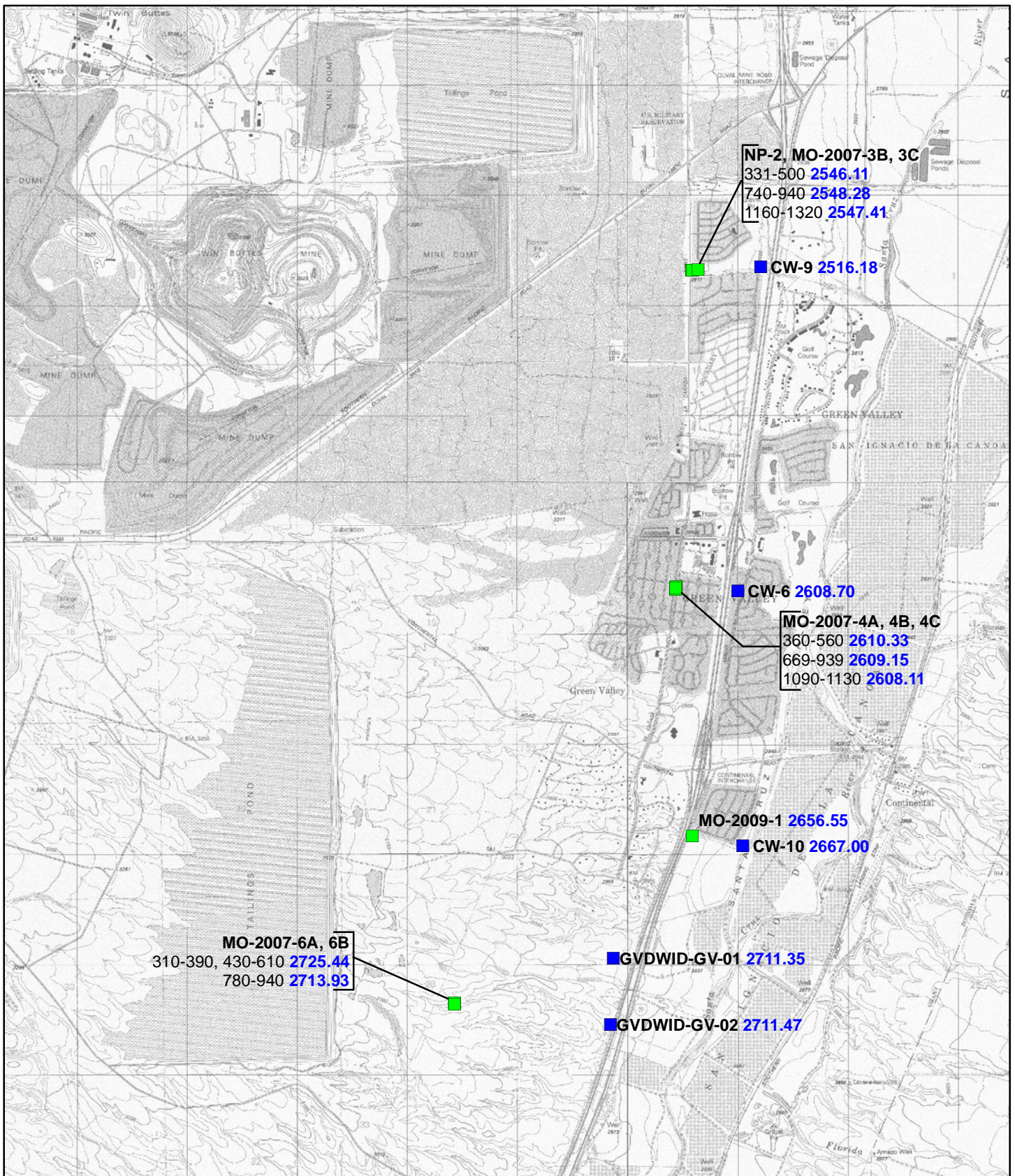
0 2,000 4,000
Feet

CLEAR CREEK ASSOCIATES

File ID 055039-075
Date 10/21/12



Figure 3
Sulfate Concentrations
in Groundwater
Third Quarter 2012



Legend

CW-9 Well ID
2516.18 Groundwater Elevation (ft amsl)

Well Symbols
 ■ Water Supply Well
 ■ Sentinel Well

0 2,000 4,000
 Feet

CLEAR CREEK ASSOCIATES

File ID 055039-074
 Date 9/24/12

Co-Located Wells

— Screened Interval (ft bls): **Groundwater Elevation (ft amsl)**



Figure 5
 Groundwater Elevations
 Third Quarter 2012

APPENDIX A

DATA VERIFICATION REPORT

APPENDIX A
DATA VERIFICATION REPORT

Prepared for:

FREEPORT-MCMORAN SIERRITA INC.
6200 West Duval Mine Road
Green Valley, Arizona 85614

Prepared by:

CLEAR CREEK ASSOCIATES, P.L.C.
221 North Court Avenue Suite 101
Tucson, Arizona 85701

October 24, 2012

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1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the second and third quarters 2012 by Freeport-McMoRan Sierrita Inc. (Sierrita) pursuant to the Mitigation Order on Consent Docket No. P-50-06. All analytical results for groundwater samples collected during this reporting period were provided to Sierrita by ACZ Laboratories, Inc. (ACZ) for preparation of the Semiannual Groundwater Monitoring Report.

This report does not review field sampling or sample handling procedures for Sierrita. Sierrita collected samples following the methods in the *Quality Assurance/Quality Control (QA/QC) Plan for Water Monitoring, Phelps Dodge Sierrita, Inc.* (PDSI, 2005) in Appendix E of the Work Plan (Hydro Geo Chem, Inc. [HGC], 2006). Laboratory QA/QC data are evaluated according to the data quality indicators (DQIs) given in the Quality Assurance Project Plan (QAPP) (HGC, 2006).

Appendix B of the main text of this report contains laboratory reports for samples collected by Sierrita including Chain of Custody (COC) forms, laboratory correspondence, QC summaries, data qualifiers, and any case narratives. The analytical results for all 85 samples collected are contained in 18 reports having the ACZ Project numbers identified in the following table.

The results of the internal QA/QC tests performed by ACZ are presented with the laboratory reports included in Appendix B. Based on the results of surrogate spike recoveries, matrix spike recovery, and matrix spike duplicate tests, ACZ did not advise of any modifications that should be made regarding the usability and data validation status of the laboratory test results.

ACZ Project ID	Wells Reported
Second Quarter 2012 Number of well samples collected: 68 Number of duplicate samples collected: 1 Total number of samples collected: 69	
L94262	PZ-8, MH-30
L94382	MO-2007-2
L94511	MO-2007-4A, MO-2007-4B, MO-2007-4C, MO-2007-3C, MO-2007-3B, CW-10, CW-6, CW-9, MO-2009-1
L94664	TMM-1
L94787	IW-23, IW-10, IW-22, IW-11, IW-6A, IW-12, IW-14, IW-15, IW-19, IW-1, IW-2A, IW-8, IW-9, IW-4, IW-24, IW-5A,
L94836	HAVENGOLF
L94876	MH-11
L95049	MH-10, PZ-7, GV-1, GV-2
L95164	MH-13B, MH-13A, MH-13C, MO-2007-6A, MO-2007-6B, MO-2007-1B, MO-2007-1A, MO-2007-1C
L94380	MH-26A, MH-26B, MH-25A, MH-26-C, MH-25-B, MH-25-C, DUP20120501A
L94788	MH-28, MH-29
L95294	MO-2007-5C, SIWELL
L95293	CW-3, NP-2, ESP-2, ESP-1, ESP-3, IW-20, IW-21, IW-13, IW-3A, MO-2007-5B
L95465	M-8
L95422	CC of GV, M-9, M-10, M-20
Third Quarter 2012 Number of well samples collected: 14 Number of duplicate samples collected: 2 Total number of samples collected: 16	
L96143	MO-2007-3B, MO-2007-3C
L96276	MO-2007-6A, MO-2007-6B, MO-2007-4B, MO-2007-4C, MO-2007-4A, NP-2, MO-2009-1, DUP20120813A
L96509	CW-6, CW-9, CW-10, GV-1, GV-2, DUP20120829A

2. LABORATORY QUALITY CONTROL

As specified in the QAPP, laboratory QC was maintained for all analysis through proper licensure, the use of approved analytical methods, QC measurements, appropriate turnaround time for analysis (timeliness), method detection limits (MDLs), and practical quantitation limits (PQLs). Each of these controls is discussed in the following subsections.

The review of laboratory QC included a review to identify any qualified data and an assessment to determine their significance. Additionally, the laboratory QC summaries were reviewed to verify that results met QA criteria.

2.1 Licensure

ACZ is licensed with the Arizona Department of Health Services (license number AZ0102) and is accredited in accordance with the National Environmental Laboratory Accreditation Conference.

2.2 Analytical Methods

The following methods were used for sulfate analysis during this monitoring period:

- U.S. Environmental Protection Agency (EPA) 300.0 (Ion-Chromatography)
- ASTM International Method D516-02 (Turbidimetric)

2.3 Method Detection Limits (MDLs) and Practical Quantification Limits (PQLs)

The MDLs and PQLs of the analytical methods used by ACZ are shown in the following table. The MDLs for analyses of samples were equal to or less than the target MDLs identified in the QAPP.

Method	MDL (mg/L)	PQL (mg/L)	Target MDL ¹ (mg/L)
EPA 300.0	0.5	3	10
D516-02	5	30	10

mg/L = milligrams per liter

¹ Target MDL from Table E.2 of QAPP

2.4 Timeliness

Holding time was derived from the EPA methods utilized and was calculated beginning from the time of sample collection in the field. All samples submitted for sulfate analysis were analyzed within the twenty-eight day holding time specified by each of the methods used for analysis.

2.5 Quality Control Measurements

The following laboratory QC samples were prepared and analyzed:

- Preparation blanks, calibration blanks, and calibration verification standards
- Analytical spikes and analytical spike duplicates
- Laboratory control samples
- Laboratory duplicate samples

2.5.1 Preparation Blanks, Calibration Blanks, and Calibration Verification Standards

Preparation blanks were run with each group of samples submitted for sulfate analysis. Preparation blanks were prepared from analyte-free water and treated as routine samples. Analytical results of the preparation blanks showed that no target analytes were detected at the indicated MDL.

Initial calibration blanks and initial calibration verification standards were analyzed prior to each group of samples. The results of each initial calibration blank analyzed showed no detections of the target analyte. Analytical results for the initial calibration verification standards and laboratory fortified blanks showed percent recoveries that were within the acceptance criteria specified by the ACZ QA plan and the QAPP.

2.5.2 Analytical Spikes and Analytical Spike Duplicates

Analytical spike and spike duplicate samples were analyzed for 10 percent of the samples that were analyzed. The spike samples were prepared by adding a sulfate spike to one randomly chosen sample out of every ten samples analyzed. Spike recoveries for most analyses were between 90 and 110 percent. Instances in which analytical spike recoveries were high, low or unusable are qualified with an “M1”, “M2”, or “M3” flag, respectively. The “M1” flag was used on reports L94876 and L96276. The “M2” qualifier was used on the L94380 report and the “M3” qualifier was used on the L94048, L94261, L94787, L95164, L94788, L95293, L95422, and L95934 reports. In all cases where an “M1”, “M2”, or “M3” qualifier was used, the method control sample recovery was checked to insure that it is acceptable. The method control samples were prepared by adding a sulfate spike to de-ionized water.

2.5.3 Laboratory Control Samples

Laboratory control samples were run for each group of samples submitted for sulfate analysis following the method of analysis. Recoveries for all laboratory control samples were within the acceptance criteria specified by ACZ.

2.5.4 Laboratory Duplicate Samples

Analyses of laboratory duplicate samples were also reviewed as part of this quality data verification report. Field duplicate samples are discussed in Section 3.1. The relative percent difference (RPD) for all laboratory duplicate samples were within 20 percent, which is the tolerance range set by the laboratory. The RPD is not used for data validation if the sample concentration is less than ten times the method detection limit. In cases where the RPD was used for data validation based on laboratory standard operating procedure, the results met QA criteria and demonstrated appropriate levels of precision for laboratory analysis of these samples.

3. DATA QUALITY INDICATORS

The QAPP provides several DQIs for assessing the overall quality of the data. These DQIs include the following:

- Precision
- Bias
- Accuracy
- Representativeness
- Comparability
- Completeness
- Sensitivity

Each of these DQIs is discussed below in relation to groundwater sampling and analysis conducted by Sierrita.

3.1 Precision

Precision indicates how well a measurement can be reproduced. Precision is quantified by calculating the RPD between duplicate samples. For the purposes of QA/QC, precision was quantified by calculating the RPDs between duplicates among the following groups of duplicate samples:

- Laboratory duplicate samples
- Field duplicate samples

As discussed in Sections 2.5.2 and 2.5.4, there were no exceedances of RPD QA criteria based on laboratory standard operating procedures for any laboratory duplicates. During this monitoring period, a total of 3 field duplicate samples were collected by Sierrita for filtered sulfate analysis (DUP20120501A, DUP20120813A, and DUP20120829A). DUP20120501A was collected in the second quarter 2012 and DUP20120813A and DUP20120829A were collected in the third quarter 2012. The collection of one field duplicate sample in the second quarter 2012 does not meet the QA/QC goal of collecting one duplicate sample for every ten groundwater samples collected, as stated in Section 6 of Sierrita's quality assurance quality control plan, and

does not meet the goal of collecting one duplicate sample for every twenty groundwater samples as stated in the Work Plan (HGC, 2006). As a corrective action, Clear Creek will review the QA/QC goals for duplicate samples with Sierrita.

Results of the field duplicate samples collected are provided in the table below. The range of RPD values was between 0.28 and 4.08 percent, all within the 20 percent acceptance criteria for field duplicates, as stated in Section 3.3.1 of the QAPP. Overall, the DQI for precision is met.

ACZ Project No.	Well ID	Duplicate ID	Sample (mg/l)	Duplicate (mg/l)	RPD
L94380	MH-26B	DUP20120501A	1680	1750	4.08%
L96276	MO-2007-4C	DUP20120813A	91.22	91.48	0.28%
L96509	GV-2	DUP20120829A	62.98	63.26	0.44%

mg/L = milligrams per liter

RPD = Relative Percent Difference

3.2 Bias

Bias is a systematic distortion of measurements causing consistent errors in one direction. Bias is managed in this data set by the consistent application of standardized sample collection and analysis procedures.

3.3 Accuracy

Accuracy is a measure of the agreement of a measurement to a known value and is measured using the recoveries from laboratory control samples. As discussed in Sections 2.5.1, 2.5.2, and 2.5.3 respectively, there were no significant exceedances of the recovery QA criteria for any of the calibration standards, analytical spikes, or laboratory control standards. Based on this information, the overall accuracy of the data is judged sufficient for the purpose of aquifer characterization.

3.4 Representativeness

All well samples were taken from locations specified in the Pre-implementation Monitoring Plan (Sierrita, 2009) using sampling procedures specified in the QAPP. Therefore, the samples are

judged to provide a good representation of groundwater quality at the locations. The analytical data are judged to be representative of groundwater conditions because the analyses used standard procedures and methods that met QA/QC guidelines of the QAPP.

3.5 Comparability

All samples were collected using standardized procedures (PDSI, 2005) and were analyzed by ACZ using standardized methods. Insofar as standardized sample collection and analytical methods are adhered to, the sample results should be comparable.

3.6 Completeness

All samples collected by Sierrita were subsequently analyzed and reported by ACZ. All samples analyzed by ACZ are judged to satisfy the QA/QC criteria for this project and are deemed usable for aquifer characterization. Thus, the completeness of analytical results is 100 percent.

3.7 Sensitivity

The analytical methods used to analyze the samples meet the MDL requirements specified in Table E.2 of the QAPP. Therefore, the analytical sensitivity is considered acceptable for use in aquifer characterization.

4. REFERENCES

- Hydro Geo Chem, Inc. (HGC). 2006. Work Plan to Characterize and Mitigate Sulfate with Respect to Drinking Water Supplies in the Vicinity of the Phelps Dodge Sierrita Tailing Impoundment, Pima County, Arizona. August 11, 2006, revised October 31, 2006.
- Phelps Dodge Sierrita, Inc. (PDSI). 2005. Quality Assurance/Quality Control Plan for Water Monitoring, Phelps Dodge Sierrita, Inc. June 2005.
- Sierrita. 2009. Letter from Ned Hall (Sierrita) to Cynthia Campbell (ADEQ) Regarding Mitigation Order on Consent, Docket P-50-06, Response to ADEQ Comments on Recommended Groundwater Monitoring for Sulfate. May 15, 2009.

APPENDIX B

ANALYTICAL DATA REPORTS

Jon Anderson
FMI Gold & Copper - Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

June 08 2012

Cc: Ben Daigneau

Project ID: ZS000001Z9
ACZ Project ID: L94788– **SULFATE ONLY**

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 25, 2012. This project was assigned to ACZ's project number, **L94788**. Please reference this number in all future inquiries.

At the request of Phelps Dodge Sierrita, Inc. (PDSI), this laboratory report has been prepared to contain only information specific to samples and analytes identified by PDSI as evaluated pursuant to Mitigation Order No. P-500-06 with Arizona Department of Environmental Quality. Samples and analytes unrelated to the Mitigation Order, but which may be identified on the chain of custody and sample receipt, have been reported to PDSI in a separate report.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L94788**. 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 the requirements of NELAC.

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. 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. Please notify your Project Manager if you have other needs. If you have any questions, please contact your Project Manager or Customer Service Representative.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MH-29

ACZ Sample ID: **L94788-01**

Date Sampled: 05/21/12 10:36

Date Received: 05/25/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/06/12 15:36	mpb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MH-28

ACZ Sample ID: **L94788-02**

Date Sampled: 05/21/12 11:50

Date Received: 05/25/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/06/12 15:36	mpb

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94788**

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.02		.02066	mg/L	103.3	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0012	0.0012			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.01		.0111	mg/L	111	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.01	U	.01046	mg/L	104.6	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.01	U	.01054	mg/L	105.4	70	130	0.76	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05446	mg/L	108.9	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0015	0.0015			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.05048	mg/L	100.9	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.05534	mg/L	110.6	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.05566	mg/L	111.2	70	130	0.58	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.04933	mg/L	98.7	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.0501		.04993	mg/L	99.7	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.0501	U	.05158	mg/L	103	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.0501	U	.05224	mg/L	104.3	70	130	1.27	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05182	mg/L	103.6	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.0501		.04963	mg/L	99.1	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.0501	U	.05027	mg/L	100.3	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.0501	U	.05154	mg/L	102.9	70	130	2.49	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		1.956	mg/L	97.8	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.508	mg/L	101.6	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.508	mg/L	101.6	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.505	mg/L	101	85	115	0.59	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94788**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		1.997	mg/L	99.9	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.504	mg/L	100.8	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.506	mg/L	101.2	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.5	mg/L	100	85	115	1.19	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		1.992	mg/L	99.6	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.51	mg/L	102	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.513	mg/L	102.6	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.511	mg/L	102.2	85	115	0.39	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323683													
WG323683ICV	ICV	06/01/12 11:42	WC120531-	2.002		1.92	mg/L	95.9	95	105			
WG323683ICB	ICB	06/01/12 11:45				U	mg/L		-0.3	0.3			
WG323685													
WG323685ICV	ICV	06/01/12 13:38	WC120531-	2.002		1.92	mg/L	95.9	95	105			
WG323685ICB	ICB	06/01/12 13:42				U	mg/L		-0.3	0.3			
WG323685LFB1	LFB	06/01/12 13:49	WC120124-	5		5.1	mg/L	102	90	110			
L94787-14AS	AS	06/01/12 14:51	WC120124-	5	.3	5.12	mg/L	96.4	90	110			
L94787-14DUP	DUP	06/01/12 14:54			.3	.34	mg/L				12.5	20	RA
WG323685LFB2	LFB	06/01/12 15:37	WC120124-	5		5.05	mg/L	101	90	110			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05212	mg/L	104.2	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.049	mg/L	97.9	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.04961	mg/L	99.1	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.05057	mg/L	101	70	130	1.92	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	100		101.38	mg/L	101.4	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.6	0.6			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	50.007		51.69	mg/L	103.4	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	50.007	.7	53.03	mg/L	104.6	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	50.007	.7	52.55	mg/L	103.7	85	115	0.91	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94788**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		2.018	mg/L	100.9	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.522	mg/L	104.4	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.527	mg/L	105.4	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.52	mg/L	104	85	115	1.34	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05174	mg/L	103.5	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0018	0.0018			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.04696	mg/L	93.8	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.04713	mg/L	94.2	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.04739	mg/L	94.7	70	130	0.55	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323865													
WG323865ICV	ICV	06/05/12 22:33	WI120405-3	2.416		2.379	mg/L	98.5	90	110			
WG323865ICB	ICB	06/05/12 22:34				U	mg/L		-0.06	0.06			
WG323867													
WG323867LFB	LFB	06/05/12 23:39	WI120211-3	2		2.033	mg/L	101.7	90	110			
L94788-01AS	AS	06/05/12 23:41	WI120211-3	2	.38	2.454	mg/L	103.7	90	110			
L94788-02DUP	DUP	06/05/12 23:44			1.04	1.04	mg/L				0	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323390													
WG323390PBW	PBW	05/25/12 15:15				U	mg/L		-20	20			
WG323390LCSW	LCSW	05/25/12 15:15	PCN39024	260		258	mg/L	99.2	80	120			
L94797-03DUP	DUP	05/25/12 15:29			970	970	mg/L				0	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05147	mg/L	102.9	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.04555	mg/L	91	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	.0005	.05265	mg/L	104.2	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	.0005	.05374	mg/L	106.4	70	130	2.05	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94788**

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323927													
WG323927ICB	ICB	06/06/12 14:52				U	mg/L		-3	3			
WG323927ICV	ICV	06/06/12 14:52	WI120523-4	20		20.9	mg/L	104.5	90	110			
WG323927LFB	LFB	06/06/12 15:13	WI120508-1	10		9.8	mg/L	98	90	110			
L94788-01DUP	DUP	06/06/12 15:36			1600	1640	mg/L				2.5	20	
L94788-02AS	AS	06/06/12 15:36	SO4TURB10	10	1600	1880	mg/L	2800	90	110			M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05387	mg/L	107.7	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.05013	mg/L	100.2	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.05096	mg/L	101.8	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.05199	mg/L	103.9	70	130	2	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94788**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94788-01	WG323685	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).
	WG323927	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.
L94788-02	WG323685	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).
	WG323927	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94788**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94788
Date Received: 05/25/2012 09:11
Received By: ksj
Date Printed: 5/25/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
Na15437	2.3	15

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

Notes

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94788
Date Received: 05/25/2012 09:11
Received By: ksj
Date Printed: 5/25/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94788-01	MH-29		Y		Y							<input type="checkbox"/>
L94788-02	MH-28		Y		Y							<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj



Laboratories, Inc.

L94788

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

CHAIN of CUSTODY

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSIS REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001Z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE/TIME

Matrix

of Containers

Quarterly

MH-29

05/21/12 : 10:36

GW

3

X

MH-28

05/21/12 : 1150

GW

3

X

Matrix

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

REMARKS

Copy of report to Ben Daigneau contains only "SO4" results with QC Summary.

UPS Tracking # 12867 7E4 23 1000 8099

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

RELINQUISHED BY:

DATE/TIME

RECEIVED BY:

DATE/TIME

ALEXIS ALVAREZ

05/24/12 : 1430

APPENDIX C

TIME SERIES GRAPHS OF SULFATE CONCENTRATION

TABLE C.1
Sulfate Concentration Over Time

	Dissolved sulfate concentration reported in milligrams per liter (mg/l)																							
Well ID	Q4 2006	Q1 2007	Q2 2007	Q3 2007	Q4 2007	Q1 2008	Q2 2008	Q3 2008	Q4 2008	Q1 2009	Q2 2009	Q3 2009	Q4 2009	Q1 2010	Q2 2010	Q3 2010	Q4 2010	Q1 2011	Q2 2011	Q3 2011	Q4 2011	Q12012	Q22012	Q32012
CW-6	12/04/06 46.2	01/03/07 49.2	05/14/07 68.7	07/10/07 57.6	10/02/07 54.2	01/08/08 48.9	04/15/08 51.2	07/08/08 47.9	10/07/08 51.5	02/06/09 48.2	04/22/09 47.9	09/17/09 70	11/05/09 59.7	02/10/10 46.6	05/14/10 52.1	07/27/10 55.2	10/14/10 52.5	02/24/11 70.3	04/28/11 58.1	07/20/11 81	12/14/11 54.5	1/24/12 60.17	5/9/12 80.99	8/29/2012 82.24
CW-9	12/04/06 44.5	01/03/07 44.9	05/14/07 47.8	07/10/07 46.7	10/02/07 46.4	01/08/08 47.3	04/15/08 43.7	07/08/08 44.1	10/07/08 43.5	02/06/09 45.1	04/22/09 44.3	07/30/09 43.8	11/05/09 44.7	02/10/10 43.4	05/14/10 44.2	07/27/10 44.1	10/14/10 44.2	02/24/11 42.7	04/28/11 44.4	07/20/11 43.9	12/14/11 43.8	1/24/12 43.8	5/9/12 44.39	8/29/2012 43.94
CW-10	12/04/06 37.2	01/24/07 48.6	05/14/07 52.8	07/10/07 51.7	10/02/07 47.7	01/08/08 45.3	04/15/08 50.8	07/08/08 50.5	10/07/08 48.3	02/06/09 51.3	04/22/09 47.9	07/30/09 49.2	11/20/09 49.9	02/10/10 44.9	05/14/10 49.1	07/27/10 48.9	10/14/10 48.5	02/24/11 50.2	04/28/11 49.6	07/20/11 50.7	12/14/11 49.24	1/24/12 52.32	5/9/12 52.51	8/7/2012 50.95
ESP-1	12/04/06 262	01/03/07 242	05/14/07 113	07/10/07 94	10/12/07 110	01/23/08 100	04/18/08 102	07/25/08 104	10/30/08 121	01/29/09 113	04/16/09 130	NS	11/10/09 173	NS	4/28/10 204	NS	10/15/10 291	NS	05/03/11 359	NS	12/13/11 387.52	NS	6/19/12 395.72	NS
ESP-2	12/04/06 29.6	01/03/07 31.3	05/14/07 28.4	07/10/07 28.6	10/12/07 30	01/23/08 30	04/18/08 27.6	07/25/08 26.8	10/30/08 30.1	01/29/09 27.8	04/16/09 28.2	NS	11/10/09 28.9	NS	4/28/10 28.7	NS	10/15/10 27.9	NS	05/03/11 28.1	NS	11/22/11 26.65	NS	6/19/12 27.75	NS
ESP-3	12/04/06 36.2	01/03/07 37.5	05/14/07 36.6	07/10/07 36.6	10/12/07 40	01/23/08 30	04/18/08 35.7	07/25/08 34	10/30/08 36.8	01/29/09 35.2	04/16/09 35.3	NS	11/12/09 39.5	NS	4/28/10 35.8	NS	10/15/10 35.2	NS	05/03/11 35.1	NS	11/22/11 34.18	NS	6/19/12 34.98	NS
GV-01-GVDWID		01/09/07 40.9	04/10/07 43.2	07/11/07 41.5	10/03/07 43.8	01/07/08 45.7	04/16/08 44.1	07/07/08 45.2	11/25/08 39	03/03/09 42.3	04/22/09 40.6	07/29/09 44.3	11/04/09 45.1	01/27/10 47.0	04/01/10 48.5	07/28/10 39.4	10/14/10 38.4	01/20/11 40.0	04/28/11 42.9	07/20/11 39.6	12/7/11 39.31	3/14/12 35.56	6/7/12 37.87	8/29/2012 36.15
GV-02-GVDWID		01/09/07 103	04/10/07 106	07/11/07 98	10/03/07 100	01/07/08 98	04/16/08 97	07/07/08 93.2	11/25/08 93.5	02/04/09 98.8	04/22/09 79.5	07/29/09 91.6	11/04/09 93.2	01/27/10 94.9	04/01/10 99.5	07/28/10 83	10/14/10 90.7	01/20/11 92.7	04/28/11 87.3	07/20/11 87.2	12/7/11 77.88	3/14/12 77.35	6/7/12 71.78	8/29/2012 62.98
MO-2007-1A				08/08/07 19.2	10/09/07 20	01/24/08 20	04/09/08 21	07/14/08 16.6	10/17/08 17.9	01/16/09 18.1	04/01/09 18.2	07/01/09 16.3	10/22/09 16.6	NS	04/16/10 18.5	NS	10/13/10 16	NS	05/05/11 17.9	NS	10/6/11 16.143	NS	6/12/12 16.98	NS
MO-2007-1B				08/02/07 18.9	10/09/07 30	01/24/08 30	04/09/08 35	07/14/08 39.8	10/17/08 54.3	01/16/09 69.7	04/01/09 84.1	07/01/09 99	10/22/09 143	NS	04/16/10 230	NS	10/13/10 340	NS	05/05/11 479	NS	10/6/11 604.67	NS	6/12/12 766.0	NS
MO-2007-1C				07/31/07 112	10/09/07 90	01/24/08 140	04/09/08 149	07/14/08 165	10/21/08 146	01/16/09 233	04/01/09 229	07/01/09 236	10/22/09 301	NS	04/16/10 320	NS	10/13/10 376	NS	04/20/11 381	NS	10/6/11 393.94	NS	6/12/12 406.4	NS
MO-2007-3B				09/10/07 38	10/09/07 40	01/21/08 40	04/16/08 37	07/14/08 37.8	10/22/08 42.4	01/19/09 36.9	04/01/09 38.2	07/27/09 37.2	10/22/09 39.1	01/20/10 37.9	04/22/10 41.9	07/21/10 38.7	10/26/10 39.1	01/18/11 38.2	05/04/11 38.1	07/06/11 38.3	10/5/11 37.822	1/11/12 39	5/8/12 37.64	8/7/2012 36.26
MO-2007-3C				07/05/07 136	10/10/07 110	01/21/08 130	04/15/08 127	07/14/08 126	10/21/08 103	01/19/09 113	04/01/09 115	07/22/09 107	10/22/09 108	01/20/10 103	04/14/10 110	07/21/10 101	10/26/10 104	01/18/11 106	05/04/11 107	07/06/11 101	10/5/11 96.818	1/11/12 104.03	5/7/12 95.99	8/7/2012 93.25
MO-2007-4A					10/09/07 37	01/22/08 40	04/16/08 33.1	07/17/08 34.8	10/22/08 40.1	01/19/09 35.9	04/02/09 36.7	07/01/09 36.3	10/26/09 35.7	01/26/10 36.0	04/14/10 37.0	07/21/10 34.9	10/13/10 35.2	01/19/11 35.8	05/04/11 35.9	07/06/11 35.3	10/5/11 34.47	1/17/12 37.55	5/7/12 35.62	8/13/2012 35.33
MO-2007-4B					10/11/07 37.6	01/07/08 60	04/16/08 33.6	07/18/08 35.5	10/22/08 37.4	01/21/09 32.9	04/02/09 34.6	07/01/09 34.7	10/26/09 34.5	01/26/10 34.1	04/14/10 35.1	07/21/10 34	10/13/10 34.2	01/19/11 34.6	05/04/11 34.5	07/06/11 34.4	10/5/11 34.194	1/17/12 33.14	5/7/12 34.25	8/13/2012 34.02
MO-2007-4C				08/16/07 78.7	10/12/07 80.1	01/22/08 80	04/16/08 80	07/18/08 78.6	10/22/08 84.9	01/21/09 78.5	04/02/09 81	07/01/09 82.7	10/26/09 83.9	01/26/10 83.2	04/14/10 87.7	07/21/10 85.6	10/13/10 86.5	01/19/11 87.6	05/04/11 88.1	07/06/11 85	10/5/11 89.355	1/12/12 92.92	5/7/12 91.7	8/13/2012 91.22
MO-2007-6A					10/02/07 26.5	01/22/08 30	04/18/08 20.5	07/24/08 16.9	10/23/08 18.6	01/22/09 26.9	04/02/09 23.7	07/22/09 19.8	10/26/09 23.5	01/20/10 24.6	04/21/10 34.7	08/10/10 26.8	10/26/10 33.9	01/18/11 30.2	05/05/11 29.2	07/07/11 36.6	10/6/11 34.109	1/11/12 43.51	6/12/12 34.98	8/13/2012 36.91
MO-2007-6B					10/04/07 93.6	01/22/08 80	04/17/08 90.4	07/24/08 81.5	10/23/08 63.2	01/22/09 84.5	04/02/09 75.7	07/22/09 63.5	10/26/09 62.1	01/20/10 69.7	04/21/10 57.9	08/10/10 68.8	10/26/11 57.7	01/18/11 58.5	05/05/11 57.2	07/07/11 57.5	10/6/11 55.342	1/11/12 57.78	6/12/12 55.99	8/13/2012 56.54
MO-2009-1											04/24/09 62.1	07/29/09 97.7	11/03/09 109	01/25/10 82.1	04/20/10 99	08/10/10 109	12/15/10 94	02/02/11 92	06/16/11 102	08/31/11 108	12/1/11 91.82	1/11/12 93.84	5/9/12 97.69	8/15/2012 102.4
NP-2			06/04/07 41.2	08/13/07 41.7	11/06/07 41.7	01/11/08 43.5	04/17/08 40	07/11/08 40.5	10/09/08 39.7	02/09/09 42.4	04/24/09 32.1	09/17/09 40	NS	NS	04/22/10 41.9	08/05/10 41.2	10/25/10 41.4	01/19/11 41.9	05/03/11 43.5	07/18/11 44.8	12/5/11 58.63	3/21/12 64.11	6/18/12 64.9	8/15/2012 65.72

NS = No sample
Q1 = First Quarter
Q2 = Second Quarter
Q3 = Third Quarter
Q4 = Fourth Quarter

FIGURE C.1
SULFATE CONCENTRATION OVER TIME FOR WELLS
MO-2007-4A, MO-2007-4B, MO-2007-4C, AND CW-6

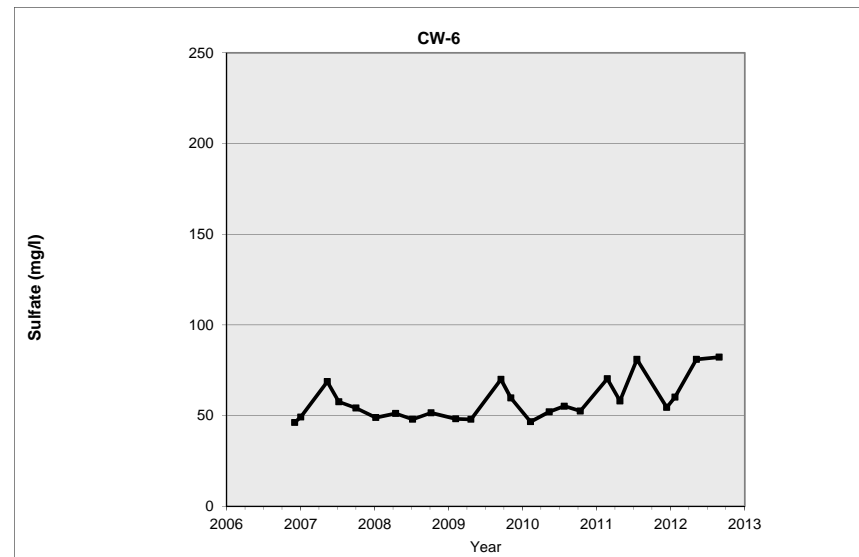
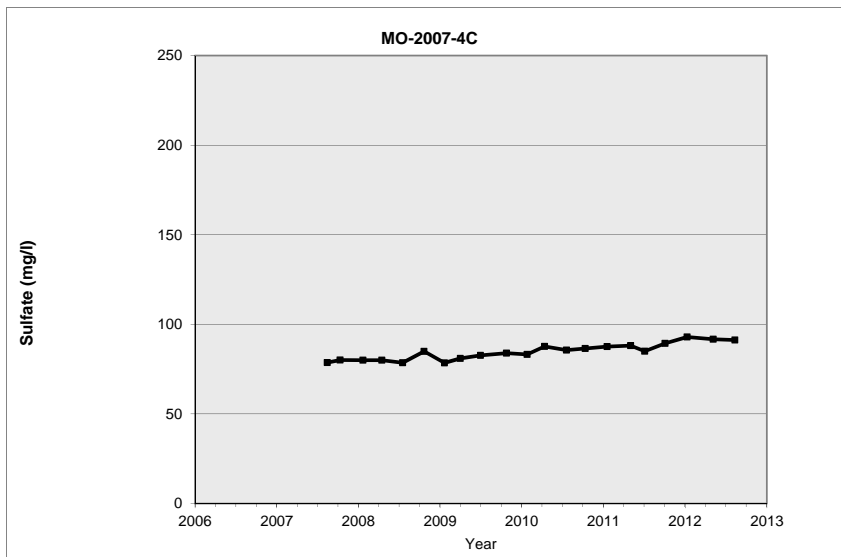
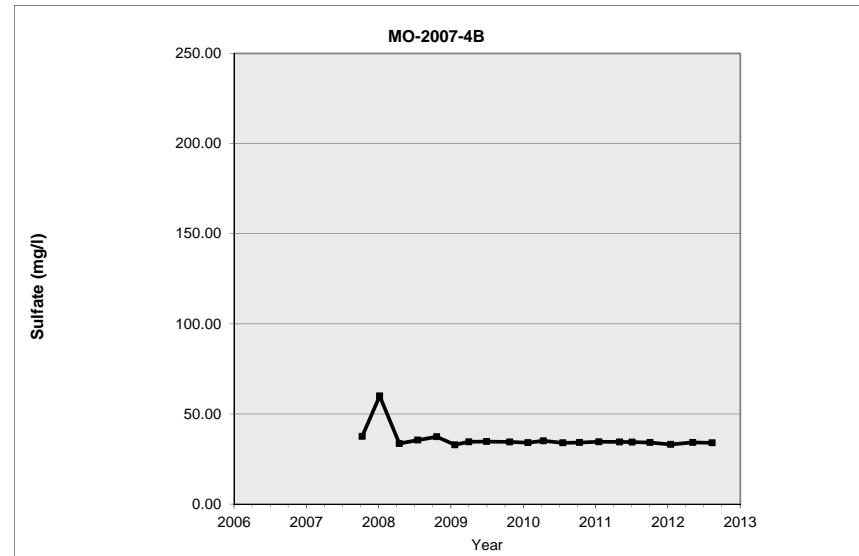
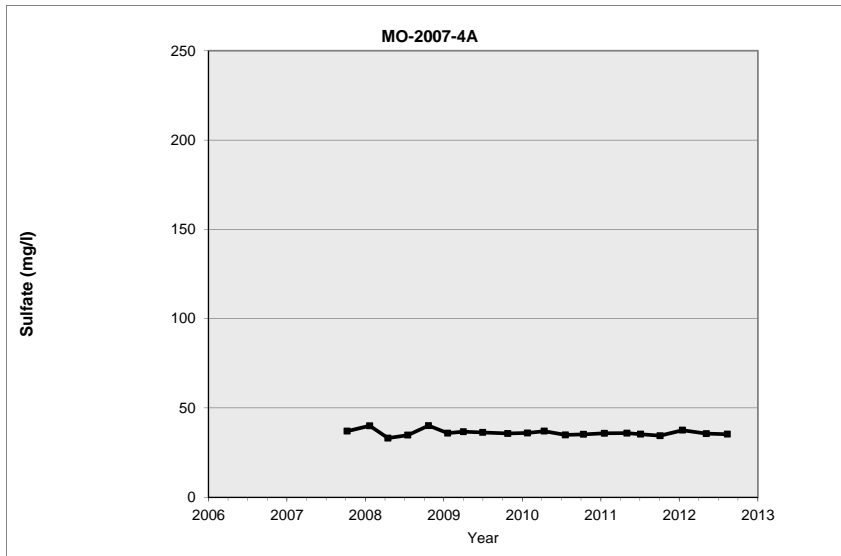


FIGURE C.2
SULFATE CONCENTRATION OVER TIME FOR WELLS
NP-2, MO-2007-3B, MO-2007-3C, AND CW-9

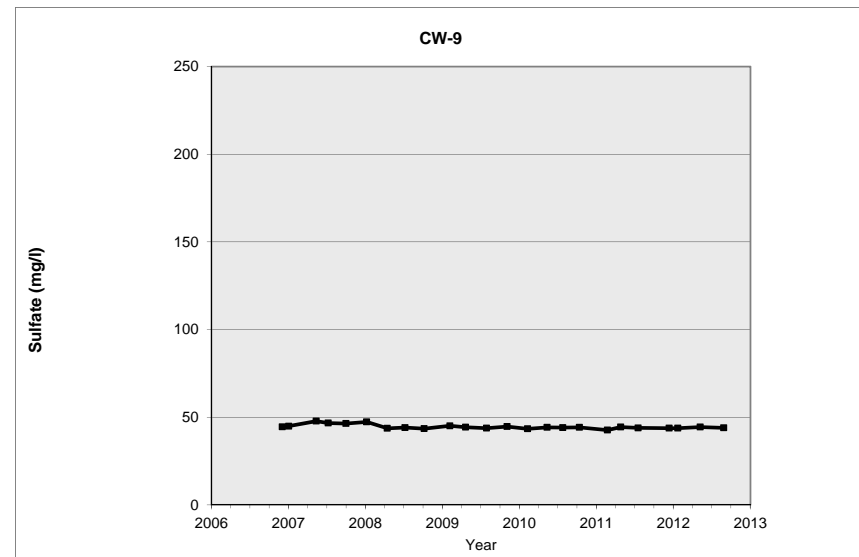
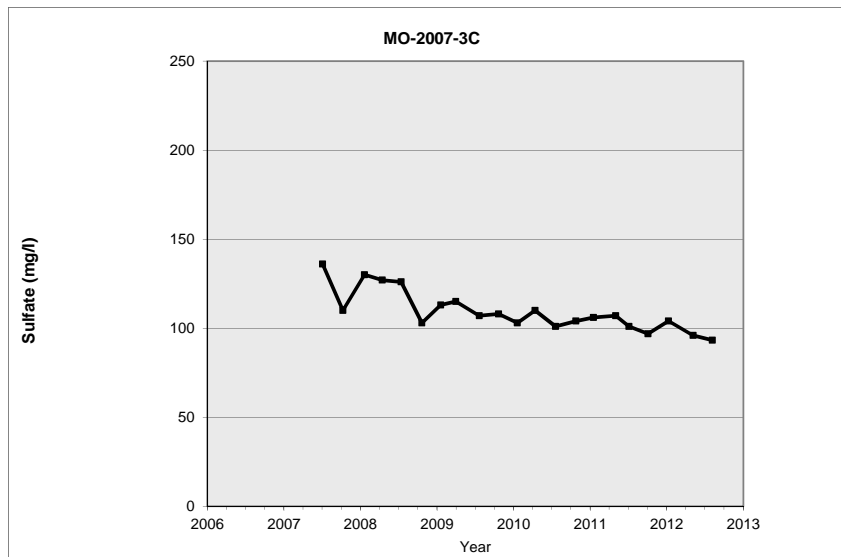
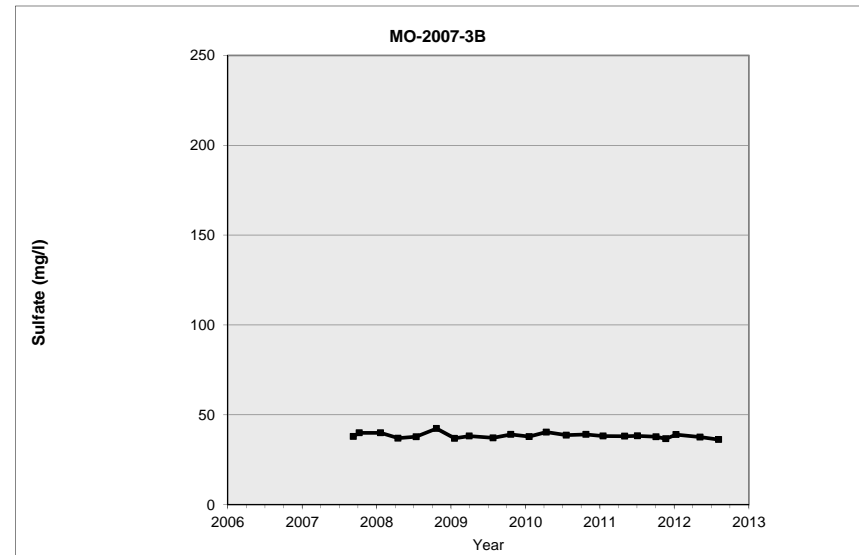
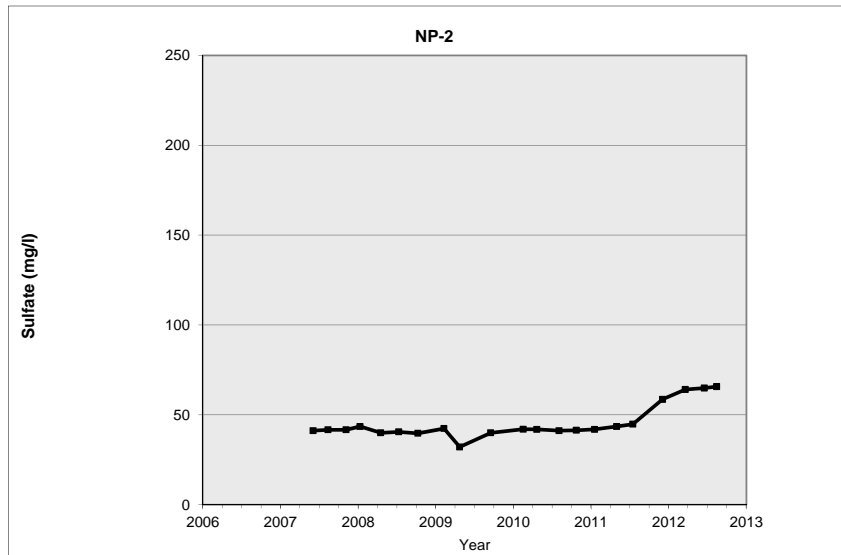


FIGURE C.3
SULFATE CONCENTRATION OVER TIME FOR WELLS MO-2009-1 AND CW-10

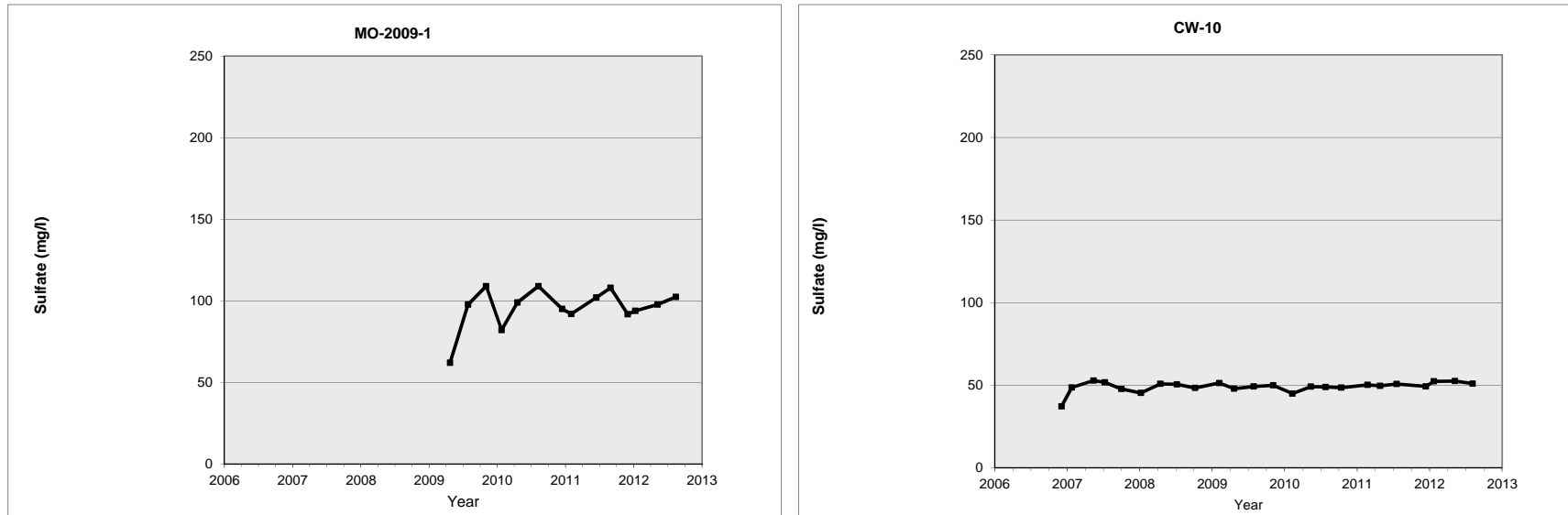


FIGURE C.4
SULFATE CONCENTRATION OVER TIME FOR WELLS
GV-01-GVDWID, GV-02-GVDWID, MO-2007-6A, AND MO-2007-6B

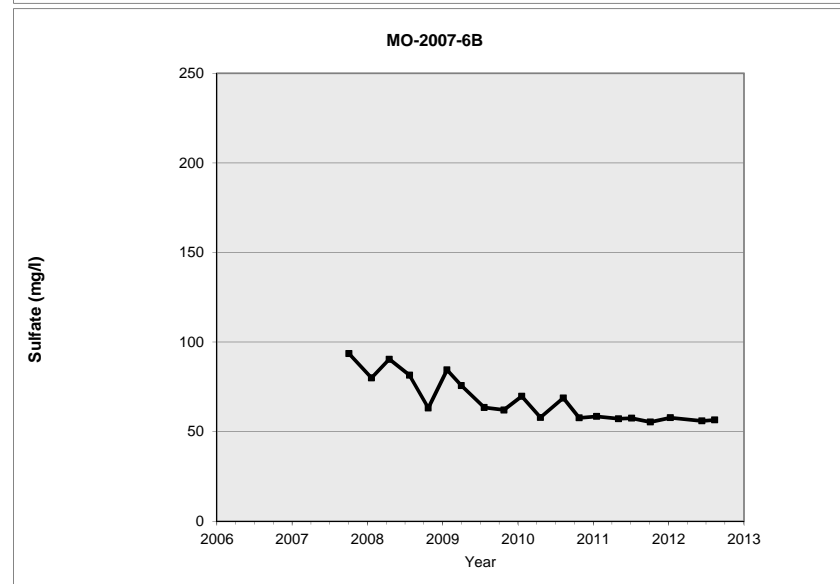
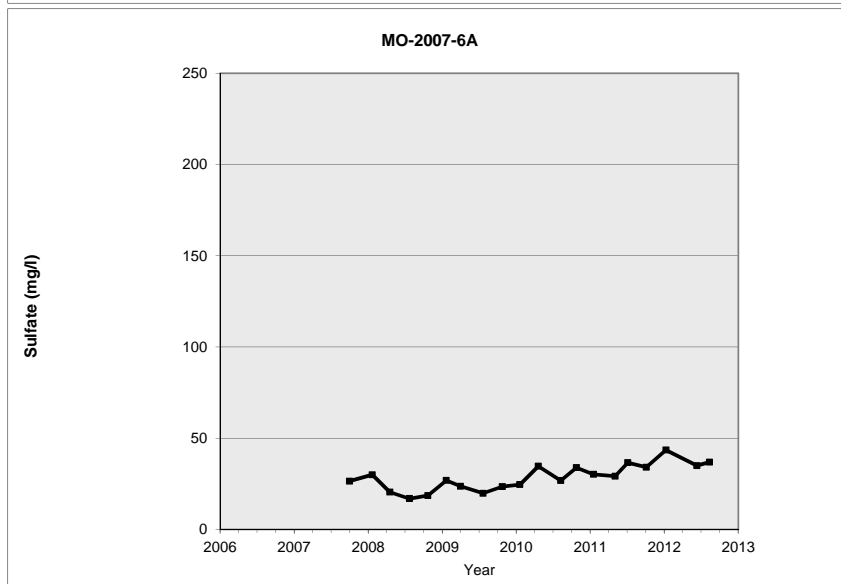
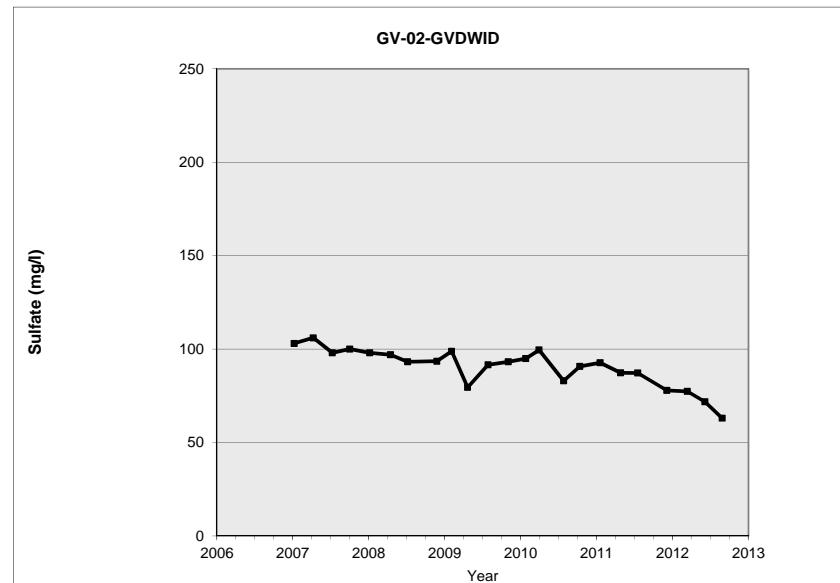
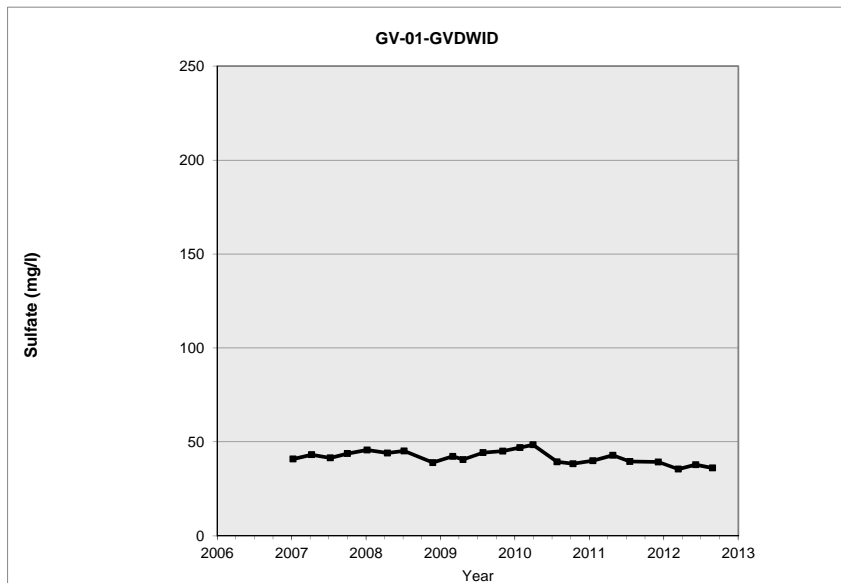


FIGURE C.5
SULFATE CONCENTRATION OVER TIME FOR WELLS
MO-2007-1A, MO-2007-1B, AND MO-2007-1C

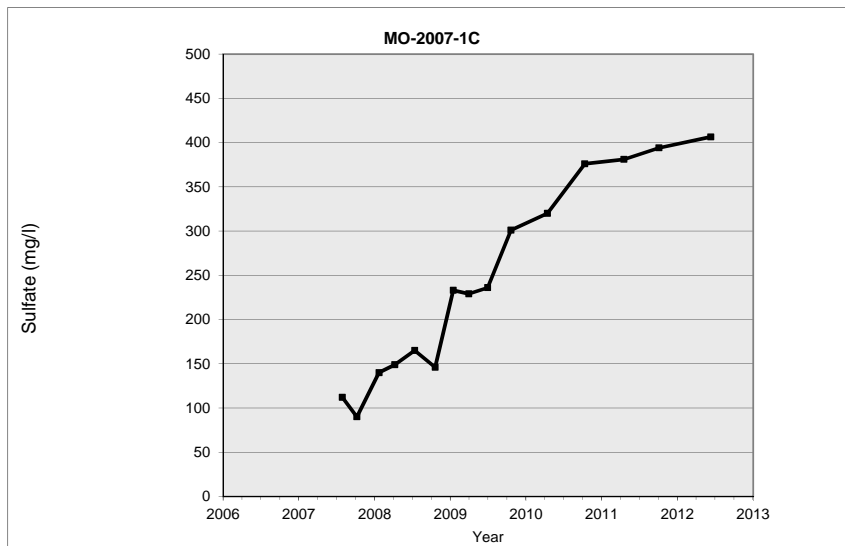
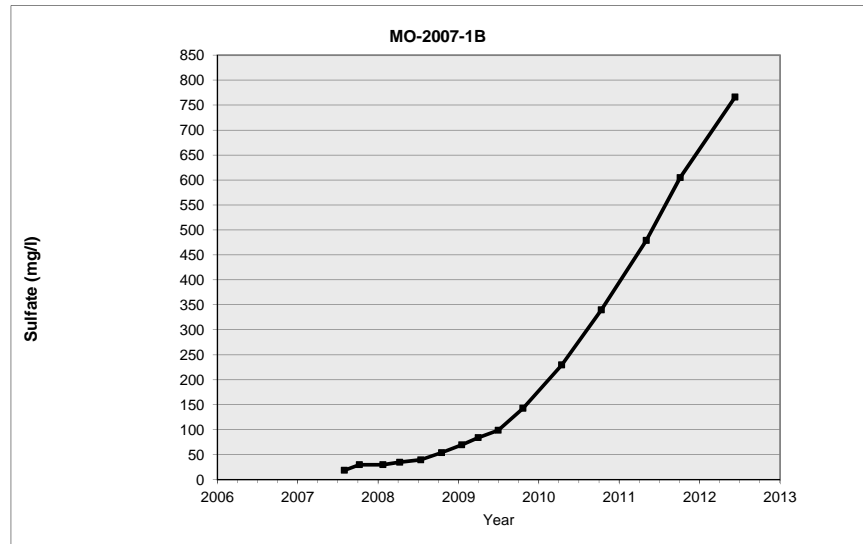
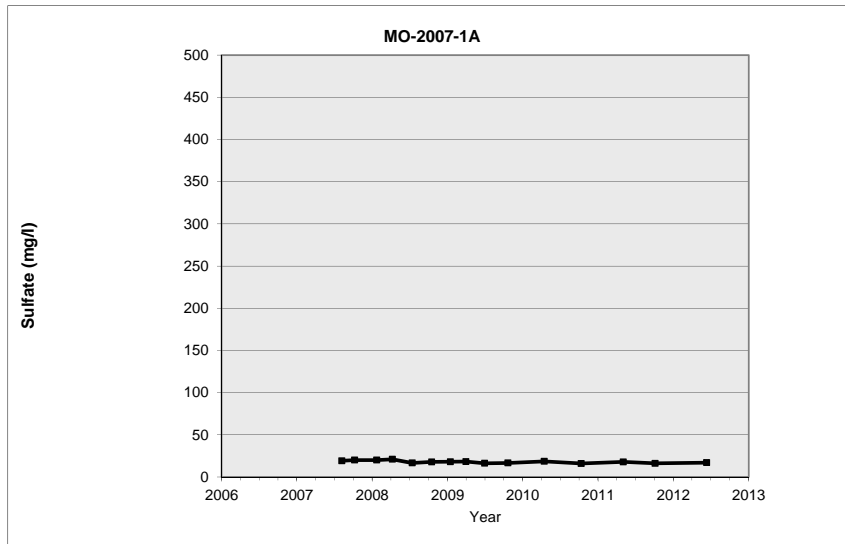
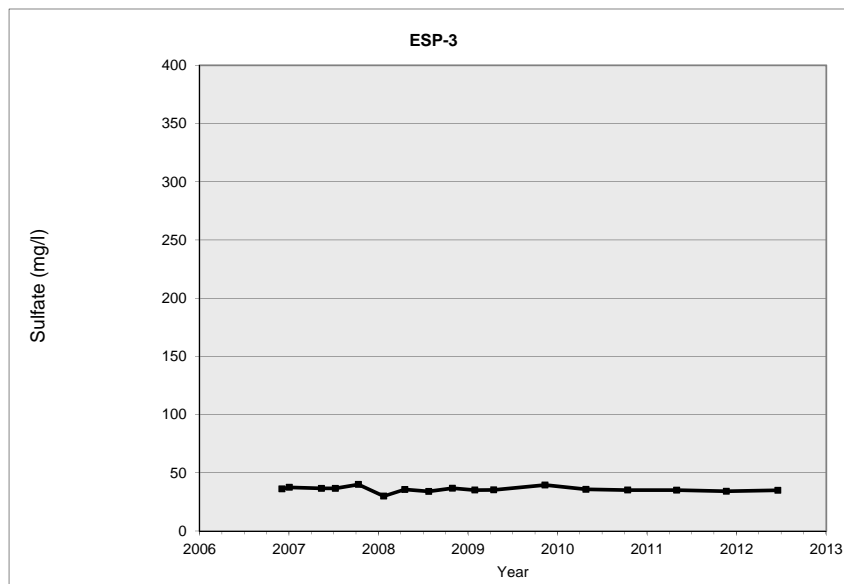
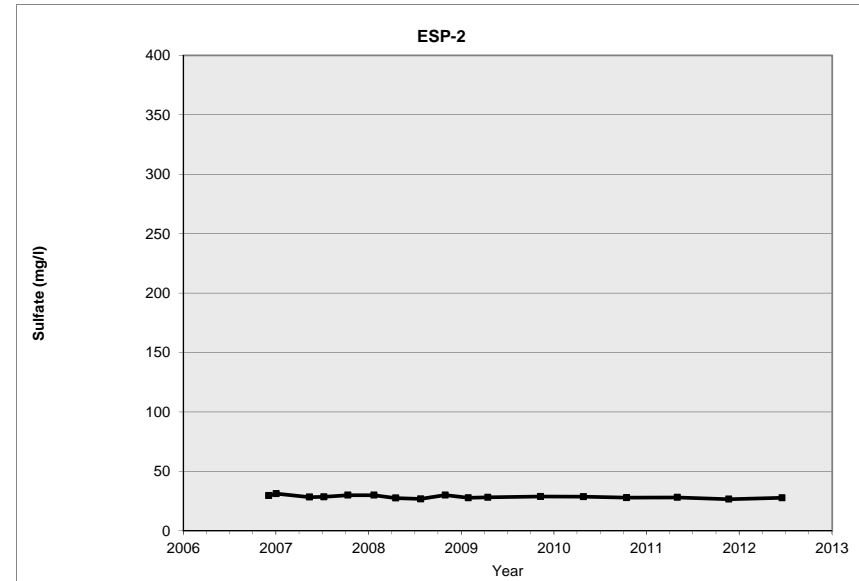
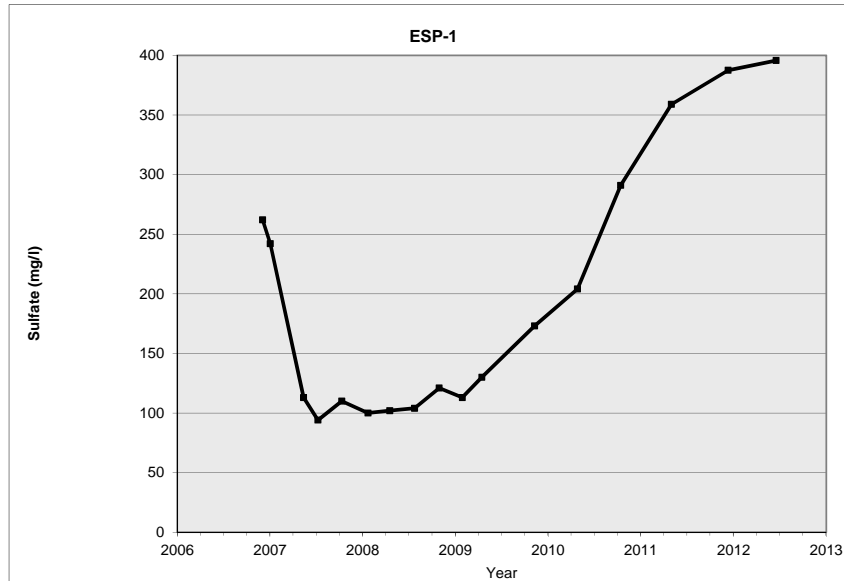
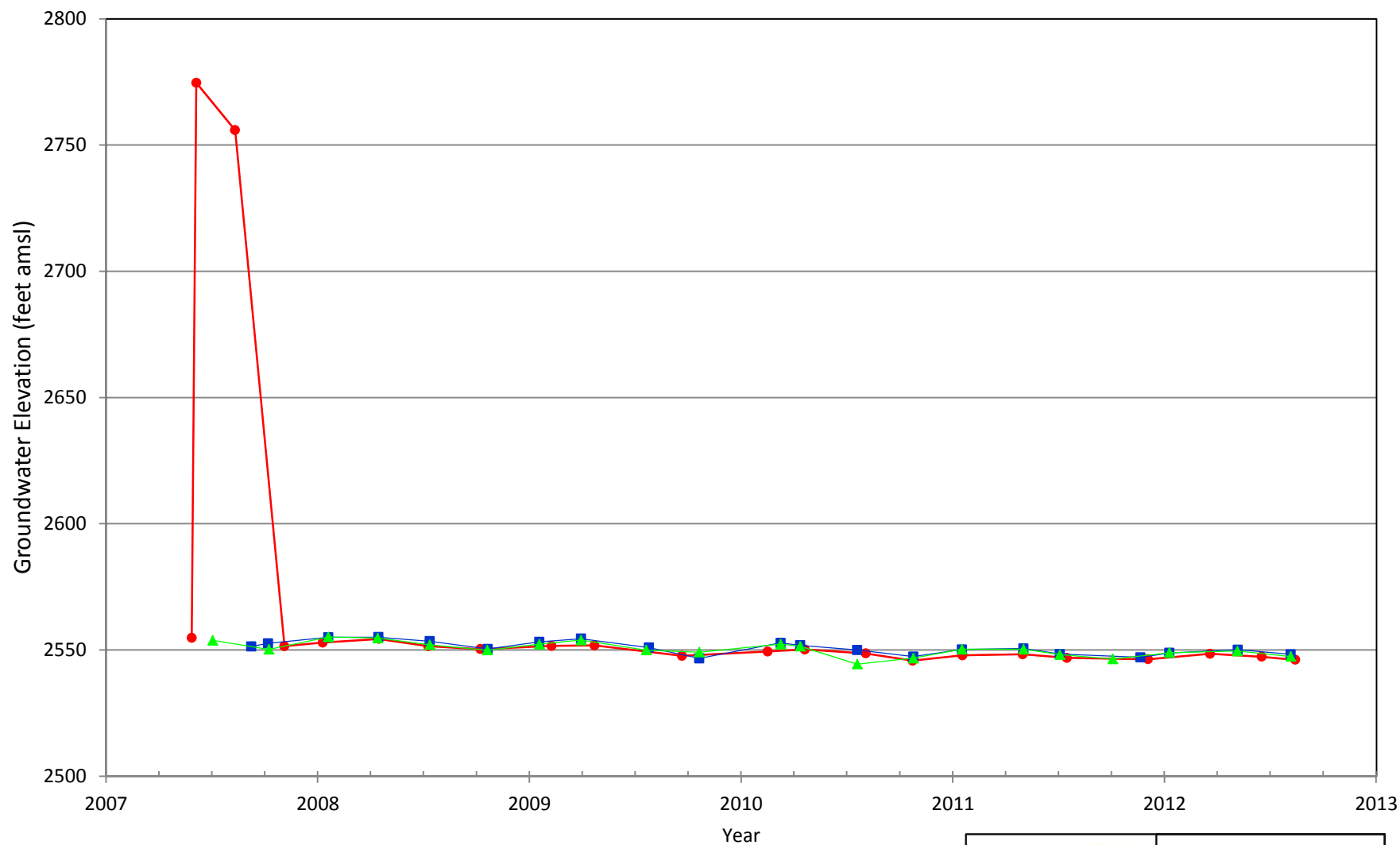



FIGURE C.6
SULFATE CONCENTRATION OVER TIME FOR WELLS
ESP-1, ESP-2, AND ESP-3

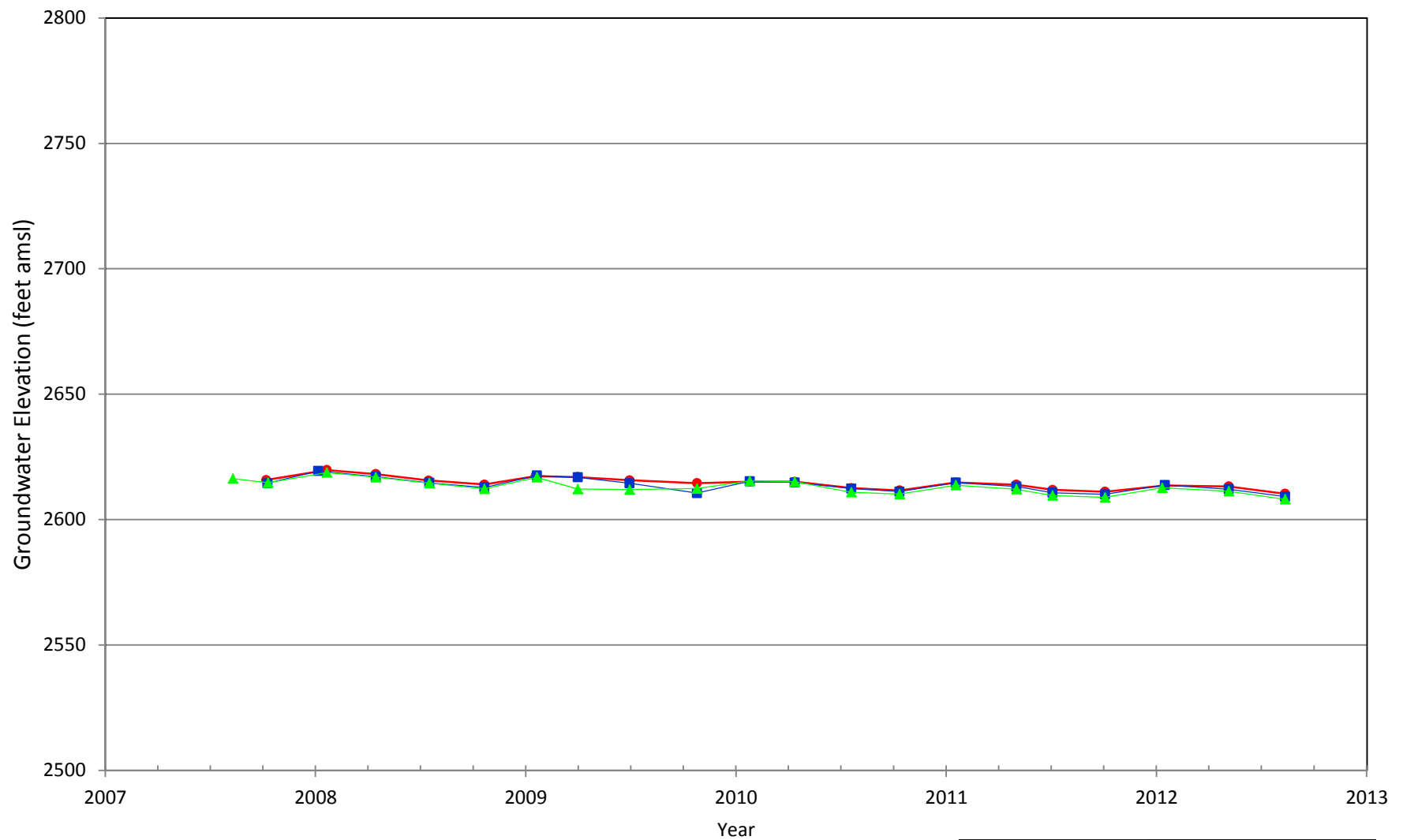


APPENDIX D


TIME SERIES GRAPHS OF GROUNDWATER ELEVATION

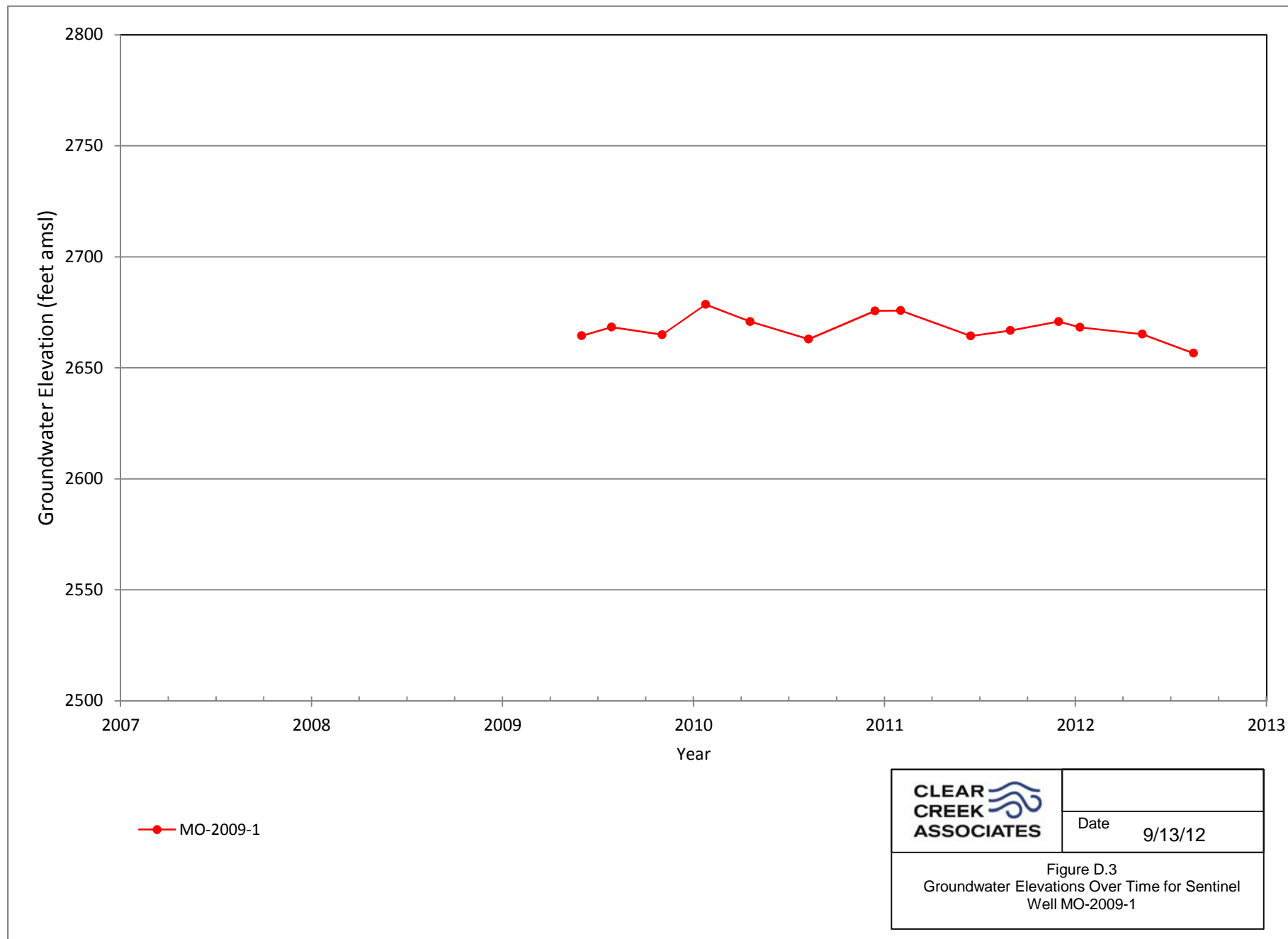


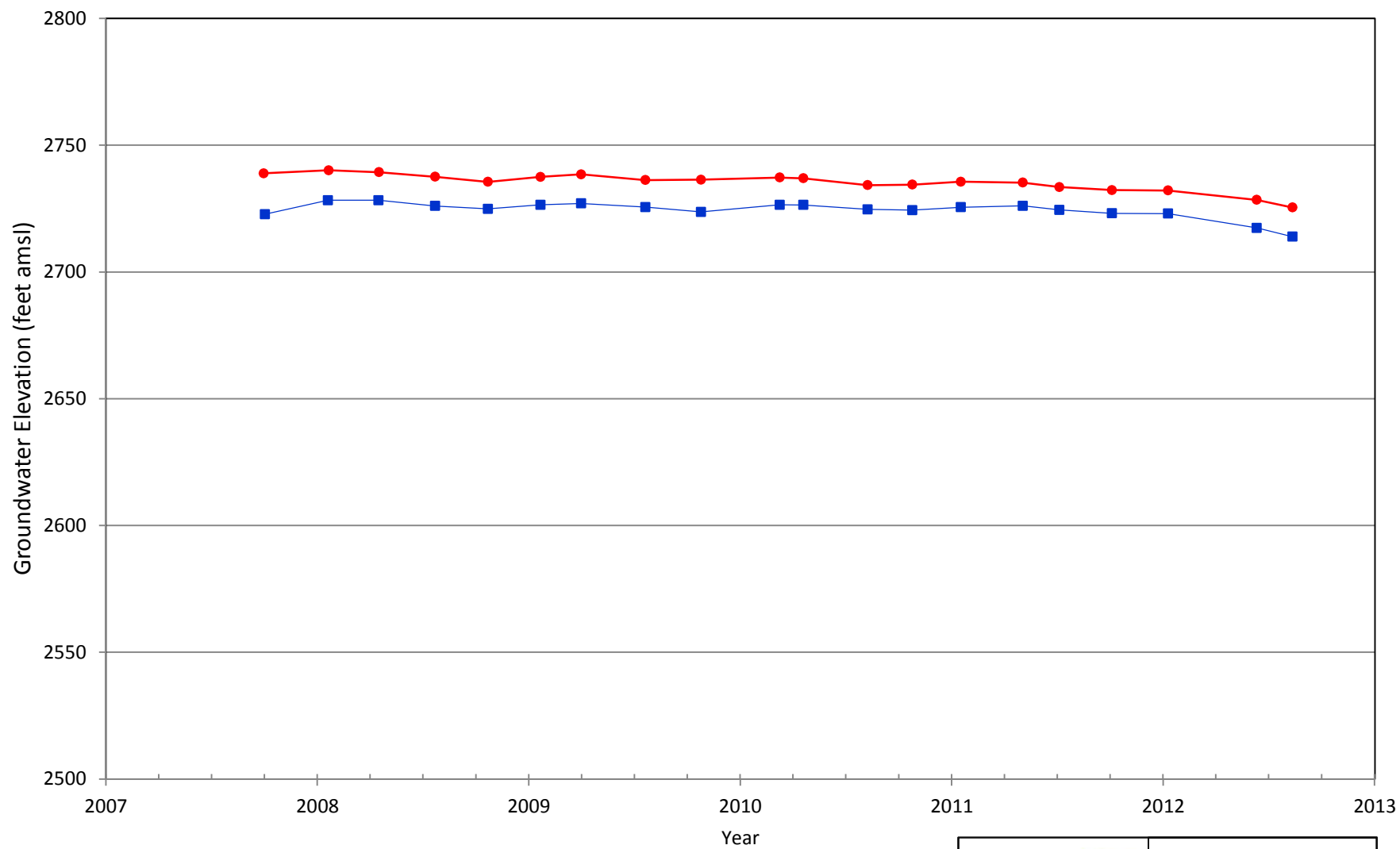
	Date
	9/13/12
<p>Figure D.1 Groundwater Elevations Over Time for Sentinel Wells NP-2, MO-2007-3B, and MO-2007-3C</p>	



MO-2007-4A
MO-2007-4B
MO-2007-4C

	Date
	9/13/12
<p>Figure D.2 Groundwater Elevations Over Time for Sentinel Wells MO-2007-4A, MO-2007-4B, and MO-2007-4C</p>	





—●— MO-2007-6A

—■— MO-2007-6B

**CLEAR
CREEK
ASSOCIATES**

Date 9/13/12

Figure D.4
Groundwater Elevations Over Time for Sentinel
Wells MO-2007-6A and MO-2007-6B

April 27, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS00000129

ACZ Project ID: L94048

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 13, 2012. This project has been assigned to ACZ's project number, L94048. 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 L94048. 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 27, 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.



FMI Gold & Copper - Sierrita

Project ID: ZS00000129

Sample ID: HW-5-

ACZ Sample ID: **L94048-01**

Date Sampled: 04/10/12 14:30

Date Received: 04/13/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	21.9			mg/L	0.4	2	04/20/12 23:58	pjb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS00000129

Sample ID: HW-5-IN-S-

ACZ Sample ID: **L94048-02**

Date Sampled: 04/10/12 15:02

Date Received: 04/13/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	33.3			mg/L	0.6	3	04/21/12 0:00	pjb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS00000129

Sample ID: HW-5-IN-N-

ACZ Sample ID: **L94048-03**

Date Sampled: 04/10/12 14:46

Date Received: 04/13/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.35			mg/L	0.02	0.1	04/21/12 0:01	pjb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS00000129
Sample ID: HW-5-DITCH

ACZ Sample ID: **L94048-04**
Date Sampled: 04/10/12 14:20
Date Received: 04/13/12
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	4.47			mg/L	0.06	0.3	04/21/12 0:02	pjb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS00000129

Sample ID: CAT POND #3

ACZ Sample ID: **L94048-05**

Date Sampled: 04/10/12 15:29

Date Received: 04/13/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	16.2			mg/L	0.3	2	04/21/12 0:03	pjb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS00000129

Sample ID: MH-19

ACZ Sample ID: **L94048-06**

Date Sampled: 04/12/12 11:40

Date Received: 04/13/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	04/25/12 21:18	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0053			mg/L	0.0005	0.002	04/25/12 21:18	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	04/26/12 11:56	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	04/25/12 21:18	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	04/18/12 19:24	aeb
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	04/18/12 19:24	aeb
Copper, dissolved	M200.7 ICP		U	*	mg/L	0.01	0.05	04/18/12 19:24	aeb
Lead, dissolved	M200.8 ICP-MS	0.0003	B		mg/L	0.0001	0.0005	04/25/12 21:18	msh
Magnesium, dissolved	M200.7 ICP	45.6			mg/L	0.2	1	04/18/12 19:24	aeb
Molybdenum, dissolved	M200.7 ICP	0.03	B		mg/L	0.01	0.05	04/18/12 19:24	aeb
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.0006	0.003	04/25/12 21:18	msh
Selenium, dissolved	M200.8 ICP-MS	0.0049			mg/L	0.0001	0.0003	04/25/12 21:18	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	04/25/12 21:18	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.5	B	*	mg/L	0.1	0.5	04/17/12 20:40	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	9.5			mg/L	0.1	0.5	04/21/12 0:08	pjb
Residue, Filterable (TDS) @180C	SM2540C	1680			mg/L	10	20	04/16/12 11:01	las
Sulfate	D516-02 - Turbidimetric	720		*	mg/L	20	100	04/24/12 10:10	ccp

Arizona license number: AZ0102

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS00000129

ACZ Project ID: **L94048**

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.02		.02048	mg/L	102.4	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0012	0.0012			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.01		.00942	mg/L	94.2	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.01	U	.01125	mg/L	112.5	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.01	U	.01033	mg/L	103.3	70	130	8.53	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.05208	mg/L	104.2	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0015	0.0015			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.05005		.05096	mg/L	101.8	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.05005	.0053	.05938	mg/L	108.1	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.05005	.0053	.05817	mg/L	105.6	70	130	2.06	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321708													
WG321708ICV	ICV	04/26/12 11:34	MS120416-2	.05		.05299	mg/L	106	90	110			
WG321708ICB	ICB	04/26/12 11:38				U	mg/L		-0.0003	0.0003			
WG321708LFB	LFB	04/26/12 11:43	MS120327-3	.0501		.04625	mg/L	92.3	85	115			
L94112-03AS	AS	04/26/12 12:40	MS120327-3	.0501	U	.04725	mg/L	94.3	70	130			
L94112-03ASD	ASD	04/26/12 12:44	MS120327-3	.0501	U	.04793	mg/L	95.7	70	130	1.43	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.04991	mg/L	99.8	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0003	0.0003			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.0501		.04742	mg/L	94.7	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.0501	U	.04757	mg/L	95	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.0501	U	.04619	mg/L	92.2	70	130	2.94	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321202													
WG321202ICV	ICV	04/18/12 17:39	II120112-3	2		1.981	mg/L	99.1	95	105			
WG321202ICB	ICB	04/18/12 17:45				U	mg/L		-0.03	0.03			
WG321202LFB	LFB	04/18/12 17:57	II120409-2	.5		.516	mg/L	103.2	85	115			
L94029-04AS	AS	04/18/12 18:47	II120409-2	.5	U	.503	mg/L	100.6	85	115			
L94029-04ASD	ASD	04/18/12 18:50	II120409-2	.5	U	.497	mg/L	99.4	85	115	1.2	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS00000129

ACZ Project ID: **L94048**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321202													
WG321202ICV	ICV	04/18/12 17:39	II120112-3	2		1.997	mg/L	99.9	95	105			
WG321202ICB	ICB	04/18/12 17:45				U	mg/L		-0.03	0.03			
WG321202LFB	LFB	04/18/12 17:57	II120409-2	.5		.505	mg/L	101	85	115			
L94029-04AS	AS	04/18/12 18:47	II120409-2	.5	.07	.565	mg/L	99	85	115			
L94029-04ASD	ASD	04/18/12 18:50	II120409-2	.5	.07	.561	mg/L	98.2	85	115	0.71	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321202													
WG321202ICV	ICV	04/18/12 17:39	II120112-3	2		2.003	mg/L	100.2	95	105			
WG321202ICB	ICB	04/18/12 17:45				U	mg/L		-0.03	0.03			
WG321202LFB	LFB	04/18/12 17:57	II120409-2	.5		.52	mg/L	104	85	115			
L94029-04AS	AS	04/18/12 18:47	II120409-2	.5	9.83	10.06	mg/L	46	85	115			M3
L94029-04ASD	ASD	04/18/12 18:50	II120409-2	.5	9.83	10.01	mg/L	36	85	115	0.5	20	M3

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321183													
WG321183ICV	ICV	04/17/12 10:02	WC120412-	2.002		1.91	mg/L	95.4	95	105			
WG321183ICB	ICB	04/17/12 10:09				U	mg/L		-0.3	0.3			
WG321187													
WG321187LFB1	LFB	04/17/12 13:51	WC120124-	5		5.03	mg/L	100.6	90	110			
WG321187LFB2	LFB	04/17/12 17:31	WC120124-	5		4.95	mg/L	99	90	110			
L94046-06AS	AS	04/17/12 19:47	WC120124-	5	.1	5.15	mg/L	101	90	110			
L94046-06DUP	DUP	04/17/12 19:55			.1	.11	mg/L				9.5	20	RA

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.04833	mg/L	96.7	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0003	0.0003			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.05005		.04734	mg/L	94.6	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.05005	.0003	.05289	mg/L	105.1	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.05005	.0003	.05069	mg/L	100.7	70	130	4.25	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321202													
WG321202ICV	ICV	04/18/12 17:39	II120112-3	100		102.38	mg/L	102.4	95	105			
WG321202ICB	ICB	04/18/12 17:45				U	mg/L		-0.6	0.6			
WG321202LFB	LFB	04/18/12 17:57	II120409-2	50.0051		53.03	mg/L	106	85	115			
L94029-04AS	AS	04/18/12 18:47	II120409-2	50.0051	47	100.2	mg/L	106.4	85	115			
L94029-04ASD	ASD	04/18/12 18:50	II120409-2	50.0051	47	99.65	mg/L	105.3	85	115	0.55	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS00000129

ACZ Project ID: **L94048**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321202													
WG321202ICV	ICV	04/18/12 17:39	II120112-3	2		2.026	mg/L	101.3	95	105			
WG321202ICB	ICB	04/18/12 17:45				U	mg/L		-0.03	0.03			
WG321202LFB	LFB	04/18/12 17:57	II120409-2	.5		.526	mg/L	105.2	85	115			
L94029-04AS	AS	04/18/12 18:47	II120409-2	.5	U	.521	mg/L	104.2	85	115			
L94029-04ASD	ASD	04/18/12 18:50	II120409-2	.5	U	.514	mg/L	102.8	85	115	1.35	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.05133	mg/L	102.7	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0018	0.0018			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.05005		.04794	mg/L	95.8	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.05005	U	.04564	mg/L	91.2	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.05005	U	.04479	mg/L	89.5	70	130	1.88	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321438													
WG321438ICV	ICV	04/20/12 18:50	WI120405-3	2.416		2.365	mg/L	97.9	90	110			
WG321438ICB	ICB	04/20/12 18:51				U	mg/L		-0.06	0.06			
WG321443													
WG321443LFB1	LFB	04/20/12 23:10	WI120211-3	2		2.079	mg/L	104	90	110			
L94046-05AS	AS	04/20/12 23:29	WI120211-3	2	.27	2.435	mg/L	108.3	90	110			
L94046-06DUP	DUP	04/20/12 23:31			.26	.269	mg/L				3.4	20	
WG321443LFB2	LFB	04/20/12 23:44	WI120211-3	2		2.046	mg/L	102.3	90	110			
L94048-05AS	AS	04/21/12 0:07	WI120211-3	30	16.2	48.19	mg/L	106.6	90	110			
L94048-06DUP	DUP	04/21/12 0:09			9.5	9.47	mg/L				0.3	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321122													
WG321122PBW	PBW	04/16/12 10:45				U	mg/L		-20	20			
WG321122LCSW	LCSW	04/16/12 10:46	PCN39018	260		254	mg/L	97.7	80	120			
L94061-03DUP	DUP	04/16/12 11:14			180	174	mg/L				3.4	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.05215	mg/L	104.3	90	110			
WG321579ICB	ICB	04/25/12 19:52				U	mg/L		-0.0003	0.0003			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.05005		.0492	mg/L	98.3	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.05005	.0049	.06085	mg/L	111.8	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.05005	.0049	.057	mg/L	104.1	70	130	6.53	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS00000129

ACZ Project ID: **L94048**

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321546													
WG321546ICB	ICB	04/24/12 9:01				U	mg/L		-3	3			
WG321546ICV	ICV	04/24/12 9:01	WI120423-8	20		18.9	mg/L	94.5	90	110			
WG321546LFB	LFB	04/24/12 9:55	WI111111-3	10.03		9.8	mg/L	97.7	90	110			
L94049-01AS	AS	04/24/12 10:47	SO4TURB5	10	89	97.1	mg/L	81	90	110			M3
L94048-06DUP	DUP	04/24/12 11:30			720	714	mg/L				0.8	20	

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321579													
WG321579ICV	ICV	04/25/12 19:47	MS120416-2	.05		.04929	mg/L	98.6	90	110			
WG321579ICB	ICB	04/25/12 19:52				.00011	mg/L		-0.0003	0.0003			
WG321579LFB	LFB	04/25/12 19:56	MS120327-3	.05005		.04731	mg/L	94.5	85	115			
L94048-06AS	AS	04/25/12 21:22	MS120327-3	.05005	U	.05294	mg/L	105.8	70	130			
L94048-06ASD	ASD	04/25/12 21:35	MS120327-3	.05005	U	.05115	mg/L	102.2	70	130	3.44	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94048**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94048-06	WG321202	Copper, 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.
	WG321187	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).
	WG321546	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94048**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS00000129

ACZ Project ID: L94048
Date Received: 04/13/2012 10:24
Received By: ksj
Date Printed: 4/16/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
2442		2.8	16

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

Notes

FMI Gold & Copper - Sierrita
ZS00000129

ACZ Project ID: L94048
Date Received: 04/13/2012 10:24
Received By: ksj
Date Printed: 4/16/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94048-01	HW-5-				Y							<input type="checkbox"/>
L94048-02	HW-5-IN-S-				Y							<input type="checkbox"/>
L94048-03	HW-5-IN-N-				Y							<input type="checkbox"/>
L94048-04	HW-5-DITCH				Y							<input type="checkbox"/>
L94048-05	CAT POND #3				Y							<input type="checkbox"/>
L94048-06	MH-19				Y							<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj



Laboratories, Inc.

L94048

CHAIN OF CUSTODY

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

Name: Jon Anderson
 Company: Freeport-McMoran Sierra Inc.
 E-mail: jona.than-anderson@fmi.com

Address: 6200 W. Duval Mine Road
Green Valley, AZ 85614
 Telephone: 520-393-2714

Name: Ben Daigneau
 Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com
 Telephone: 520-622-3222

Name:
 Company:
 E-mail:

Address:
 Telephone:

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

YES ☐
 NO ☐

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

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☒

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

Sampler's Name: Robert Carper Sampler's site Information State AZ Zip code 85644 Time Zone ☐

Quote #:

Project/PO #: 25000000 129

Reporting state for compliance testing:

Check box if samples include NRC licensed material? ☐

				# of Containers	Monthly	Quarterly							
HW-5-	4-10-12	14:30	GW	1	X								
HW-5-IN-5-	4-10-12	15:02	GW	1	X								
HW-5-IN-N-	4-10-12	14:46	GW	1	X								
HW-5-Ditch	4-10-12	14:20	GW	1	X								
CAT Pond #3	4-10-12	15:29	GW	1	X								
MH-19	4-12-12	11:40	GW	3		X							

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

Nitrate results go to Ben Daigneau
 UPS TRACKING # 1Z 867 7E4 23 1000 7858

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

Robert Carper

4-12-12

L94048 Chain of Custody

May 09, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001JL

ACZ Project ID: L94262

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 27, 2012. This project has been assigned to ACZ's project number, L94262. Please reference this number in all future inquiries.

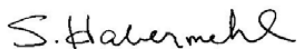
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L94262. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 09, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001JL

Sample ID: PZ-8

ACZ Sample ID: **L94262-01**

Date Sampled: 04/26/12 09:21

Date Received: 04/27/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	344.9			mg/L	5	25	05/04/12 13:31	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001JL

Sample ID: MH-30

ACZ Sample ID: **L94262-02**

Date Sampled: 04/26/12 12:07

Date Received: 04/27/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1738			mg/L	100	500	05/04/12 14:13	ccp

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001JL

ACZ Project ID: **L94262**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321877													
WG321877ICV	ICV	05/03/12 14:48	WI120406-1	50.15		51.43	mg/L	102.6	90	110			
WG321877ICB	ICB	05/03/12 15:09				U	mg/L		-1.5	1.5			
WG322155													
WG322155LFB1	LFB	05/04/12 13:10	WI120312-2	30		29.93	mg/L	99.8	90	110			
L94262-01DUP	DUP	05/04/12 13:52			344.9	337.5	mg/L				2.2	20	
L94262-02AS	AS	05/04/12 14:34	WI120312-2	6000	1738	7676	mg/L	99	90	110			
WG322155LFB2	LFB	05/04/12 23:22	WI120312-2	30		29.76	mg/L	99.2	90	110			
WG322155LFB1	LFB	05/07/12 13:12	WI120312-2	30		30.22	mg/L	100.7	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94262**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94262**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
 ZS000001JL

ACZ Project ID: L94262
 Date Received: 04/27/2012 09:47
 Received By: gac
 Date Printed: 4/30/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
3162	4.7	15

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

Notes

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L94262
Date Received: 04/27/2012 09:47
Received By: gac
Date Printed: 4/30/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94262-01	PZ-8									X		<input type="checkbox"/>
L94262-02	MH-30									X		<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac



Laboratories, Inc.

L94262

CHAIN OF CUSTODY

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

Name: Jon Anderson
Company: Freepart - McMoran Inc.
E-mail: jonathan-anderson@fmi.com

Address: 6200 W. Duval Mine Road
Green Valley, AZ 85614
Telephone: 520-393-2714

Name: Benjamin J. Daigneau
Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com
Telephone:

Name:
Company:
E-mail:

Address:
Telephone:

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

YES ☐
NO ☐

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: Ruth Cuy Sampler's site information State AZ Zip code Time Zone

Quote #:
Project/PO #: 250000015L
Reporting state for compliance testing:
Are any samples NRC licensable material? Yes / No

of Containers

504

P2-8	4/26/12	0921	GW	1
MH-30	4/26/12	1207	GW	1

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

UPS Tracking # 1Z 867 7EH 231600 7876
Ben - sulfates only report
e
Clear creek

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

<u>Ruth Cuy</u>	<u>4/26/2012</u>	<u>AKC</u>	<u>4/27/12</u>	<u>0917</u>
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L94262 Chain of Custody

May 11, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L94382

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 04, 2012. This project has been assigned to ACZ's project number, L94382. Please reference this number in all future inquiries.

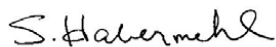
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L94382. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 11, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-2

ACZ Sample ID: **L94382-01**

Date Sampled: 05/02/12 13:29

Date Received: 05/04/12

Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	543.5			mg/L	5	25	05/09/12 17:28	ccp

Arizona license number: AZ0102

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - SierritaACZ Project ID: **L94382**

Project ID: ZS000001Z9

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321877													
WG321877ICV	ICV	05/03/12 14:48	WI120406-1	50.15		51.43	mg/L	102.6	90	110			
WG321877ICB	ICB	05/03/12 15:09				U	mg/L		-1.5	1.5			
WG322362													
WG322362LFB	LFB	05/09/12 16:24	WI120312-2	30		30.02	mg/L	100.1	90	110			
L94300-02DUP	DUP	05/09/12 17:06			116.87	114.99	mg/L				1.6	20	
L94382-01AS	AS	05/09/12 17:49	WI120312-2	300	543.5	836.4	mg/L	97.6	90	110			

FMI Gold & Copper - SierritaACZ Project ID: **L94382**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94382**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94382
Date Received: 05/04/2012 09:00
Received By: ksj
Date Printed: 5/7/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
3049	5.9	15

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

Notes

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94382
Date Received: 05/04/2012 09:00
Received By: ksj
Date Printed: 5/7/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94382-01	MO-2007-2									X		<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj

May 29, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L94511

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 11, 2012. This project has been assigned to ACZ's project number, L94511. Please reference this number in all future inquiries.

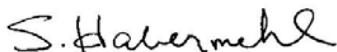
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L94511. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 29, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-4A

ACZ Sample ID: **L94511-01**

Date Sampled: 05/07/12 09:32

Date Received: 05/11/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	35.62			mg/L	0.5	2.5	05/18/12 9:08	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-4C

ACZ Sample ID: **L94511-02**

Date Sampled: 05/07/12 11:59

Date Received: 05/11/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	91.70			mg/L	0.5	2.5	05/18/12 9:30	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-4B

ACZ Sample ID: **L94511-03**

Date Sampled: 05/07/12 13:47

Date Received: 05/11/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.25			mg/L	0.5	2.5	05/18/12 9:51	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-3C

ACZ Sample ID: **L94511-04**

Date Sampled: 05/07/12 17:14

Date Received: 05/11/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	95.99			mg/L	2.5	12.5	05/18/12 10:12	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-3B

ACZ Sample ID: **L94511-05**

Date Sampled: 05/08/12 10:21

Date Received: 05/11/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	37.64			mg/L	0.5	2.5	05/18/12 10:33	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: CW-10

ACZ Sample ID: **L94511-06**

Date Sampled: 05/09/12 09:02

Date Received: 05/11/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	52.51			mg/L	0.5	2.5	05/26/12 1:52	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: CW-6

ACZ Sample ID: **L94511-07**

Date Sampled: 05/09/12 10:00

Date Received: 05/11/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	80.99			mg/L	2.5	12.5	05/26/12 2:34	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: CW-9

ACZ Sample ID: **L94511-08**

Date Sampled: 05/09/12 10:58

Date Received: 05/11/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	44.39			mg/L	0.5	2.5	05/26/12 3:16	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2009-1

ACZ Sample ID: **L94511-09**

Date Sampled: 05/09/12 14:57

Date Received: 05/11/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	97.69			mg/L	0.5	2.5	05/26/12 3:37	ccp

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94511**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322421													
WG322421ICV	ICV	05/11/12 14:11	WI120406-1	50.15		51.23	mg/L	102.2	90	110			
WG322421ICB	ICB	05/11/12 14:33				U	mg/L		-1.5	1.5			
WG322819													
WG322819LFB	LFB	05/18/12 0:42	WI120312-2	30		29.78	mg/L	99.3	90	110			
L94459-14DUP	DUP	05/18/12 6:20			10.91	10.9	mg/L				0.1	20	
L94459-15AS	AS	05/18/12 7:02	WI120312-2	30	9.79	40.11	mg/L	101.1	90	110			
WG323366													
WG323366LFB	LFB	05/26/12 1:31	WI120312-2	30		29.43	mg/L	98.1	90	110			
L94511-06DUP	DUP	05/26/12 2:13			52.51	52.54	mg/L				0.1	20	
L94511-07AS	AS	05/26/12 2:55	WI120312-2	150	80.99	228.56	mg/L	98.4	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94511**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94511**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94511
Date Received: 05/11/2012 10:05
Received By: ksj
Date Printed: 5/14/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
3283	4.5	13

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

Notes

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94511
Date Received: 05/11/2012 10:05
Received By: ksj
Date Printed: 5/14/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94511-01	MO-2007-4A									X		<input type="checkbox"/>
L94511-02	MO-2007-4C									X		<input type="checkbox"/>
L94511-03	MO-2007-4B									X		<input type="checkbox"/>
L94511-04	MO-2007-3C									X		<input type="checkbox"/>
L94511-05	MO-2007-3B									X		<input type="checkbox"/>
L94511-06	CW-10									X		<input type="checkbox"/>
L94511-07	CW-6									X		<input type="checkbox"/>
L94511-08	CW-9									X		<input type="checkbox"/>
L94511-09	MO-2009-1									X		<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj



Laboratories, Inc.

L94511

CHAIN OF CUSTODY

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

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

X

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

PROJECT INFORMATION

ANALYTES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001Z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE/TIME

Matrix

of Containers

SO4 by EPA 300 or EPA 375

MO-2007-4A

5/7/12 : 0932

GW

1

X

MO-2007-4C

5/7/12 : 1159

GW

1

X

MO-2007-4B

5/7/12 : 1347

GW

1

X

MO-2007-3C

5/7/12 : 1714

GW

1

X

MO-2007-3B

5/8/12 : 1021

GW

1

X

CW-10

5/9/12 : 0902

GW

1

X

CW-6

5/9/12 : 1000

GW

1

X

CW-9

5/9/12 : 1058

GW

1

X

MO-2009-1

5/9/12 : 1457

GW

1

X

Matrix

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

REMARKS

UPS Tracking #1Z 867 7E4 23 1000 8115

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

RELINQUISHED BY:

DATE/TIME

RECEIVED BY:

DATE/TIME

ALEXIS ALVAREZ

5/10/12 : 1400

AKR 5/10/12

1005

L94511 Chain of Custody

May 31, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L94664

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 18, 2012. This project has been assigned to ACZ's project number, L94664. Please reference this number in all future inquiries.

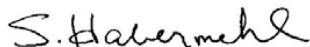
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L94664. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after June 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: TMM-1

ACZ Sample ID: **L94664-01**

Date Sampled: 05/15/12 10:37

Date Received: 05/18/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	7.93			mg/L	0.5	2.5	05/23/12 16:52	ccp

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94664**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322421													
WG322421ICV	ICV	05/11/12 14:11	WI120406-1	50.15		51.23	mg/L	102.2	90	110			
WG322421ICB	ICB	05/11/12 14:33				U	mg/L		-1.5	1.5			
WG323102													
WG323102LFB	LFB	05/23/12 11:36	WI120312-2	30		29.85	mg/L	99.5	90	110			
L94664-01DUP	DUP	05/23/12 17:13			7.93	7.93	mg/L				0	20	
L94668-02AS	AS	05/24/12 17:35	WI120312-2	300	365	666.1	mg/L	100.4	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94664**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94664**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94664
Date Received: 05/18/2012 10:12
Received By: ksj
Date Printed: 5/21/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
2902		3.6	14

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

Notes

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94664
Date Received: 05/18/2012 10:12
Received By: ksj
Date Printed: 5/21/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94664-01	TMM-1									X		<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj



References

Name: Jon Anderson	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: jonathan_anderson@fmi.com	Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

1. $\frac{1}{2} \log \frac{1}{2}$ (1) (2) (3) (4)

Name:		Address:
Company:		
E-mail:		Telephone:

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

YES

NC

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

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

Are samples for CO DW Compliance Monitoring?

YES

NC

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

PROJECT INFORMATION

ANY VGE'S RI-OFF SHED *attach* *ext* *in* *use* *quite* *months*

[illegible]

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

UPS Tracking #1Z 867 7E4 23 1000 8106

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

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
Alexis Alvarez <i>[Signature]</i>	5/17/12 : 1430	<i>AKC</i> 5/18/12	1012

June 06, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L94787

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 25, 2012. This project has been assigned to ACZ's project number, L94787. Please reference this number in all future inquiries.

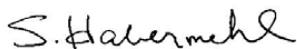
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L94787. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 06, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-23

ACZ Sample ID: **L94787-01**

Date Sampled: 05/22/12 10:23

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	05/31/12 23:47	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	B	*	mg/L	0.001	0.004	05/31/12 23:47	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:47	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:47	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:37	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:37	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:37	jic
Lead, dissolved	M200.8 ICP-MS	0.0007	B		mg/L	0.0002	0.001	05/31/12 23:47	msh
Magnesium, dissolved	M200.7 ICP	108			mg/L	0.4	2	05/30/12 20:37	jic
Molybdenum, dissolved	M200.7 ICP	0.07	B		mg/L	0.02	0.1	05/30/12 20:37	jic
Nickel, dissolved	M200.8 ICP-MS	0.001	B		mg/L	0.001	0.006	05/31/12 23:47	msh
Selenium, dissolved	M200.8 ICP-MS	0.0014			mg/L	0.0002	0.0005	05/31/12 23:47	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:47	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	05/31/12 13:27	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.76			mg/L	0.02	0.1	06/02/12 15:10	pjb
Residue, Filterable (TDS) @180C	SM2540C	3040			mg/L	10	20	05/25/12 15:01	abm
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/05/12 15:30	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-10

ACZ Sample ID: **L94787-02**

Date Sampled: 05/22/12 10:33

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	05/31/12 23:50	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	B	*	mg/L	0.001	0.004	05/31/12 23:50	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:50	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:50	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:47	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:47	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:47	jjc
Lead, dissolved	M200.8 ICP-MS	0.0009	B		mg/L	0.0002	0.001	05/31/12 23:50	msh
Magnesium, dissolved	M200.7 ICP	106			mg/L	0.4	2	05/30/12 20:47	jjc
Molybdenum, dissolved	M200.7 ICP	0.10			mg/L	0.02	0.1	05/30/12 20:47	jjc
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	05/31/12 23:50	msh
Selenium, dissolved	M200.8 ICP-MS	0.0011			mg/L	0.0002	0.0005	05/31/12 23:50	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:50	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	05/31/12 13:48	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.70			mg/L	0.02	0.1	06/02/12 15:12	pjb
Residue, Filterable (TDS) @180C	SM2540C	3100			mg/L	10	20	05/25/12 15:01	abm
Sulfate	D516-02 - Turbidimetric	1700		*	mg/L	100	500	06/05/12 15:31	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-22

ACZ Sample ID: **L94787-03**

Date Sampled: 05/22/12 10:46

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	05/31/12 23:53	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	B	*	mg/L	0.001	0.004	05/31/12 23:53	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:53	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:53	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:50	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:50	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:50	jjc
Lead, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0002	0.001	05/31/12 23:53	msh
Magnesium, dissolved	M200.7 ICP	97.6			mg/L	0.4	2	05/30/12 20:50	jjc
Molybdenum, dissolved	M200.7 ICP	0.15			mg/L	0.02	0.1	05/30/12 20:50	jjc
Nickel, dissolved	M200.8 ICP-MS	0.001	B		mg/L	0.001	0.006	05/31/12 23:53	msh
Selenium, dissolved	M200.8 ICP-MS	0.0016			mg/L	0.0002	0.0005	05/31/12 23:53	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:53	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	05/31/12 13:52	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.68			mg/L	0.02	0.1	06/02/12 15:15	pjb
Residue, Filterable (TDS) @180C	SM2540C	3110			mg/L	10	20	05/25/12 15:02	abm
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/05/12 15:31	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-11

ACZ Sample ID: **L94787-04**

Date Sampled: 05/22/12 10:58

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	05/31/12 23:57	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	B	*	mg/L	0.001	0.004	05/31/12 23:57	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:57	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:57	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:53	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:53	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:53	jic
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:57	msh
Magnesium, dissolved	M200.7 ICP	104			mg/L	0.4	2	05/30/12 20:53	jic
Molybdenum, dissolved	M200.7 ICP	0.19			mg/L	0.02	0.1	05/30/12 20:53	jic
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	05/31/12 23:57	msh
Selenium, dissolved	M200.8 ICP-MS	0.0015			mg/L	0.0002	0.0005	05/31/12 23:57	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	05/31/12 23:57	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	05/31/12 13:55	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.69			mg/L	0.02	0.1	06/02/12 15:16	pjb
Residue, Filterable (TDS) @180C	SM2540C	3010			mg/L	10	20	05/25/12 15:03	abm
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/05/12 15:32	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-28

ACZ Sample ID: **L94787-05**

Date Sampled: 05/22/12 11:15

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 0:06	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	B	*	mg/L	0.001	0.004	06/01/12 0:06	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:06	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:06	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:56	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:56	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:56	jic
Lead, dissolved	M200.8 ICP-MS	0.0003	B		mg/L	0.0002	0.001	06/01/12 0:06	msh
Magnesium, dissolved	M200.7 ICP	119			mg/L	0.4	2	05/30/12 20:56	jic
Molybdenum, dissolved	M200.7 ICP	0.04	B		mg/L	0.02	0.1	05/30/12 20:56	jic
Nickel, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.006	06/01/12 0:06	msh
Selenium, dissolved	M200.8 ICP-MS	0.0018			mg/L	0.0002	0.0005	06/01/12 0:06	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:06	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	05/31/12 13:59	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.00			mg/L	0.02	0.1	06/02/12 15:17	pjb
Residue, Filterable (TDS) @180C	SM2540C	3030			mg/L	10	20	05/25/12 15:03	abm
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/05/12 15:32	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-6A

ACZ Sample ID: **L94787-06**

Date Sampled: 05/22/12 11:49

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 0:10	msh
Arsenic, dissolved	M200.8 ICP-MS		U	*	mg/L	0.001	0.004	06/01/12 0:10	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:10	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:10	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:59	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:59	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 20:59	jic
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:10	msh
Magnesium, dissolved	M200.7 ICP	103			mg/L	0.4	2	05/30/12 20:59	jic
Molybdenum, dissolved	M200.7 ICP	0.50			mg/L	0.02	0.1	05/30/12 20:59	jic
Nickel, dissolved	M200.8 ICP-MS	0.001	B		mg/L	0.001	0.006	06/01/12 0:10	msh
Selenium, dissolved	M200.8 ICP-MS	0.0009			mg/L	0.0002	0.0005	06/01/12 0:10	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:10	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	B		mg/L	0.1	0.5	06/01/12 14:05	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.58			mg/L	0.02	0.1	06/02/12 15:18	pjb
Residue, Filterable (TDS) @180C	SM2540C	3170			mg/L	10	20	05/25/12 15:04	abm
Sulfate	D516-02 - Turbidimetric	1800		*	mg/L	100	500	06/05/12 15:32	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-12

ACZ Sample ID: **L94787-07**

Date Sampled: 05/22/12 12:00

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 0:19	msh
Arsenic, dissolved	M200.8 ICP-MS	0.003	B	*	mg/L	0.001	0.004	06/01/12 0:19	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:19	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:19	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:02	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:02	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:02	jjc
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:19	msh
Magnesium, dissolved	M200.7 ICP	107			mg/L	0.4	2	05/30/12 21:02	jjc
Molybdenum, dissolved	M200.7 ICP	0.19			mg/L	0.02	0.1	05/30/12 21:02	jjc
Nickel, dissolved	M200.8 ICP-MS	0.001	B		mg/L	0.001	0.006	06/01/12 0:19	msh
Selenium, dissolved	M200.8 ICP-MS	0.0018			mg/L	0.0002	0.0005	06/01/12 0:19	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:19	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	B		mg/L	0.1	0.5	06/01/12 14:09	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.96			mg/L	0.02	0.1	06/02/12 15:19	pjb
Residue, Filterable (TDS) @180C	SM2540C	2830			mg/L	10	20	05/25/12 15:05	abm
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/05/12 15:33	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-14

ACZ Sample ID: **L94787-08**

Date Sampled: 05/22/12 12:38

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 0:23	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	B	*	mg/L	0.001	0.004	06/01/12 0:23	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:23	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:23	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:12	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:12	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:12	jjc
Lead, dissolved	M200.8 ICP-MS	0.0006	B		mg/L	0.0002	0.001	06/01/12 0:23	msh
Magnesium, dissolved	M200.7 ICP	126			mg/L	0.4	2	05/30/12 21:12	jjc
Molybdenum, dissolved	M200.7 ICP	0.08	B		mg/L	0.02	0.1	05/30/12 21:12	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.006	06/01/12 0:23	msh
Selenium, dissolved	M200.8 ICP-MS	0.0008			mg/L	0.0002	0.0005	06/01/12 0:23	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:23	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	B		mg/L	0.1	0.5	06/01/12 14:12	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.07			mg/L	0.02	0.1	06/02/12 15:23	pjb
Residue, Filterable (TDS) @180C	SM2540C	3180			mg/L	10	20	05/25/12 15:05	abm
Sulfate	D516-02 - Turbidimetric	1800		*	mg/L	100	500	06/05/12 15:28	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-15

ACZ Sample ID: **L94787-09**

Date Sampled: 05/22/12 12:51

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 0:26	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	B	*	mg/L	0.001	0.004	06/01/12 0:26	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:26	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:26	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:15	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:15	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:15	jic
Lead, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0002	0.001	06/01/12 0:26	msh
Magnesium, dissolved	M200.7 ICP	119			mg/L	0.4	2	05/30/12 21:15	jic
Molybdenum, dissolved	M200.7 ICP	0.05	B		mg/L	0.02	0.1	05/30/12 21:15	jic
Nickel, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.006	06/01/12 0:26	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0002	0.0005	06/01/12 0:26	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:26	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B		mg/L	0.1	0.5	06/01/12 14:16	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.32			mg/L	0.02	0.1	06/02/12 15:24	pjb
Residue, Filterable (TDS) @180C	SM2540C	3150			mg/L	10	20	05/25/12 15:06	abm
Sulfate	D516-02 - Turbidimetric	1800		*	mg/L	100	500	06/05/12 15:28	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-19

ACZ Sample ID: **L94787-10**

Date Sampled: 05/22/12 13:07

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 0:29	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	B	*	mg/L	0.001	0.004	06/01/12 0:29	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:29	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:29	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:18	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:18	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:18	jjc
Lead, dissolved	M200.8 ICP-MS	0.0013			mg/L	0.0002	0.001	06/01/12 0:29	msh
Magnesium, dissolved	M200.7 ICP	144			mg/L	0.4	2	05/30/12 21:18	jjc
Molybdenum, dissolved	M200.7 ICP	0.02	B		mg/L	0.02	0.1	05/30/12 21:18	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.006	06/01/12 0:29	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0002	0.0005	06/01/12 0:29	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:29	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	B		mg/L	0.1	0.5	06/01/12 14:20	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.38			mg/L	0.02	0.1	06/02/12 15:25	pjb
Residue, Filterable (TDS) @180C	SM2540C	3050			mg/L	10	20	05/25/12 15:07	abm
Sulfate	D516-02 - Turbidimetric	1300		*	mg/L	100	500	06/05/12 15:28	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-1

ACZ Sample ID: **L94787-11**

Date Sampled: 05/21/12 11:08

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	06/01/12 0:33	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0032			mg/L	0.0005	0.002	06/01/12 0:33	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/01/12 0:33	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/01/12 0:33	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	05/30/12 21:21	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	05/30/12 21:21	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	05/30/12 21:21	jjc
Lead, dissolved	M200.8 ICP-MS	0.0016			mg/L	0.0001	0.0005	06/01/12 0:33	msh
Magnesium, dissolved	M200.7 ICP	82.0			mg/L	0.2	1	05/30/12 21:21	jjc
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	05/30/12 21:21	jjc
Nickel, dissolved	M200.8 ICP-MS	0.0009	B		mg/L	0.0006	0.003	06/01/12 0:33	msh
Selenium, dissolved	M200.8 ICP-MS	0.0008			mg/L	0.0001	0.0003	06/01/12 0:33	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/01/12 0:33	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	B		mg/L	0.1	0.5	06/01/12 14:33	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.36			mg/L	0.02	0.1	06/02/12 15:26	pjb
Residue, Filterable (TDS) @180C	SM2540C	1850			mg/L	10	20	05/25/12 15:16	abm
Sulfate	D516-02 - Turbidimetric	900		*	mg/L	100	500	06/05/12 15:30	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-2A

ACZ Sample ID: **L94787-12**

Date Sampled: 05/21/12 11:30

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	06/01/12 0:36	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0058			mg/L	0.0005	0.002	06/01/12 0:36	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/01/12 0:36	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/01/12 0:36	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	05/30/12 21:30	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	05/30/12 21:30	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	05/30/12 21:30	jic
Lead, dissolved	M200.8 ICP-MS	0.0008			mg/L	0.0001	0.0005	06/01/12 0:36	msh
Magnesium, dissolved	M200.7 ICP	13.1			mg/L	0.2	1	05/30/12 21:30	jic
Molybdenum, dissolved	M200.7 ICP	0.01	B		mg/L	0.01	0.05	05/30/12 21:30	jic
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.0006	0.003	06/01/12 0:36	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0001	0.0003	06/01/12 0:36	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/01/12 0:36	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.5	B		mg/L	0.1	0.5	06/01/12 14:37	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.37			mg/L	0.02	0.1	06/02/12 15:29	pjb
Residue, Filterable (TDS) @180C	SM2540C	400			mg/L	10	20	05/25/12 15:16	abm
Sulfate	D516-02 - Turbidimetric	121		*	mg/L	5	30	06/05/12 15:22	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-25

ACZ Sample ID: **L94787-13**

Date Sampled: 05/21/12 11:55

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	06/01/12 0:39	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0052			mg/L	0.0005	0.002	06/01/12 0:39	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/01/12 0:39	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/01/12 0:39	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	05/30/12 21:33	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	05/30/12 21:33	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	05/30/12 21:33	jic
Lead, dissolved	M200.8 ICP-MS	0.0003	B		mg/L	0.0001	0.0005	06/01/12 0:39	msh
Magnesium, dissolved	M200.7 ICP	14.0			mg/L	0.2	1	05/30/12 21:33	jic
Molybdenum, dissolved	M200.7 ICP	0.01	B		mg/L	0.01	0.05	05/30/12 21:33	jic
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.0006	0.003	06/01/12 0:39	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0001	0.0003	06/01/12 0:39	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/01/12 0:39	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.5			mg/L	0.1	0.5	06/01/12 14:40	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.27			mg/L	0.02	0.1	06/02/12 15:31	pjb
Residue, Filterable (TDS) @180C	SM2540C	390			mg/L	10	20	05/25/12 15:17	abm
Sulfate	D516-02 - Turbidimetric	109		*	mg/L	5	30	06/05/12 15:24	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-8

ACZ Sample ID: **L94787-14**

Date Sampled: 05/21/12 12:15

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 0:43	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.004	06/01/12 0:43	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:43	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:43	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:36	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:36	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:36	jjc
Lead, dissolved	M200.8 ICP-MS	0.0013			mg/L	0.0002	0.001	06/01/12 0:43	msh
Magnesium, dissolved	M200.7 ICP	123			mg/L	0.4	2	05/30/12 21:36	jjc
Molybdenum, dissolved	M200.7 ICP	0.10	B		mg/L	0.02	0.1	05/30/12 21:36	jjc
Nickel, dissolved	M200.8 ICP-MS	0.001	B		mg/L	0.001	0.006	06/01/12 0:43	msh
Selenium, dissolved	M200.8 ICP-MS	0.0003	B		mg/L	0.0002	0.0005	06/01/12 0:43	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:43	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	06/01/12 14:43	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.41			mg/L	0.02	0.1	06/02/12 15:32	pjb
Residue, Filterable (TDS) @180C	SM2540C	3120			mg/L	10	20	05/25/12 15:18	abm
Sulfate	D516-02 - Turbidimetric	1700		*	mg/L	100	500	06/05/12 15:34	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-9

ACZ Sample ID: **L94787-15**

Date Sampled: 05/21/12 12:25

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 0:59	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.004	06/01/12 0:59	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:59	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:59	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:39	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:39	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:39	jic
Lead, dissolved	M200.8 ICP-MS	0.0012			mg/L	0.0002	0.001	06/01/12 0:59	msh
Magnesium, dissolved	M200.7 ICP	102			mg/L	0.4	2	05/30/12 21:39	jic
Molybdenum, dissolved	M200.7 ICP	0.06	B		mg/L	0.02	0.1	05/30/12 21:39	jic
Nickel, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.006	06/01/12 0:59	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0002	0.0005	06/01/12 0:59	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 0:59	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.5	B	*	mg/L	0.1	0.5	06/01/12 14:57	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.63			mg/L	0.02	0.1	06/02/12 15:34	pjb
Residue, Filterable (TDS) @180C	SM2540C	2990			mg/L	10	20	05/25/12 15:18	abm
Sulfate	D516-02 - Turbidimetric	1700		*	mg/L	100	500	06/05/12 15:34	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-4

ACZ Sample ID: **L94787-16**

Date Sampled: 05/21/12 12:43

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 1:02	msh
Arsenic, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.004	06/01/12 1:02	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:02	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:02	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:49	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:49	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:49	jjc
Lead, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0002	0.001	06/01/12 1:02	msh
Magnesium, dissolved	M200.7 ICP	93.9			mg/L	0.4	2	05/30/12 21:49	jjc
Molybdenum, dissolved	M200.7 ICP	0.04	B		mg/L	0.02	0.1	05/30/12 21:49	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.006	06/01/12 1:02	msh
Selenium, dissolved	M200.8 ICP-MS	0.0006			mg/L	0.0002	0.0005	06/01/12 1:02	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:02	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	06/01/12 15:00	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.45			mg/L	0.02	0.1	06/02/12 15:37	pjb
Residue, Filterable (TDS) @180C	SM2540C	2850			mg/L	10	20	05/25/12 15:19	abm
Sulfate	D516-02 - Turbidimetric	1500		*	mg/L	100	500	06/05/12 15:37	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-26

ACZ Sample ID: **L94787-17**

Date Sampled: 05/21/12 12:44

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 1:05	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.004	06/01/12 1:05	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:05	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:05	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:52	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:52	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:52	jjc
Lead, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0002	0.001	06/01/12 1:05	msh
Magnesium, dissolved	M200.7 ICP	97.4			mg/L	0.4	2	05/30/12 21:52	jjc
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:52	jjc
Nickel, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.006	06/01/12 1:05	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0002	0.0005	06/01/12 1:05	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:05	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.6		*	mg/L	0.1	0.5	06/01/12 15:03	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.56			mg/L	0.02	0.1	06/02/12 15:38	pjb
Residue, Filterable (TDS) @180C	SM2540C	2740			mg/L	10	20	05/25/12 15:20	abm
Sulfate	D516-02 - Turbidimetric	1500		*	mg/L	100	500	06/05/12 15:37	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-24

ACZ Sample ID: **L94787-18**

Date Sampled: 05/22/12 09:37

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 1:09	msh
Arsenic, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.004	06/01/12 1:09	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:09	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:09	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:55	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:55	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:55	jic
Lead, dissolved	M200.8 ICP-MS	0.0003	B		mg/L	0.0002	0.001	06/01/12 1:09	msh
Magnesium, dissolved	M200.7 ICP	94.2			mg/L	0.4	2	05/30/12 21:55	jic
Molybdenum, dissolved	M200.7 ICP	0.06	B		mg/L	0.02	0.1	05/30/12 21:55	jic
Nickel, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.006	06/01/12 1:09	msh
Selenium, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0002	0.0005	06/01/12 1:09	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:09	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	B	*	mg/L	0.1	0.5	06/01/12 15:06	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.38			mg/L	0.02	0.1	06/02/12 15:39	pjb
Residue, Filterable (TDS) @180C	SM2540C	3000			mg/L	10	20	05/25/12 15:20	abm
Sulfate	D516-02 - Turbidimetric	1700		*	mg/L	100	500	06/05/12 15:37	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-5A

ACZ Sample ID: **L94787-19**

Date Sampled: 05/22/12 09:53

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 1:12	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	B		mg/L	0.001	0.004	06/01/12 1:12	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:12	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:12	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:58	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:58	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 21:58	jic
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:12	msh
Magnesium, dissolved	M200.7 ICP	104			mg/L	0.4	2	05/30/12 21:58	jic
Molybdenum, dissolved	M200.7 ICP	0.07	B		mg/L	0.02	0.1	05/30/12 21:58	jic
Nickel, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.006	06/01/12 1:12	msh
Selenium, dissolved	M200.8 ICP-MS	0.0008			mg/L	0.0002	0.0005	06/01/12 1:12	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:12	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	06/01/12 15:20	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.50			mg/L	0.02	0.1	06/02/12 15:41	pjb
Residue, Filterable (TDS) @180C	SM2540C	3050			mg/L	10	20	05/25/12 15:21	abm
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/05/12 15:37	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-27

ACZ Sample ID: **L94787-20**

Date Sampled: 05/22/12 10:06

Date Received: 05/25/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/01/12 1:15	msh
Arsenic, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.004	06/01/12 1:15	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:15	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:15	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 22:01	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 22:01	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	05/30/12 22:01	jjc
Lead, dissolved	M200.8 ICP-MS	0.0006	B		mg/L	0.0002	0.001	06/01/12 1:15	msh
Magnesium, dissolved	M200.7 ICP	92.7			mg/L	0.4	2	05/30/12 22:01	jjc
Molybdenum, dissolved	M200.7 ICP	0.04	B		mg/L	0.02	0.1	05/30/12 22:01	jjc
Nickel, dissolved	M200.8 ICP-MS	0.003	B		mg/L	0.001	0.006	06/01/12 1:15	msh
Selenium, dissolved	M200.8 ICP-MS	0.0007			mg/L	0.0002	0.0005	06/01/12 1:15	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/01/12 1:15	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.4	B	*	mg/L	0.1	0.5	06/01/12 15:24	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.51			mg/L	0.02	0.1	06/02/12 15:42	pjb
Residue, Filterable (TDS) @180C	SM2540C	2920			mg/L	10	20	05/25/12 15:22	abm
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/05/12 15:37	tcd

Arizona license number: AZ0102

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94787**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.02		.02037	mg/L	101.9	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0012	0.0012			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.01		.00998	mg/L	99.8	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.02	U	.02176	mg/L	108.8	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.02	U	.0233	mg/L	116.5	70	130	6.84	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.02	U	.02224	mg/L	111.2	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.02	U	.02132	mg/L	106.6	70	130	4.22	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.05431	mg/L	108.6	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0015	0.0015			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.05005		.05446	mg/L	108.8	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1001	.001	.1227	mg/L	121.6	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1001	.001	.1317	mg/L	130.6	70	130	7.08	20	MA
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1001	.002	.1283	mg/L	126.2	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1001	.002	.1174	mg/L	115.3	70	130	8.87	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.04759	mg/L	95.2	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0003	0.0003			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.0501		.04981	mg/L	99.4	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1002	U	.11038	mg/L	110.2	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1002	U	.11648	mg/L	116.2	70	130	5.38	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1002	U	.11026	mg/L	110	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1002	U	.09964	mg/L	99.4	70	130	10.12	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.0508	mg/L	101.6	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0003	0.0003			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.0501		.05202	mg/L	103.8	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1002	U	.10588	mg/L	105.7	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1002	U	.1127	mg/L	112.5	70	130	6.24	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1002	U	.10746	mg/L	107.2	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1002	U	.0967	mg/L	96.5	70	130	10.54	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94787**

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323532													
WG323532ICV	ICV	05/30/12 20:16	II120430-3	2		1.985	mg/L	99.3	95	105			
WG323532ICB	ICB	05/30/12 20:22				U	mg/L		-0.03	0.03			
WG323532LFB	LFB	05/30/12 20:34	II120509-2	.5		.504	mg/L	100.8	85	115			
L94787-01AS	AS	05/30/12 20:41	II120509-2	1	U	1.035	mg/L	103.5	85	115			
L94787-01ASD	ASD	05/30/12 20:44	II120509-2	1	U	1.061	mg/L	106.1	85	115	2.48	20	
L94787-11AS	AS	05/30/12 21:24	II120509-2	.5	U	.525	mg/L	105	85	115			
L94787-11ASD	ASD	05/30/12 21:27	II120509-2	.5	U	.524	mg/L	104.8	85	115	0.19	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323532													
WG323532ICV	ICV	05/30/12 20:16	II120430-3	2		2.023	mg/L	101.2	95	105			
WG323532ICB	ICB	05/30/12 20:22				U	mg/L		-0.03	0.03			
WG323532LFB	LFB	05/30/12 20:34	II120509-2	.5		.495	mg/L	99	85	115			
L94787-01AS	AS	05/30/12 20:41	II120509-2	1	U	1.029	mg/L	102.9	85	115			
L94787-01ASD	ASD	05/30/12 20:44	II120509-2	1	U	1.048	mg/L	104.8	85	115	1.83	20	
L94787-11AS	AS	05/30/12 21:24	II120509-2	.5	U	.52	mg/L	104	85	115			
L94787-11ASD	ASD	05/30/12 21:27	II120509-2	.5	U	.512	mg/L	102.4	85	115	1.55	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323532													
WG323532ICV	ICV	05/30/12 20:16	II120430-3	2		2.01	mg/L	100.5	95	105			
WG323532ICB	ICB	05/30/12 20:22				U	mg/L		-0.03	0.03			
WG323532LFB	LFB	05/30/12 20:34	II120509-2	.5		.502	mg/L	100.4	85	115			
L94787-01AS	AS	05/30/12 20:41	II120509-2	1	U	1.071	mg/L	107.1	85	115			
L94787-01ASD	ASD	05/30/12 20:44	II120509-2	1	U	1.096	mg/L	109.6	85	115	2.31	20	
L94787-11AS	AS	05/30/12 21:24	II120509-2	.5	U	.538	mg/L	107.6	85	115			
L94787-11ASD	ASD	05/30/12 21:27	II120509-2	.5	U	.534	mg/L	106.8	85	115	0.75	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94787**

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323599													
WG323599ICV	ICV	05/31/12 10:10	WC120522-	2.002		1.9	mg/L	94.9	95	105			
WG323599ICB	ICB	05/31/12 10:15				U	mg/L		-0.3	0.3			
WG323599LFB1	LFB	05/31/12 10:22	WC120124-	5		4.86	mg/L	97.2	90	110			
WG323599LFB2	LFB	05/31/12 13:24	WC120124-	5		4.75	mg/L	95	90	110			
L94787-01AS	AS	05/31/12 13:30	WC120124-	5	.2	4.84	mg/L	92.8	90	110			
L94787-01DUP	DUP	05/31/12 13:34			.2	.21	mg/L				4.9	20	RA
WG323683													
WG323683ICV	ICV	06/01/12 11:42	WC120531-	2.002		1.92	mg/L	95.9	95	105			
WG323683ICB	ICB	06/01/12 11:45				U	mg/L		-0.3	0.3			
WG323685													
WG323685ICV	ICV	06/01/12 13:38	WC120531-	2.002		1.92	mg/L	95.9	95	105			
WG323685ICB	ICB	06/01/12 13:42				U	mg/L		-0.3	0.3			
WG323685LFB1	LFB	06/01/12 13:49	WC120124-	5		5.1	mg/L	102	90	110			
L94750-01AS	AS	06/01/12 13:59	WC120124-	5	1.3	6.54	mg/L	104.8	90	110			
L94750-01DUP	DUP	06/01/12 14:02			1.3	1.33	mg/L				2.3	20	
L94787-14AS	AS	06/01/12 14:51	WC120124-	5	.3	5.12	mg/L	96.4	90	110			
L94787-14DUP	DUP	06/01/12 14:54			.3	.34	mg/L				12.5	20	RA
WG323685LFB2	LFB	06/01/12 15:37	WC120124-	5		5.05	mg/L	101	90	110			

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.05329	mg/L	106.6	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0003	0.0003			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.05005		.05407	mg/L	108	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1001	U	.11846	mg/L	118.3	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1001	U	.12546	mg/L	125.3	70	130	5.74	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1001	.0013	.12266	mg/L	121.2	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1001	.0013	.11256	mg/L	111.1	70	130	8.59	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323532													
WG323532ICV	ICV	05/30/12 20:16	II120430-3	100		101.6	mg/L	101.6	95	105			
WG323532ICB	ICB	05/30/12 20:22				U	mg/L		-0.6	0.6			
WG323532LFB	LFB	05/30/12 20:34	II120509-2	50.007		51.57	mg/L	103.1	85	115			
L94787-01AS	AS	05/30/12 20:41	II120509-2	100.014	108	213.2	mg/L	105.2	85	115			
L94787-01ASD	ASD	05/30/12 20:44	II120509-2	100.014	108	212.8	mg/L	104.8	85	115	0.19	20	
L94787-11AS	AS	05/30/12 21:24	II120509-2	50.007	82	135.7	mg/L	107.4	85	115			
L94787-11ASD	ASD	05/30/12 21:27	II120509-2	50.007	82	135.3	mg/L	106.6	85	115	0.3	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94787**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323532													
WG323532ICV	ICV	05/30/12 20:16	II120430-3	2		2.03	mg/L	101.5	95	105			
WG323532ICB	ICB	05/30/12 20:22				U	mg/L		-0.03	0.03			
WG323532LFB	LFB	05/30/12 20:34	II120509-2	.5		.523	mg/L	104.6	85	115			
L94787-01AS	AS	05/30/12 20:41	II120509-2	1	.07	1.128	mg/L	105.8	85	115			
L94787-01ASD	ASD	05/30/12 20:44	II120509-2	1	.07	1.124	mg/L	105.4	85	115	0.36	20	
L94787-11AS	AS	05/30/12 21:24	II120509-2	.5	U	.554	mg/L	110.8	85	115			
L94787-11ASD	ASD	05/30/12 21:27	II120509-2	.5	U	.538	mg/L	107.6	85	115	2.93	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.05141	mg/L	102.8	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0018	0.0018			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.05005		.05233	mg/L	104.6	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1001	U	.1027	mg/L	102.6	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1001	U	.1104	mg/L	110.3	70	130	7.23	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1001	.001	.1056	mg/L	104.5	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1001	.001	.0958	mg/L	94.7	70	130	9.73	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323745													
WG323745ICV	ICV	06/02/12 14:29	WI120405-3	2.416		2.402	mg/L	99.4	90	110			
WG323745ICB	ICB	06/02/12 14:30				U	mg/L		-0.06	0.06			
WG323746													
WG323746LFB	LFB	06/02/12 15:09	WI120211-3	2		1.965	mg/L	98.3	90	110			
L94787-01AS	AS	06/02/12 15:11	WI120211-3	2	.76	2.717	mg/L	97.9	90	110			
L94787-02DUP	DUP	06/02/12 15:13			.7	.704	mg/L				0.6	20	
L94787-11AS	AS	06/02/12 15:28	WI120211-3	2	1.36	3.344	mg/L	99.2	90	110			
L94787-12DUP	DUP	06/02/12 15:30			1.37	1.37	mg/L				0	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323389													
WG323389PBW	PBW	05/25/12 15:00				U	mg/L		-20	20			
WG323389LCSW	LCSW	05/25/12 15:00	PCN39024	260		240	mg/L	92.3	80	120			
L94787-10DUP	DUP	05/25/12 15:07			3050	3028	mg/L				0.7	20	
WG323390													
WG323390PBW	PBW	05/25/12 15:15				U	mg/L		-20	20			
WG323390LCSW	LCSW	05/25/12 15:15	PCN39024	260		258	mg/L	99.2	80	120			
L94787-20DUP	DUP	05/25/12 15:22			2920	2920	mg/L				0	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94787**

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.05415	mg/L	108.3	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0003	0.0003			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.05005		.05211	mg/L	104.1	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1001	.0015	.11988	mg/L	118.3	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1001	.0015	.12448	mg/L	122.9	70	130	3.76	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1001	.0003	.12208	mg/L	121.7	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1001	.0003	.11148	mg/L	111.1	70	130	9.08	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323851													
WG323851ICB	ICB	06/05/12 14:45				U	mg/L		-3	3			
WG323851ICV	ICV	06/05/12 14:45	WI120523-4	20		19.2	mg/L	96	90	110			
WG323851LFB	LFB	06/05/12 15:20	WI120508-1	10		10.7	mg/L	107	90	110			
L94787-12AS	AS	06/05/12 15:24	SO4TURB5	10	121	122.7	mg/L	17	90	110			M3
L94787-01DUP	DUP	06/05/12 15:30			1600	1670	mg/L				4.3	20	
L94787-02AS	AS	06/05/12 15:31	SO4TURB10	10	1700	1700	mg/L	0	90	110			M3
L94787-11DUP	DUP	06/05/12 15:34			900	970	mg/L				7.5	20	RA

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323619													
WG323619ICV	ICV	05/31/12 23:37	MS120416-2	.05		.05336	mg/L	106.7	90	110			
WG323619ICB	ICB	05/31/12 23:40				U	mg/L		-0.0003	0.0003			
WG323619LFB	LFB	05/31/12 23:43	MS120531-3	.05005		.05426	mg/L	108.4	85	115			
L94787-04AS	AS	06/01/12 0:00	MS120531-3	.1001	U	.12002	mg/L	119.9	70	130			
L94787-04ASD	ASD	06/01/12 0:03	MS120531-3	.1001	U	.1277	mg/L	127.6	70	130	6.2	20	
L94787-14AS	AS	06/01/12 0:46	MS120531-3	.1001	U	.12468	mg/L	124.6	70	130			
L94787-14ASD	ASD	06/01/12 0:49	MS120531-3	.1001	U	.11378	mg/L	113.7	70	130	9.14	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94787**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94787-01	WG323619	Arsenic, dissolved	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.
	WG323599	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).
	WG323851	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.
L94787-02	WG323619	Arsenic, dissolved	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.
	WG323599	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).
	WG323851	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.
L94787-03	WG323619	Arsenic, dissolved	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.
	WG323599	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).
	WG323851	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.
L94787-04	WG323619	Arsenic, dissolved	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.
	WG323599	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).
	WG323851	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.
L94787-05	WG323619	Arsenic, dissolved	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.
	WG323599	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).
	WG323851	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.
L94787-06	WG323619	Arsenic, dissolved	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.
	WG323851	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94787**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94787-07	WG323619	Arsenic, dissolved	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.
	WG323851	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.
L94787-08	WG323619	Arsenic, dissolved	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.
	WG323851	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.
L94787-09	WG323619	Arsenic, dissolved	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.
	WG323851	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.
L94787-10	WG323619	Arsenic, dissolved	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.
	WG323851	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.
L94787-11	WG323851	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).
L94787-12	WG323851	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).
L94787-13	WG323851	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).
L94787-14	WG323685	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).
	WG323851	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: L94787

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94787-15	WG323685	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).
	WG323851	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).
L94787-16	WG323685	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).
	WG323851	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).
L94787-17	WG323685	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).
	WG323851	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).
L94787-18	WG323685	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).
	WG323851	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).
L94787-19	WG323685	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).
	WG323851	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).
L94787-20	WG323685	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).
	WG323851	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94787**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94787
Date Received: 05/25/2012 09:11
Received By: ksj
Date Printed: 5/25/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
Na15437	2.3	15

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

Notes

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94787
Date Received: 05/25/2012 09:11
Received By: ksj
Date Printed: 5/25/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94787-01	IW-23		Y		Y							<input type="checkbox"/>
L94787-02	IW-10		Y		Y							<input type="checkbox"/>
L94787-03	IW-22		Y		Y							<input type="checkbox"/>
L94787-04	IW-11		Y		Y							<input type="checkbox"/>
L94787-05	IW-28		Y		Y							<input type="checkbox"/>
L94787-06	IW-6A		Y		Y							<input type="checkbox"/>
L94787-07	IW-12		Y		Y							<input type="checkbox"/>
L94787-08	IW-14		Y		Y							<input type="checkbox"/>
L94787-09	IW-15		Y		Y							<input type="checkbox"/>
L94787-10	IW-19		Y		Y							<input type="checkbox"/>
L94787-11	IW-1		Y		Y							<input type="checkbox"/>
L94787-12	IW-2A		Y		Y							<input type="checkbox"/>
L94787-13	IW-25		Y		Y							<input type="checkbox"/>
L94787-14	IW-8		Y		Y							<input type="checkbox"/>
L94787-15	IW-9		Y		Y							<input type="checkbox"/>
L94787-16	IW-4		Y		Y							<input type="checkbox"/>
L94787-17	IW-26		Y		Y							<input type="checkbox"/>
L94787-18	IW-24		Y		Y							<input type="checkbox"/>
L94787-19	IW-5A		Y		Y							<input type="checkbox"/>
L94787-20	IW-27		Y		Y							<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj



Laboratories, Inc.

L94787

CHAIN OF CUSTODY

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

Report To:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-648-8844

Copy of Report To:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001Z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

of Containers

Quarterly

SAMPLE IDENTIFICATION

DATE/TIME

Matrix

IW-23

05/22/12 : 1023

GW

3

X

IW-10

05/22/12 : 1033

GW

3

X

IW-22

05/22/12 : 1046

GW

3

X

IW-11

05/22/12 : 1058

GW

3

X

IW-28

05/22/12 : 1115

GW

3

X

IW-6A

05/22/12 : 1149

GW

3

X

IW-12

05/22/12 : 1200

GW

3

X

IW-14

05/22/12 : 1238

GW

3

X

IW-15

05/22/12 : 1251

GW

3

X

IW-19

05/22/12 : 1307

GW

3

X

Matrix

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

REMARKS

UPS Tracking # 12 867 7E4 23 1000 8099

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

RELINQUISHED BY:

DATE/TIME

RECEIVED BY:

DATE/TIME

Alexis Alvarez

05/24/12 : 1430

AUC 5/25/12

0900



Laboratories, Inc.

L94487

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

CHAIN OF CUSTODY

Report for:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-648-8844

Copy of Report for:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSIS REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001Z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	Quarterly																
IW-1	05/21/12 : 1108	GW	3	X																
IW-2A	05/21/12 : 1130	GW	3	X																
IW-25	05/21/12 : 1155	GW	3	X																
IW-8	05/21/12 : 1215	GW	3	X																
IW-9	05/21/12 : 1225	GW	3	X																
IW-4	05/21/12 : 1243	GW	3	X																
IW-26	05/21/12 : 1244	GW	3	X																
IW-24	05/22/12 : 0937	GW	3	X																
IW-5A	05/22/12 : 0953	GW	3	X																
IW-27	05/22/12 : 1006	GW	3	X																

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

REMARKS

UPS Tracking # 12867 ZF4 23 1000 8099

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

RELINQUISHED BY:

DATE/TIME

RECEIVED BY:

DATE/TIME

Alexis Alvarez

05/24/12 : 1430

HUC 5/25/12

0900

June 07, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L94836

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 30, 2012. This project has been assigned to ACZ's project number, L94836. Please reference this number in all future inquiries.

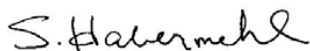
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L94836. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 07, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9
Sample ID: HAVENGOLF

ACZ Sample ID: **L94836-01**
Date Sampled: 05/29/12 09:52
Date Received: 05/30/12
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	88.05			mg/L	1	5	06/06/12 2:44	ccp

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94836**

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323820													
WG323820ICV	ICV	06/05/12 11:58	WI120406-1	50.15		51.04	mg/L	101.8	90	110			
WG323820ICB	ICB	06/05/12 12:19				U	mg/L		-1.5	1.5			
WG323824													
WG323824LFB1	LFB	06/05/12 16:53	WI120312-2	30		29.94	mg/L	99.8	90	110			
L94820-04DUP	DUP	06/05/12 22:31			8.61	8.6	mg/L				0.1	20	
L94820-05AS	AS	06/05/12 23:13	WI120312-2	30	24.71	54.27	mg/L	98.5	90	110			
WG323824LFB2	LFB	06/06/12 3:05	WI120312-2	30		29.99	mg/L	100	90	110			

FMI Gold & Copper - SierritaACZ Project ID: **L94836**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94836**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94836
Date Received: 05/30/2012 09:34
Received By: ksj
Date Printed: 5/31/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

The client was not contacted.

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
3751		5.1	15

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

Notes

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94836
Date Received: 05/30/2012 09:34
Received By: ksj
Date Printed: 5/31/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94836-01	HAVENGOLF									X		<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj



Laboratories, Inc.

L94836

CHAIN of CUSTODY

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

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

X

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001Z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE:TIME

Matrix

of Containers

SO4 by EPA 300 or EPA 375

HAVENGOLF

5/29/12 : 0952

GW

1

X

Matrix

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

REMARKS

UPS Tracking #1Z 867 7E4 23 1000 8071

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

ALEXIS ALVAREZ

05/29/12 : 1400

L94836 Chain of Custody

June 11, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L94876

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 01, 2012. This project has been assigned to ACZ's project number, L94876. Please reference this number in all future inquiries.

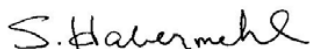
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L94876. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 11, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MH-11

ACZ Sample ID: **L94876-01**

Date Sampled: 05/30/12 13:07

Date Received: 06/01/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/06/12 4:29	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.003	B		mg/L	0.001	0.004	06/06/12 4:29	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/06/12 4:29	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/06/12 4:29	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/05/12 3:59	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/05/12 3:59	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/05/12 3:59	jjc
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/06/12 4:29	pmc
Magnesium, dissolved	M200.7 ICP	104			mg/L	0.2	1	06/05/12 3:59	jjc
Molybdenum, dissolved	M200.7 ICP	0.01	B		mg/L	0.01	0.05	06/05/12 3:59	jjc
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	06/06/12 4:29	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0020			mg/L	0.0002	0.0005	06/06/12 4:29	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/06/12 4:29	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	B		mg/L	0.1	0.5	06/07/12 17:38	mla
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.22			mg/L	0.02	0.1	06/09/12 0:27	pjb
Residue, Filterable (TDS) @180C	SM2540C	2530			mg/L	10	20	06/01/12 15:15	jad
Sulfate	D516-02 - Turbidimetric	1440		*	mg/L	50	300	06/07/12 16:10	lhb

Arizona license number: AZ0102

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94876**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.02		.02073	mg/L	103.7	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0012	0.0012			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.01		.01008	mg/L	100.8	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.01	.0022	.01141	mg/L	92.1	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.01	.0022	.01156	mg/L	93.6	70	130	1.31	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05347	mg/L	106.9	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0015	0.0015			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.05005		.05098	mg/L	101.9	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.05005	.0858	.1366	mg/L	101.5	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.05005	.0858	.1369	mg/L	102.1	70	130	0.22	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.04743	mg/L	94.9	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0003	0.0003			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.0501		.04939	mg/L	98.6	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.0501	.0003	.04891	mg/L	97	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.0501	.0003	.04828	mg/L	95.8	70	130	1.3	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05148	mg/L	103	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0003	0.0003			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.0501		.05058	mg/L	101	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.0501	.0003	.05019	mg/L	99.6	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.0501	.0003	.04941	mg/L	98	70	130	1.57	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323782													
WG323782ICV	ICV	06/05/12 3:29	II120430-3	2		1.984	mg/L	99.2	95	105			
WG323782ICB	ICB	06/05/12 3:35				U	mg/L		-0.03	0.03			
WG323782LFB	LFB	06/05/12 3:47	II120509-2	.5		.514	mg/L	102.8	85	115			
L94872-01AS	AS	06/05/12 3:53	II120509-2	.5	U	.512	mg/L	102.4	85	115			
L94872-01ASD	ASD	06/05/12 3:56	II120509-2	.5	U	.517	mg/L	103.4	85	115	0.97	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94876**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323782													
WG323782ICV	ICV	06/05/12 3:29	II120430-3	2		2.021	mg/L	101.1	95	105			
WG323782ICB	ICB	06/05/12 3:35				U	mg/L		-0.03	0.03			
WG323782LFB	LFB	06/05/12 3:47	II120509-2	.5		.507	mg/L	101.4	85	115			
L94872-01AS	AS	06/05/12 3:53	II120509-2	.5	U	.512	mg/L	102.4	85	115			
L94872-01ASD	ASD	06/05/12 3:56	II120509-2	.5	U	.51	mg/L	102	85	115	0.39	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323782													
WG323782ICV	ICV	06/05/12 3:29	II120430-3	2		1.996	mg/L	99.8	95	105			
WG323782ICB	ICB	06/05/12 3:35				U	mg/L		-0.03	0.03			
WG323782LFB	LFB	06/05/12 3:47	II120509-2	.5		.509	mg/L	101.8	85	115			
L94872-01AS	AS	06/05/12 3:53	II120509-2	.5	U	.514	mg/L	102.8	85	115			
L94872-01ASD	ASD	06/05/12 3:56	II120509-2	.5	U	.515	mg/L	103	85	115	0.19	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323998													
WG323998ICV	ICV	06/07/12 12:54	WC120605-	2.002		1.96	mg/L	97.9	95	105			
WG323998ICB	ICB	06/07/12 13:00				U	mg/L		-0.3	0.3			
WG324011													
WG324011ICV	ICV	06/07/12 16:34	WC120605-	2.002		1.96	mg/L	97.9	95	105			
WG324011ICB	ICB	06/07/12 16:40				U	mg/L		-0.3	0.3			
WG324011LFB1	LFB	06/07/12 16:47	WC120601-	5.005		4.8	mg/L	95.9	90	110			
L94827-03AS	AS	06/07/12 16:55	WC120601-	5.005	1.2	5.94	mg/L	94.7	90	110			
L94827-03DUP	DUP	06/07/12 16:58			1.2	1.16	mg/L				3.4	20	
WG324011LFB2	LFB	06/07/12 18:52	WC120601-	5.005		4.82	mg/L	96.3	90	110			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05165	mg/L	103.3	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0003	0.0003			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.05005		.05062	mg/L	101.1	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.05005	.0009	.05197	mg/L	102	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.05005	.0009	.05157	mg/L	101.2	70	130	0.77	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323782													
WG323782ICV	ICV	06/05/12 3:29	II120430-3	100		101.08	mg/L	101.1	95	105			
WG323782ICB	ICB	06/05/12 3:35				U	mg/L		-0.6	0.6			
WG323782LFB	LFB	06/05/12 3:47	II120509-2	50.007		51.04	mg/L	102.1	85	115			
L94872-01AS	AS	06/05/12 3:53	II120509-2	50.007	1.5	52.81	mg/L	102.6	85	115			
L94872-01ASD	ASD	06/05/12 3:56	II120509-2	50.007	1.5	53.15	mg/L	103.3	85	115	0.64	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94876**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323782													
WG323782ICV	ICV	06/05/12 3:29	II120430-3	2		2.025	mg/L	101.3	95	105			
WG323782ICB	ICB	06/05/12 3:35				.012	mg/L		-0.03	0.03			
WG323782LFB	LFB	06/05/12 3:47	II120509-2	.5		.524	mg/L	104.8	85	115			
L94872-01AS	AS	06/05/12 3:53	II120509-2	.5	U	.523	mg/L	104.6	85	115			
L94872-01ASD	ASD	06/05/12 3:56	II120509-2	.5	U	.524	mg/L	104.8	85	115	0.19	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05021	mg/L	100.4	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0018	0.0018			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.05005		.04835	mg/L	96.6	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.05005	.0199	.06325	mg/L	86.6	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.05005	.0199	.06335	mg/L	86.8	70	130	0.16	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324110													
WG324110ICV	ICV	06/08/12 21:58	WI120405-3	2.416		2.365	mg/L	97.9	90	110			
WG324110ICB	ICB	06/08/12 21:59				U	mg/L		-0.06	0.06			
WG324114													
WG324114LFB1	LFB	06/08/12 23:59	WI120211-3	2		2.007	mg/L	100.4	90	110			
L94790-01AS	AS	06/09/12 0:18	WI120211-3	2	1.68	3.688	mg/L	100.4	90	110			
L94790-02DUP	DUP	06/09/12 0:20			.57	.563	mg/L				1.2	20	
WG324114LFB2	LFB	06/09/12 0:33	WI120211-3	2		1.961	mg/L	98.1	90	110			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323712													
WG323712PBW	PBW	06/01/12 15:00				U	mg/L		-20	20			
WG323712LCSW	LCSW	06/01/12 15:01	PCN39025	260		250	mg/L	96.2	80	120			
L94878-02DUP	DUP	06/01/12 15:23			110	104	mg/L				5.6	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05349	mg/L	107	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0003	0.0003			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.05005		.0504	mg/L	100.7	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.05005	.0019	.05632	mg/L	108.7	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.05005	.0019	.05509	mg/L	106.3	70	130	2.21	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94876**

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324024													
WG324024ICB	ICB	06/07/12 11:53				U	mg/L		-3	3			
WG324024ICV	ICV	06/07/12 11:53	WI120607-1	20		19.8	mg/L	99	90	110			
WG324024LFB	LFB	06/07/12 15:46	WI120508-1	10		10.2	mg/L	102	90	110			
L94852-02AS	AS	06/07/12 15:46	WI120508-1	10	3	14.8	mg/L	118	90	110			M1
L94852-01DUP	DUP	06/07/12 16:31			U	U	mg/L				0	20	RA

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323864													
WG323864ICV	ICV	06/06/12 3:28	MS120604-5	.05		.05287	mg/L	105.7	90	110			
WG323864ICB	ICB	06/06/12 3:31				U	mg/L		-0.0003	0.0003			
WG323864LFB	LFB	06/06/12 3:35	MS120531-3	.05005		.05168	mg/L	103.3	85	115			
L94854-02AS	AS	06/06/12 4:23	MS120531-3	.05005	.0005	.05399	mg/L	106.9	70	130			
L94854-02ASD	ASD	06/06/12 4:26	MS120531-3	.05005	.0005	.0534	mg/L	105.7	70	130	1.1	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94876**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94876-01	WG324024	Sulfate	D516-02 - Turbidimetric	M1	Matrix spike recovery was high, 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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94876**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94876
Date Received: 06/01/2012 10:17
Received By: ksj
Date Printed: 6/1/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
3188	3.1	14

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

Notes

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L94876
Date Received: 06/01/2012 10:17
Received By: ksj
Date Printed: 6/1/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94876-01	MH-11		Y		Y							<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj



Laboratories, Inc.

L94876

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

CHAIN OF CUSTODY

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE/TIME

Matrix

of Containers

Quarterly

MH-11

5/30/12 : 1307

GW

3

x

Matrix

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 8062

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

RELINQUISHED BY:

DATE/TIME

RECEIVED BY:

DATE/TIME

ALEXIS ALVAREZ

05/31/12 : 1430

June 21, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L95049

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 08, 2012. This project has been assigned to ACZ's project number, L95049. Please reference this number in all future inquiries.

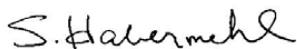
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L95049. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 21, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold Copper - Sierrita

June 21, 2012

Project ID: ZS000001Z9

ACZ Project ID: L95049

Sample Receipt

ACZ Laboratories, Inc. (ACZ) received 4 ground water samples from FMI Gold & Copper - Sierrita on June 8, 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 L95049. The custodian verified the sample information entered into the computer against the chain of custody (COC) forms and sample bottle labels.

Holding Times

All analyses were performed within EPA recommended holding times.

Sample Analysis

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

1. The Total Dissolved Solids results have been qualified with the N1 flag on the extended qualifier report. The chemist noted that the drying oven dropped to 78.3 degrees for approximately 2 hours due to a power outage on 6/9/12.

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MH-10

ACZ Sample ID: **L95049-01**

Date Sampled: 06/05/12 17:25

Date Received: 06/08/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/20/12 9:37	msh
Arsenic, dissolved	M200.8 ICP-MS	0.001	B		mg/L	0.001	0.004	06/18/12 14:39	msh
Beryllium, dissolved	M200.8 ICP-MS		U	*	mg/L	0.0002	0.001	06/18/12 14:39	msh
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/18/12 14:39	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/12/12 14:33	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/12/12 14:33	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/12/12 14:33	jjc
Lead, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/18/12 14:39	msh
Magnesium, dissolved	M200.7 ICP	96.3			mg/L	0.4	2	06/12/12 14:33	jjc
Molybdenum, dissolved	M200.7 ICP	0.04	B		mg/L	0.02	0.1	06/12/12 14:33	jjc
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	06/18/12 14:39	msh
Selenium, dissolved	M200.8 ICP-MS	0.0006		*	mg/L	0.0002	0.0005	06/18/12 14:39	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/18/12 14:39	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	06/14/12 13:38	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.24			mg/L	0.02	0.1	06/20/12 0:43	pjb
Residue, Filterable (TDS) @180C	SM2540C	2730		*	mg/L	10	20	06/08/12 16:28	mja
Sulfate	D516-02 - Turbidimetric	1500			mg/L	100	500	06/18/12 15:31	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: PZ-7

ACZ Sample ID: **L95049-02**

Date Sampled: 06/06/12 09:52

Date Received: 06/08/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	489.1		*	mg/L	5	25	06/14/12 5:44	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: GV-1

ACZ Sample ID: **L95049-03**

Date Sampled: 06/07/12 09:02

Date Received: 06/08/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	37.87		*	mg/L	0.5	2.5	06/14/12 6:05	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: GV-2

ACZ Sample ID: **L95049-04**

Date Sampled: 06/07/12 09:49

Date Received: 06/08/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	71.78		*	mg/L	0.5	2.5	06/14/12 6:26	jlf

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95049**

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324739													
WG324739ICV	ICV	06/20/12 9:17	MS120604-5	.02		.0186	mg/L	93	90	110			
WG324739ICB	ICB	06/20/12 9:20				U	mg/L		-0.0012	0.0012			
WG324739LFB	LFB	06/20/12 9:24	MS120531-3	.01		.00911	mg/L	91.1	85	115			
L95056-13AS	AS	06/20/12 9:50	MS120531-3	.05	.003	.0475	mg/L	89	70	130			
L95056-13ASD	ASD	06/20/12 10:00	MS120531-3	.05	.003	.047	mg/L	88	70	130	1.06	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05146	mg/L	102.9	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0015	0.0015			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.05005		.05087	mg/L	101.6	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.05005	U	.06494	mg/L	129.8	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.05005	U	.06371	mg/L	127.3	70	130	1.91	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.048	mg/L	96	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0003	0.0003			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.0501		.04662	mg/L	93.1	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.0501	U	.04431	mg/L	88.4	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.0501	U	.04354	mg/L	86.9	70	130	1.75	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05236	mg/L	104.7	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0003	0.0003			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.0501		.05201	mg/L	103.8	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.0501	U	.05008	mg/L	100	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.0501	U	.04843	mg/L	96.7	70	130	3.35	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324206													
WG324206ICV	ICV	06/12/12 12:53	II120430-3	2		1.943	mg/L	97.2	95	105			
WG324206ICB	ICB	06/12/12 12:59				U	mg/L		-0.03	0.03			
WG324206LFB	LFB	06/12/12 13:11	II120606-2	.5		.488	mg/L	97.6	85	115			
L94980-08AS	AS	06/12/12 14:02	II120606-2	.5	U	.479	mg/L	95.8	85	115			
L94980-08ASD	ASD	06/12/12 14:05	II120606-2	.5	U	.48	mg/L	96	85	115	0.21	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95049**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324206													
WG324206ICV	ICV	06/12/12 12:53	II120430-3	2		2	mg/L	100	95	105			
WG324206ICB	ICB	06/12/12 12:59				U	mg/L		-0.03	0.03			
WG324206LFB	LFB	06/12/12 13:11	II120606-2	.5		.489	mg/L	97.8	85	115			
L94980-08AS	AS	06/12/12 14:02	II120606-2	.5	U	.479	mg/L	95.8	85	115			
L94980-08ASD	ASD	06/12/12 14:05	II120606-2	.5	U	.483	mg/L	96.6	85	115	0.83	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324206													
WG324206ICV	ICV	06/12/12 12:53	II120430-3	2		1.996	mg/L	99.8	95	105			
WG324206ICB	ICB	06/12/12 12:59				U	mg/L		-0.03	0.03			
WG324206LFB	LFB	06/12/12 13:11	II120606-2	.5		.5	mg/L	100	85	115			
L94980-08AS	AS	06/12/12 14:02	II120606-2	.5	U	.511	mg/L	102.2	85	115			
L94980-08ASD	ASD	06/12/12 14:05	II120606-2	.5	U	.511	mg/L	102.2	85	115	0	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324406													
WG324406ICV	ICV	06/14/12 12:32	WC120613-	2.002		1.96	mg/L	97.9	95	105			
WG324406ICB	ICB	06/14/12 12:39				U	mg/L		-0.3	0.3			
WG324406LFB1	LFB	06/14/12 12:46	WC120601-	5.005		4.93	mg/L	98.5	90	110			
L94896-01AS	AS	06/14/12 12:54	WC120601-	5.005	.7	5.26	mg/L	91.1	90	110			
L94896-01DUP	DUP	06/14/12 12:57			.7	.66	mg/L				5.9	20	RA
WG324406LFB2	LFB	06/14/12 15:56	WC120601-	5.005		4.95	mg/L	98.9	90	110			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05333	mg/L	106.7	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0003	0.0003			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.05005		.05236	mg/L	104.6	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.05005	U	.05603	mg/L	111.9	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.05005	U	.05437	mg/L	108.6	70	130	3.01	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324206													
WG324206ICV	ICV	06/12/12 12:53	II120430-3	100		101.15	mg/L	101.2	95	105			
WG324206ICB	ICB	06/12/12 12:59				U	mg/L		-0.6	0.6			
WG324206LFB	LFB	06/12/12 13:11	II120606-2	50.007		50.56	mg/L	101.1	85	115			
L94980-08AS	AS	06/12/12 14:02	II120606-2	50.007	17.9	68.33	mg/L	100.8	85	115			
L94980-08ASD	ASD	06/12/12 14:05	II120606-2	50.007	17.9	67.99	mg/L	100.2	85	115	0.5	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95049**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324206													
WG324206ICV	ICV	06/12/12 12:53	II120430-3	2		2.013	mg/L	100.7	95	105			
WG324206ICB	ICB	06/12/12 12:59				U	mg/L		-0.03	0.03			
WG324206LFB	LFB	06/12/12 13:11	II120606-2	.5		.501	mg/L	100.2	85	115			
L94980-08AS	AS	06/12/12 14:02	II120606-2	.5	U	.496	mg/L	99.2	85	115			
L94980-08ASD	ASD	06/12/12 14:05	II120606-2	.5	U	.498	mg/L	99.6	85	115	0.4	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05319	mg/L	106.4	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0018	0.0018			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.05005		.04996	mg/L	99.8	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.05005	U	.05064	mg/L	101.2	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.05005	U	.05006	mg/L	100	70	130	1.15	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324759													
WG324759ICV	ICV	06/19/12 23:48	WI120405-3	2.416		2.35	mg/L	97.3	90	110			
WG324759ICB	ICB	06/19/12 23:49				U	mg/L		-0.06	0.06			
WG324761													
WG324761LFB	LFB	06/20/12 0:26	WI120211-3	2		1.99	mg/L	99.5	90	110			
L94896-01AS	AS	06/20/12 0:28	WI120211-3	2	U	2.125	mg/L	106.3	90	110			
L95031-01DUP	DUP	06/20/12 0:31			.31	.308	mg/L				0.6	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324097													
WG324097PBW	PBW	06/08/12 15:50				U	mg/L		-20	20			
WG324097LCSW	LCSW	06/08/12 15:51	PCN39026	260		248	mg/L	95.4	80	120			
L95049-01DUP	DUP	06/08/12 16:29			2730	2730	mg/L				0	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05269	mg/L	105.4	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0003	0.0003			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.05005		.05104	mg/L	102	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.05005	U	.06522	mg/L	130.3	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.05005	U	.0669	mg/L	133.7	70	130	2.54	20	MA

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95049**

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324631													
WG324631ICB	ICB	06/18/12 9:24				U	mg/L		-3	3			
WG324631ICV	ICV	06/18/12 9:24	WI120607-1	20		18.6	mg/L	93	90	110			
WG324631LFB	LFB	06/18/12 15:04	WI120508-1	10		9.6	mg/L	96	90	110			
L95034-02DUP	DUP	06/18/12 15:24			3100	3180	mg/L				2.5	20	
L95034-03AS	AS	06/18/12 15:24	SO4TURB10	100	3200	3310	mg/L	110	90	110			

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323820													
WG323820ICV	ICV	06/05/12 11:58	WI120406-1	50.15		51.04	mg/L	101.8	90	110			
WG323820ICB	ICB	06/05/12 12:19				U	mg/L		-1.5	1.5			
WG324325													
WG324325LFB	LFB	06/13/12 20:56	WI120312-2	30		30.38	mg/L	101.3	90	110			
L95001-05DUP	DUP	06/14/12 2:34			U	U	mg/L				0	20	RA
L95023-01AS	AS	06/14/12 3:16	WI120312-2	150	125.94	276.29	mg/L	100.2	90	110			

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324508													
WG324508ICV	ICV	06/18/12 13:12	MS120604-5	.05		.05376	mg/L	107.5	90	110			
WG324508ICB	ICB	06/18/12 13:15				U	mg/L		-0.0003	0.0003			
WG324508LFB	LFB	06/18/12 13:18	MS120531-3	.05005		.05273	mg/L	105.4	85	115			
L95020-05AS	AS	06/18/12 14:10	MS120531-3	.05005	U	.05617	mg/L	112.2	70	130			
L95020-05ASD	ASD	06/18/12 14:13	MS120531-3	.05005	U	.05456	mg/L	109	70	130	2.91	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L95049**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95049-01	WG324508	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [$<$ MDL].
		Selenium, dissolved	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.
	WG324406	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).
	WG324097	Residue, Filterable (TDS) @180C	SM2540C	N1	See Case Narrative.
L95049-02	WG324325	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation ($<$ 10x MDL).
L95049-03	WG324325	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation ($<$ 10x MDL).
L95049-04	WG324325	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation ($<$ 10x MDL).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L95049**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L95049
Date Received: 06/08/2012 12:07
Received By: ksj
Date Printed: 6/8/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
3305		1.5	14

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

Notes

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L95049
Date Received: 06/08/2012 12:07
Received By: ksj
Date Printed: 6/8/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L95049-01	MH-10		Y		Y							<input type="checkbox"/>
L95049-02	PZ-7									X		<input type="checkbox"/>
L95049-03	GV-1									X		<input type="checkbox"/>
L95049-04	GV-2									X		<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj



Laboratories, Inc.

L95049

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

CHAIN of CUSTODY

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@FMI.COM

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001Z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE:TIME

Matrix

of Containers

Sulfate

Quarterly

MH-10

6/5/2012 : 1725

GW

3

x

PZ-7

6/6/2012 : 0952

GW

1

x

GV-1

6/7/2012 : 0902

GW

1

x

GV-2

6/7/2012 : 0949

GW

1

x

Matrix

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 8053

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

ALEXIS ALVAREZ

06/07/12 : 1300

AK 6/8/12

1207

L95049 Chain of Custody

June 27, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L95164

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 15, 2012. This project has been assigned to ACZ's project number, L95164. Please reference this number in all future inquiries.

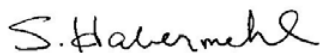
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L95164. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 27, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MH-13B

ACZ Sample ID: **L95164-01**

Date Sampled: 06/11/12 13:32

Date Received: 06/15/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	06/22/12 3:22	pmc
Arsenic, dissolved	M200.8 ICP-MS		U		mg/L	0.0005	0.002	06/22/12 3:22	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/22/12 3:22	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/22/12 3:22	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/19/12 15:38	aeb
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/19/12 15:38	aeb
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/19/12 15:38	aeb
Lead, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0001	0.0005	06/22/12 3:22	pmc
Magnesium, dissolved	M200.7 ICP	57.3			mg/L	0.2	1	06/19/12 15:38	aeb
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/20/12 2:01	aeb
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.0006	0.003	06/22/12 3:22	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0023			mg/L	0.0001	0.0003	06/22/12 3:22	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/22/12 3:22	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	B	*	mg/L	0.1	0.5	06/19/12 15:52	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.08	B	*	mg/L	0.02	0.1	06/23/12 14:37	pjb
Residue, Filterable (TDS) @180C	SM2540C	1950			mg/L	10	20	06/15/12 15:46	jad
Sulfate	D516-02 - Turbidimetric	1020		*	mg/L	50	300	06/26/12 14:20	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MH-13A

ACZ Sample ID: **L95164-02**

Date Sampled: 06/11/12 15:08

Date Received: 06/15/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/22/12 3:25	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.001	B		mg/L	0.001	0.004	06/22/12 3:25	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/22/12 3:25	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/22/12 3:25	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/19/12 15:41	aeb
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/19/12 15:41	aeb
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/19/12 15:41	aeb
Lead, dissolved	M200.8 ICP-MS	0.0006	B		mg/L	0.0002	0.001	06/22/12 3:25	pmc
Magnesium, dissolved	M200.7 ICP	111			mg/L	0.4	2	06/19/12 15:41	aeb
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/20/12 2:11	aeb
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	06/22/12 3:25	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0017			mg/L	0.0002	0.0005	06/22/12 3:25	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/22/12 3:25	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.1	B	*	mg/L	0.1	0.5	06/19/12 15:55	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved		U	*	mg/L	0.02	0.1	06/23/12 14:38	pjb
Residue, Filterable (TDS) @180C	SM2540C	3040			mg/L	10	20	06/15/12 15:47	jad
Sulfate	D516-02 - Turbidimetric	1680		*	mg/L	50	300	06/26/12 14:25	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MH-13C

ACZ Sample ID: **L95164-03**

Date Sampled: 06/11/12 15:55

Date Received: 06/15/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	06/22/12 3:28	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0083			mg/L	0.0005	0.002	06/22/12 3:28	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/22/12 3:28	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/22/12 3:28	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/19/12 15:44	aeb
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/19/12 15:44	aeb
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/19/12 15:44	aeb
Lead, dissolved	M200.8 ICP-MS	0.0001	B		mg/L	0.0001	0.0005	06/22/12 3:28	pmc
Magnesium, dissolved	M200.7 ICP	0.9	B		mg/L	0.2	1	06/19/12 15:44	aeb
Molybdenum, dissolved	M200.7 ICP	0.23			mg/L	0.01	0.05	06/20/12 2:14	aeb
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.0006	0.003	06/22/12 3:28	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0001	B		mg/L	0.0001	0.0003	06/22/12 3:28	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/22/12 3:28	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	1.2		*	mg/L	0.1	0.5	06/19/12 15:58	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.10	B	*	mg/L	0.02	0.1	06/23/12 14:40	pjb
Residue, Filterable (TDS) @180C	SM2540C	240			mg/L	10	20	06/15/12 15:48	jad
Sulfate	D516-02 - Turbidimetric	50		*	mg/L	5	30	06/26/12 14:15	jlf

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-6A

ACZ Sample ID: **L95164-04**

Date Sampled: 06/12/12 09:08

Date Received: 06/15/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.98		*	mg/L	0.5	2.5	06/22/12 0:03	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-6B

ACZ Sample ID: **L95164-05**

Date Sampled: 06/12/12 11:00

Date Received: 06/15/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	55.99		*	mg/L	0.5	2.5	06/22/12 0:24	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-1B

ACZ Sample ID: **L95164-06**

Date Sampled: 06/12/12 14:22

Date Received: 06/15/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	766.0		*	mg/L	5	25	06/22/12 15:10	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-1A

ACZ Sample ID: **L95164-07**

Date Sampled: 06/12/12 15:14

Date Received: 06/15/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	16.98		*	mg/L	0.5	2.5	06/22/12 1:06	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-1C

ACZ Sample ID: **L95164-08**

Date Sampled: 06/12/12 16:32

Date Received: 06/15/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	406.4		*	mg/L	5	25	06/22/12 1:27	ccp

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
Project ID: ZS000001Z9

ACZ Project ID: **L95164**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.02		.01957	mg/L	97.9	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0012	0.0012			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.01		.00945	mg/L	94.5	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.01	U	.01007	mg/L	100.7	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.01	U	.01015	mg/L	101.5	70	130	0.79	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.05206	mg/L	104.1	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0015	0.0015			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.05005		.04881	mg/L	97.5	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.05005	U	.05334	mg/L	106.6	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.05005	U	.05348	mg/L	106.9	70	130	0.26	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.04707	mg/L	94.1	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0003	0.0003			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.0501		.04497	mg/L	89.8	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.0501	U	.04877	mg/L	97.3	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.0501	U	.04824	mg/L	96.3	70	130	1.09	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.05032	mg/L	100.6	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0003	0.0003			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.0501		.0479	mg/L	95.6	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.0501	U	.05049	mg/L	100.8	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.0501	U	.05082	mg/L	101.4	70	130	0.65	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324694													
WG324694ICV	ICV	06/19/12 14:43	II120430-3	2		1.996	mg/L	99.8	95	105			
WG324694ICB	ICB	06/19/12 14:47				U	mg/L		-0.03	0.03			
WG324694LFB	LFB	06/19/12 15:00	II120606-2	.5		.513	mg/L	102.6	85	115			
L95097-01AS	AS	06/19/12 15:10	II120606-2	.5	U	.525	mg/L	105	85	115			
L95097-01ASD	ASD	06/19/12 15:13	II120606-2	.5	U	.529	mg/L	105.8	85	115	0.76	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

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Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324694													
WG324694ICV	ICV	06/19/12 14:43	II120430-3	2		1.979	mg/L	99	95	105			
WG324694ICB	ICB	06/19/12 14:47				U	mg/L		-0.03	0.03			
WG324694LFB	LFB	06/19/12 15:00	II120606-2	.5		.502	mg/L	100.4	85	115			
L95097-01AS	AS	06/19/12 15:10	II120606-2	.5	U	.524	mg/L	104.8	85	115			
L95097-01ASD	ASD	06/19/12 15:13	II120606-2	.5	U	.52	mg/L	104	85	115	0.77	20	

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324694													
WG324694ICV	ICV	06/19/12 14:43	II120430-3	2		1.993	mg/L	99.7	95	105			
WG324694ICB	ICB	06/19/12 14:47				U	mg/L		-0.03	0.03			
WG324694LFB	LFB	06/19/12 15:00	II120606-2	.5		.524	mg/L	104.8	85	115			
L95097-01AS	AS	06/19/12 15:10	II120606-2	.5	U	.525	mg/L	105	85	115			
L95097-01ASD	ASD	06/19/12 15:13	II120606-2	.5	U	.532	mg/L	106.4	85	115	1.32	20	

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324680													
WG324680ICV	ICV	06/19/12 12:16	WC120618-	2.002		1.9	mg/L	94.9	95	105			
WG324680ICB	ICB	06/19/12 12:22				U	mg/L		-0.3	0.3			
WG324680LFB1	LFB	06/19/12 12:31	WC120601-	5.005		4.76	mg/L	95.1	90	110			
WG324680LFB2	LFB	06/19/12 14:28	WC120601-	5.005		4.72	mg/L	94.3	90	110			
L95162-07DUP	DUP	06/19/12 15:45			.4	.39	mg/L				2.5	20	RA
L95162-07AS	AS	06/19/12 15:49	WC120601-	5.005	.4	5	mg/L	91.9	90	110			

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.05107	mg/L	102.1	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0003	0.0003			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.05005		.0479	mg/L	95.7	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.05005	U	.04996	mg/L	99.8	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.05005	U	.05031	mg/L	100.5	70	130	0.7	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324694													
WG324694ICV	ICV	06/19/12 14:43	II120430-3	100		102.5	mg/L	102.5	95	105			
WG324694ICB	ICB	06/19/12 14:47				U	mg/L		-0.6	0.6			
WG324694LFB	LFB	06/19/12 15:00	II120606-2	50.007		51.79	mg/L	103.6	85	115			
L95097-01AS	AS	06/19/12 15:10	II120606-2	50.007	20.6	74.9	mg/L	108.6	85	115			
L95097-01ASD	ASD	06/19/12 15:13	II120606-2	50.007	20.6	75.01	mg/L	108.8	85	115	0.15	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95164**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324741													
WG324741ICV	ICV	06/20/12 1:40	II120430-3	2		2.037	mg/L	101.9	95	105			
WG324741ICB	ICB	06/20/12 1:46				U	mg/L		-0.03	0.03			
WG324741LFB	LFB	06/20/12 1:58	II120606-2	.5		.517	mg/L	103.4	85	115			
L95164-01AS	AS	06/20/12 2:05	II120606-2	.5	U	.53	mg/L	106	85	115			
L95164-01ASD	ASD	06/20/12 2:08	II120606-2	.5	U	.533	mg/L	106.6	85	115	0.56	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.04938	mg/L	98.8	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0018	0.0018			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.05005		.04575	mg/L	91.4	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.05005	U	.04609	mg/L	92.1	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.05005	U	.04588	mg/L	91.7	70	130	0.46	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325064													
WG325064ICV	ICV	06/23/12 14:16	WI120405-3	2.416		2.462	mg/L	101.9	90	110			
WG325064ICB	ICB	06/23/12 14:17				U	mg/L		-0.06	0.06			
WG325064LFB	LFB	06/23/12 14:20	WI120211-3	2		2.006	mg/L	100.3	90	110			
L95159-01AS	AS	06/23/12 14:23	WI120211-3	2	.03	1.882	mg/L	92.6	90	110			
L95159-02DUP	DUP	06/23/12 14:25			U	U	mg/L				0	20	RA
L95164-02AS	AS	06/23/12 14:39	WI120211-3	2	U	2.041	mg/L	102.1	90	110			
L95164-03DUP	DUP	06/23/12 14:42			.1	.097	mg/L				3	20	RA

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324542													
WG324542PBW	PBW	06/15/12 15:20				U	mg/L		-20	20			
WG324542LCSW	LCSW	06/15/12 15:21	PCN39027	260		266	mg/L	102.3	80	120			
L95164-03DUP	DUP	06/15/12 15:49			240	230	mg/L				4.3	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.05188	mg/L	103.8	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0003	0.0003			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.05005		.04481	mg/L	89.5	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.05005	U	.05709	mg/L	114.1	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.05005	U	.05655	mg/L	113	70	130	0.95	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95164**

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325180													
WG325180ICB	ICB	06/26/12 12:38				U	mg/L		-3	3			
WG325180ICV	ICV	06/26/12 12:38	WI120625-2	20		20.4	mg/L	102	90	110			
WG325180LFB	LFB	06/26/12 14:04	WI120508-1	10		9.7	mg/L	97	90	110			
L95159-04DUP	DUP	06/26/12 14:12			70	69.8	mg/L				0.3	20	
L95162-01AS	AS	06/26/12 14:27	SO4TURB50	10	1720	1719	mg/L	-10	90	110			M3

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324762													
WG324762ICV	ICV	06/20/12 17:56	WI120406-1	50.15		51.1	mg/L	101.9	90	110			
WG324762ICB	ICB	06/20/12 18:18				U	mg/L		-1.5	1.5			
WG324762LFB1	LFB	06/21/12 10:20	WI120312-2	30		30.15	mg/L	100.5	90	110			
WG324762LFB2	LFB	06/21/12 20:32	WI120312-2	30		30.17	mg/L	100.6	90	110			
L95149-03DUP	DUP	06/21/12 21:14			U	U	mg/L				0	20	RA
L95149-04AS	AS	06/21/12 22:38	WI120312-2	3000	U	3032	mg/L	101.1	90	110			

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324859													
WG324859ICV	ICV	06/22/12 1:56	MS120604-5	.05		.05336	mg/L	106.7	90	110			
WG324859ICB	ICB	06/22/12 1:59				U	mg/L		-0.0003	0.0003			
WG324859LFB	LFB	06/22/12 2:02	MS120531-3	.05005		.04952	mg/L	98.9	85	115			
L95159-01AS	AS	06/22/12 3:00	MS120531-3	.05005	U	.05228	mg/L	104.5	70	130			
L95159-01ASD	ASD	06/22/12 3:03	MS120531-3	.05005	U	.0527	mg/L	105.3	70	130	0.8	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: L95164

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95164-01	WG324680	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).
	WG325064	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325180	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.
L95164-02	WG324680	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).
	WG325064	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325180	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.
L95164-03	WG324680	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).
	WG325064	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325180	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.
L95164-04	WG324762	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L95164-05	WG324762	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L95164-06	WG324762	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L95164-07	WG324762	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
L95164-08	WG324762	Sulfate	M300.0 - Ion Chromatography	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L95164**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L95164
Date Received: 06/15/2012 10:16
Received By: ksj
Date Printed: 6/15/2012

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Are all labels on containers and are they intact and legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Time? L95164-03 Container B1219743: Mislabeled, Corrected sample ID used per chain of custody, L95164-03 Container B1219744: Mislabeled, Corrected sample ID used per chain of custody,	<input type="checkbox"/>	<input checked="" 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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?
2631	4.9	15	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.

L95164

CHAIN of CUSTODY

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

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001Z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION DATE: TIME Matrix

SAMPLE IDENTIFICATION	DATE: TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375	Quarterly															
MH-13B	6/11/12 : 1332	GW	3		x															
MH-13A	6/11/12 : 1508	GW	3		x															
MH-13C	6/11/12 : 1555	GW	3		x															
MO-2007-6A	6/12/12 : 0908	GW	1	x																
MO-2007-6B	6/12/12 : 1100	GW	1	x																
MO-2007-1B	6/12/12 : 1422	GW	1	x																
MO-2007-1A	6/12/12 : 1514	GW	1	x																
MO-2007-1C	6/12/12 : 1632	GW	1	x																

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 8080

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

RELINQUISHED BY:

DATE: TIME

RECEIVED BY:

DATE: TIME

ALEXIS ALVAREZ

6/14/12 : 1330

120

6-15-12 10:16

July 09, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L95293

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 22, 2012. This project has been assigned to ACZ's project number, L95293. Please reference this number in all future inquiries.

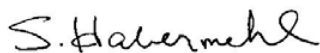
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L95293. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after August 09, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: CW-3

ACZ Sample ID: **L95293-01**

Date Sampled: 06/18/12 13:25

Date Received: 06/22/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	61.70			mg/L	0.5	2.5	06/29/12 1:13	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: NP-2

ACZ Sample ID: **L95293-02**

Date Sampled: 06/18/12 14:58

Date Received: 06/22/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	64.90			mg/L	0.5	2.5	06/29/12 1:34	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: ESP-2

ACZ Sample ID: **L95293-03**

Date Sampled: 06/19/12 11:07

Date Received: 06/22/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	27.75			mg/L	0.5	2.5	06/29/12 2:16	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: ESP-1

ACZ Sample ID: **L95293-04**

Date Sampled: 06/19/12 12:04

Date Received: 06/22/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	395.72			mg/L	2.5	12.5	06/29/12 16:45	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: ESP-3

ACZ Sample ID: **L95293-05**

Date Sampled: 06/19/12 12:53

Date Received: 06/22/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.98			mg/L	0.5	2.5	06/29/12 17:06	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-20

ACZ Sample ID: **L95293-06**

Date Sampled: 06/20/12 08:15

Date Received: 06/22/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/26/12 17:44	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.001	B		mg/L	0.001	0.004	06/26/12 17:44	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 17:44	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 17:44	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:35	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:35	jjc
Copper, dissolved	M200.7 ICP	0.03	B		mg/L	0.02	0.1	06/26/12 20:35	jjc
Lead, dissolved	M200.8 ICP-MS	0.0027			mg/L	0.0002	0.001	06/26/12 17:44	pmc
Magnesium, dissolved	M200.7 ICP	125			mg/L	0.4	2	06/26/12 20:35	jjc
Molybdenum, dissolved	M200.7 ICP	0.02	B		mg/L	0.02	0.1	06/26/12 20:35	jjc
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	06/26/12 17:44	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0011			mg/L	0.0002	0.0005	06/26/12 17:44	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 17:44	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B		mg/L	0.1	0.5	06/28/12 11:34	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.64			mg/L	0.02	0.1	07/04/12 0:47	pjb
Residue, Filterable (TDS) @180C	SM2540C	2880			mg/L	10	20	06/22/12 13:38	jad
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	07/02/12 16:22	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-21

ACZ Sample ID: **L95293-07**

Date Sampled: 06/20/12 08:39

Date Received: 06/22/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/26/12 17:47	pmc
Arsenic, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.004	06/26/12 17:47	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 17:47	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 17:47	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:38	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:38	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:38	jjc
Lead, dissolved	M200.8 ICP-MS	0.0005	B		mg/L	0.0002	0.001	06/26/12 17:47	pmc
Magnesium, dissolved	M200.7 ICP	123			mg/L	0.4	2	06/26/12 20:38	jjc
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:38	jjc
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	06/26/12 17:47	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0009			mg/L	0.0002	0.0005	06/26/12 17:47	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 17:47	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.2	B		mg/L	0.1	0.5	06/28/12 11:38	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	1.71			mg/L	0.02	0.1	07/04/12 0:48	pjb
Residue, Filterable (TDS) @180C	SM2540C	2970			mg/L	10	20	06/22/12 13:39	jad
Sulfate	D516-02 - Turbidimetric	1700		*	mg/L	100	500	07/02/12 16:22	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-13

ACZ Sample ID: **L95293-08**

Date Sampled: 06/20/12 08:53

Date Received: 06/22/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/26/12 17:57	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.004	06/28/12 7:03	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 17:57	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 17:57	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:41	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:41	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:41	jjc
Lead, dissolved	M200.8 ICP-MS	0.0006	B		mg/L	0.0002	0.001	06/28/12 7:03	pmc
Magnesium, dissolved	M200.7 ICP	117			mg/L	0.4	2	06/26/12 20:41	jjc
Molybdenum, dissolved	M200.7 ICP	0.14			mg/L	0.02	0.1	06/26/12 20:41	jjc
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	06/26/12 17:57	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0009			mg/L	0.0002	0.0005	06/28/12 7:03	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 17:57	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B		mg/L	0.1	0.5	06/28/12 11:54	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.91			mg/L	0.02	0.1	07/04/12 0:49	pjb
Residue, Filterable (TDS) @180C	SM2540C	3290			mg/L	10	20	06/22/12 13:41	jad
Sulfate	D516-02 - Turbidimetric	1900		*	mg/L	100	500	07/02/12 16:22	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: IW-3A

ACZ Sample ID: **L95293-09**

Date Sampled: 06/20/12 09:10

Date Received: 06/22/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0008	0.004	06/26/12 18:00	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.002	B		mg/L	0.001	0.004	06/28/12 7:06	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 18:00	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 18:00	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:44	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:44	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:44	jjc
Lead, dissolved	M200.8 ICP-MS		U	*	mg/L	0.0002	0.001	06/26/12 18:00	pmc
Magnesium, dissolved	M200.7 ICP	115			mg/L	0.4	2	06/26/12 20:44	jjc
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.02	0.1	06/26/12 20:44	jjc
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.001	0.006	06/26/12 18:00	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0004	B		mg/L	0.0002	0.0005	06/28/12 7:06	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0002	0.001	06/26/12 18:00	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B		mg/L	0.1	0.5	06/28/12 11:58	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.70			mg/L	0.02	0.1	07/04/12 0:50	pjb
Residue, Filterable (TDS) @180C	SM2540C	2960			mg/L	10	20	06/22/12 13:42	jad
Sulfate	D516-02 - Turbidimetric	1700		*	mg/L	100	500	07/02/12 16:31	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-5B

ACZ Sample ID: **L95293-10**

Date Sampled: 06/20/12 12:20

Date Received: 06/22/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	519.3			mg/L	5	25	06/29/12 3:40	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: RT-1

ACZ Sample ID: **L95293-11**

Date Sampled: 06/19/12 08:49

Date Received: 06/22/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	06/26/12 18:03	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0092			mg/L	0.0005	0.002	06/28/12 7:10	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/26/12 18:03	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/26/12 18:03	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/26/12 20:47	jjc
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/26/12 20:47	jjc
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	06/26/12 20:47	jjc
Lead, dissolved	M200.8 ICP-MS	0.0009			mg/L	0.0001	0.0005	06/28/12 7:10	pmc
Magnesium, dissolved	M200.7 ICP	9.5			mg/L	0.2	1	06/26/12 20:47	jjc
Molybdenum, dissolved	M200.7 ICP	0.10			mg/L	0.01	0.05	06/26/12 20:47	jjc
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.0006	0.003	06/26/12 18:03	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0008			mg/L	0.0001	0.0003	06/28/12 7:10	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	06/26/12 18:03	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.6			mg/L	0.1	0.5	06/28/12 12:02	abm
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.92			mg/L	0.02	0.1	07/04/12 0:51	pjb
Residue, Filterable (TDS) @180C	SM2540C	330			mg/L	10	20	06/22/12 13:43	jad
Sulfate	D516-02 - Turbidimetric	75		*	mg/L	5	30	07/02/12 16:14	tcd

Arizona license number: AZ0102

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95293**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.02		.02008	mg/L	100.4	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0012	0.0012			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.01		.00998	mg/L	99.8	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.02	U	.01973	mg/L	98.7	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.02	U	.01977	mg/L	98.9	70	130	0.2	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.01	U	.01002	mg/L	100.2	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.01	U	.01003	mg/L	100.3	70	130	0.1	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.05464	mg/L	109.3	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0015	0.0015			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.05005		.0458	mg/L	91.5	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1001	U	.1058	mg/L	105.7	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1001	U	.1141	mg/L	114	70	130	7.55	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.05005	.0086	.06246	mg/L	107.6	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.05005	.0086	.06051	mg/L	103.7	70	130	3.17	20	

WG325300

WG325300ICV	ICV	06/28/12 6:51	MS120604-5	.05		.05344	mg/L	106.9	90	110			
WG325300ICB	ICB	06/28/12 6:54				U	mg/L		-0.0015	0.0015			
WG325300LFB	LFB	06/28/12 6:57	MS120531-3	.05005		.04991	mg/L	99.7	85	115			
L95293-11AS	AS	06/28/12 7:13	MS120531-3	.05005	.0092	.06503	mg/L	111.5	70	130			
L95293-11ASD	ASD	06/28/12 7:16	MS120531-3	.05005	.0092	.065	mg/L	111.5	70	130	0.05	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.04926	mg/L	98.5	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0003	0.0003			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.0501		.04452	mg/L	88.9	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1002	U	.10012	mg/L	99.9	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1002	U	.10606	mg/L	105.8	70	130	5.76	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.0501	U	.05168	mg/L	103.2	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.0501	U	.05044	mg/L	100.7	70	130	2.43	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.05237	mg/L	104.7	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0003	0.0003			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.0501		.04676	mg/L	93.3	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1002	.0095	.10216	mg/L	92.5	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1002	.0095	.10584	mg/L	96.1	70	130	3.54	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.0501	U	.05141	mg/L	102.6	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.0501	U	.05098	mg/L	101.8	70	130	0.84	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95293**

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325189													
WG325189ICV	ICV	06/26/12 19:37	II120430-3	2		1.963	mg/L	98.2	95	105			
WG325189ICB	ICB	06/26/12 19:43				U	mg/L		-0.03	0.03			
WG325189LFB	LFB	06/26/12 19:55	II120606-2	.5		.491	mg/L	98.2	85	115			
L95283-01AS	AS	06/26/12 20:07	II120606-2	.5	U	.503	mg/L	100.6	85	115			
L95283-01ASD	ASD	06/26/12 20:10	II120606-2	.5	U	.506	mg/L	101.2	85	115	0.59	20	
L95293-11AS	AS	06/26/12 20:50	II120606-2	.5	U	.503	mg/L	100.6	85	115			
L95293-11ASD	ASD	06/26/12 20:54	II120606-2	.5	U	.491	mg/L	98.2	85	115	2.41	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325189													
WG325189ICV	ICV	06/26/12 19:37	II120430-3	2		2.02	mg/L	101	95	105			
WG325189ICB	ICB	06/26/12 19:43				U	mg/L		-0.03	0.03			
WG325189LFB	LFB	06/26/12 19:55	II120606-2	.5		.5	mg/L	100	85	115			
L95283-01AS	AS	06/26/12 20:07	II120606-2	.5	U	.503	mg/L	100.6	85	115			
L95283-01ASD	ASD	06/26/12 20:10	II120606-2	.5	U	.518	mg/L	103.6	85	115	2.94	20	
L95293-11AS	AS	06/26/12 20:50	II120606-2	.5	U	.51	mg/L	102	85	115			
L95293-11ASD	ASD	06/26/12 20:54	II120606-2	.5	U	.504	mg/L	100.8	85	115	1.18	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325189													
WG325189ICV	ICV	06/26/12 19:37	II120430-3	2		1.996	mg/L	99.8	95	105			
WG325189ICB	ICB	06/26/12 19:43				U	mg/L		-0.03	0.03			
WG325189LFB	LFB	06/26/12 19:55	II120606-2	.5		.495	mg/L	99	85	115			
L95283-01AS	AS	06/26/12 20:07	II120606-2	.5	U	.509	mg/L	101.8	85	115			
L95283-01ASD	ASD	06/26/12 20:10	II120606-2	.5	U	.513	mg/L	102.6	85	115	0.78	20	
L95293-11AS	AS	06/26/12 20:50	II120606-2	.5	U	.512	mg/L	102.4	85	115			
L95293-11ASD	ASD	06/26/12 20:54	II120606-2	.5	U	.501	mg/L	100.2	85	115	2.17	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325317													
WG325317ICV	ICV	06/28/12 9:41	WC120618-	2.002		2	mg/L	99.9	95	105			
WG325317ICB	ICB	06/28/12 9:47				U	mg/L		-0.3	0.3			
WG325317LFB1	LFB	06/28/12 10:13	WC120601-	5.005		5.06	mg/L	101.1	90	110			
L95291-03AS	AS	06/28/12 11:18	WC120601-	5.005	1.9	6.74	mg/L	96.7	90	110			
L95291-03DUP	DUP	06/28/12 11:21			1.9	1.88	mg/L				1.1	20	
WG325317LFB2	LFB	06/28/12 12:15	WC120601-	5.005		5	mg/L	99.9	90	110			

FMI Gold & Copper - Sierrita
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Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.05285	mg/L	105.7	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0003	0.0003			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.05005		.0463	mg/L	92.5	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1001	.001	.09738	mg/L	96.3	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1001	.001	.10028	mg/L	99.2	70	130	2.93	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.05005	.0009	.0533	mg/L	104.7	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.05005	.0009	.05179	mg/L	101.7	70	130	2.87	20	

WG325300

WG325300ICV	ICV	06/28/12 6:51	MS120604-5	.05		.05199	mg/L	104	90	110			
WG325300ICB	ICB	06/28/12 6:54				U	mg/L		-0.0003	0.0003			
WG325300LFB	LFB	06/28/12 6:57	MS120531-3	.05005		.04793	mg/L	95.8	85	115			
L95293-11AS	AS	06/28/12 7:13	MS120531-3	.05005	.0009	.05196	mg/L	102	70	130			
L95293-11ASD	ASD	06/28/12 7:16	MS120531-3	.05005	.0009	.05089	mg/L	99.9	70	130	2.08	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325189													
WG325189ICV	ICV	06/26/12 19:37	II120430-3	100		100.88	mg/L	100.9	95	105			
WG325189ICB	ICB	06/26/12 19:43				U	mg/L		-0.6	0.6			
WG325189LFB	LFB	06/26/12 19:55	II120606-2	50.007		51.46	mg/L	102.9	85	115			
L95283-01AS	AS	06/26/12 20:07	II120606-2	50.007	1	53.41	mg/L	104.8	85	115			
L95283-01ASD	ASD	06/26/12 20:10	II120606-2	50.007	1	53.51	mg/L	105	85	115	0.19	20	
L95293-11AS	AS	06/26/12 20:50	II120606-2	50.007	9.5	61.48	mg/L	103.9	85	115			
L95293-11ASD	ASD	06/26/12 20:54	II120606-2	50.007	9.5	61.66	mg/L	104.3	85	115	0.29	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325189													
WG325189ICV	ICV	06/26/12 19:37	II120430-3	2		2.031	mg/L	101.6	95	105			
WG325189ICB	ICB	06/26/12 19:43				U	mg/L		-0.03	0.03			
WG325189LFB	LFB	06/26/12 19:55	II120606-2	.5		.518	mg/L	103.6	85	115			
L95283-01AS	AS	06/26/12 20:07	II120606-2	.5	U	.522	mg/L	104.4	85	115			
L95283-01ASD	ASD	06/26/12 20:10	II120606-2	.5	U	.519	mg/L	103.8	85	115	0.58	20	
L95293-11AS	AS	06/26/12 20:50	II120606-2	.5	.1	.618	mg/L	103.6	85	115			
L95293-11ASD	ASD	06/26/12 20:54	II120606-2	.5	.1	.628	mg/L	105.6	85	115	1.61	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.05117	mg/L	102.3	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0018	0.0018			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.05005		.04582	mg/L	91.5	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1001	.022	.1074	mg/L	85.3	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1001	.022	.1105	mg/L	88.4	70	130	2.85	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.05005	U	.04632	mg/L	92.5	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.05005	U	.04565	mg/L	91.2	70	130	1.46	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95293**

Nitrate/Nitrite as N M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325668													
WG325668ICV	ICV	07/04/12 0:14	WI120405-3	2.416		2.365	mg/L	97.9	90	110			
WG325668ICB	ICB	07/04/12 0:15				U	mg/L		-0.06	0.06			
WG325668LFB1	LFB	07/04/12 0:19	WI120211-3	2		2.02	mg/L	101	90	110			
L95291-01AS	AS	07/04/12 0:37	WI120211-3	2	.3	2.302	mg/L	100.1	90	110			
L95291-02DUP	DUP	07/04/12 1:18			.23	.227	mg/L				1.3	20	
WG325668LFB2	LFB	07/04/12 1:20	WI120211-3	2		1.976	mg/L	98.8	90	110			

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325022													
WG325022PBW	PBW	06/22/12 13:15				U	mg/L		-20	20			
WG325022LCSW	LCSW	06/22/12 13:16	PCN39028	260		236	mg/L	90.8	80	120			
L95293-11DUP	DUP	06/22/12 13:44			330	322	mg/L				2.5	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.05415	mg/L	108.3	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0003	0.0003			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.05005		.04593	mg/L	91.8	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1001	.0005	.10748	mg/L	106.9	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1001	.0005	.11512	mg/L	114.5	70	130	6.86	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.05005	.0009	.05644	mg/L	111	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.05005	.0009	.05476	mg/L	107.6	70	130	3.02	20	
WG325300													
WG325300ICV	ICV	06/28/12 6:51	MS120604-5	.05		.0536	mg/L	107.2	90	110			
WG325300ICB	ICB	06/28/12 6:54				U	mg/L		-0.0003	0.0003			
WG325300LFB	LFB	06/28/12 6:57	MS120531-3	.05005		.04875	mg/L	97.4	85	115			
L95293-11AS	AS	06/28/12 7:13	MS120531-3	.05005	.0008	.05555	mg/L	109.4	70	130			
L95293-11ASD	ASD	06/28/12 7:16	MS120531-3	.05005	.0008	.05437	mg/L	107	70	130	2.15	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95293**

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325567													
WG325567ICB	ICB	07/02/12 13:05				U	mg/L		-3	3			
WG325567ICV	ICV	07/02/12 13:05	WI120625-2	20		18.8	mg/L	94	90	110			
WG325567LFB	LFB	07/02/12 16:03	WI120508-1	10		10.1	mg/L	101	90	110			
L95250-01DUP	DUP	07/02/12 16:11			1860	1870	mg/L				0.5	20	
L95250-02AS	AS	07/02/12 16:13	SO4TURB5	100	1660	1779	mg/L	119	90	110			M3
L95293-08DUP	DUP	07/02/12 16:31			1900	1920	mg/L				1	20	
L95293-09AS	AS	07/02/12 16:31	SO4TURB10	10	1700	1680	mg/L	-200	90	110			M3

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324762													
WG324762ICV	ICV	06/20/12 17:56	WI120406-1	50.15		51.1	mg/L	101.9	90	110			
WG324762ICB	ICB	06/20/12 18:18				U	mg/L		-1.5	1.5			
WG325315													
WG325315LFB	LFB	06/28/12 20:17	WI120312-2	30		29.88	mg/L	99.6	90	110			
L95155-02AS	AS	06/28/12 21:41	WI120312-2	30	23.16	52.22	mg/L	96.9	90	110			
L95293-02DUP	DUP	06/29/12 1:55			64.9	64.92	mg/L				0	20	
L95293-03AS	AS	06/29/12 2:37	WI120312-2	30	27.75	56.4	mg/L	95.5	90	110			
L95155-01DUP	DUP	06/29/12 12:53			30.73	30.38	mg/L				1.1	20	

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325132													
WG325132ICV	ICV	06/26/12 16:56	MS120604-5	.05		.05474	mg/L	109.5	90	110			
WG325132ICB	ICB	06/26/12 16:59				U	mg/L		-0.0003	0.0003			
WG325132LFB	LFB	06/26/12 17:02	MS120531-3	.05005		.0477	mg/L	95.3	85	115			
L95259-05AS	AS	06/26/12 17:08	MS120531-3	.1001	U	.10048	mg/L	100.4	70	130			
L95259-05ASD	ASD	06/26/12 17:11	MS120531-3	.1001	U	.10416	mg/L	104.1	70	130	3.6	20	
L95293-11AS	AS	06/26/12 18:06	MS120531-3	.05005	U	.05387	mg/L	107.6	70	130			
L95293-11ASD	ASD	06/26/12 18:09	MS120531-3	.05005	U	.05306	mg/L	106	70	130	1.52	20	

FMI Gold & Copper - SierritaACZ Project ID: **L95293**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95293-06	WG325567	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.
L95293-07	WG325567	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.
L95293-08	WG325567	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.
L95293-09	WG325132	Lead, dissolved	M200.8 ICP-MS	BE	Target analyte in continuing calibration blank (CCB) at or above the acceptance criteria. Target analyte was not detected in the sample [$<$ MDL].
	WG325567	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.
L95293-11	WG325567	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L95293**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L95293
Date Received: 06/22/2012 10:00
Received By: gac
Date Printed: 6/25/2012

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Are all labels on containers and are they intact and legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) For preserved bottle types, was the pH checked and within limits?	<input 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 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?
-----	-----	-----	-----
NA15631	1.8	14	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.

L95293

CHAIN of CUSTODY

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

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001Z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375	Quarterly															
CW-3	06/18/12 : 1325	GW	1	X																
NP-2	06/18/12 : 1458	GW	1	X																
ESP-2	06/19/12 : 1107	GW	1	X																
ESP-1	06/19/12 : 1204	GW	1	X																
ESP-3	06/19/12 : 1253	GW	1	X																
IW-20	06/20/12 : 0815	GW	3		X															
IW-21	06/20/12 : 0839	GW	3		X															
IW-13	06/20/12 : 0853	GW	3		X															
IW-3A	06/20/12 : 0910	GW	3		X															
MO-2007-5B	06/20/12 : 1220	GW	1	X																

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7894

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

ALEXIS ALVAREZ 6/21/12 0900 ALK 6/22/12 1000

L95293 Chain of Custody

1 of 2



Laboratories, Inc.

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

CHAIN of CUSTODY

Report to:

Name: Jon Anderson
Company: Freeport McMoRan Copper & Gold Sierrita
E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Rd
Green Valley AZ 85614
Telephone: 520-393-2714

Copy of Report to:

Name:
Company:

E-mail:
Telephone:

Invoice to:

Name:
Company:
E-mail:

Address:
Telephone:

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

YES
NO

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

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

Are samples for CO DW Compliance Monitoring?

YES
NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:
Project/PO #: ZS000001Z9
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

of Containers

Quarterly

SAMPLE IDENTIFICATION DATE:TIME Matrix

RT-1 6/19/12 : 0849 GW

3

x

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7894

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

Alexis Alvarez

6/22/12 10:22

Alex 6/22/12

10:22

July 03, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L95294

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 22, 2012. This project has been assigned to ACZ's project number, L95294. Please reference this number in all future inquiries.

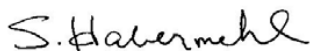
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L95294. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after August 03, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: SIWELL

ACZ Sample ID: **L95294-01**

Date Sampled: 06/20/12 13:17

Date Received: 06/22/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	8.46			mg/L	0.5	2.5	06/29/12 4:44	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MO-2007-5C

ACZ Sample ID: **L95294-02**

Date Sampled: 06/18/12 18:38

Date Received: 06/22/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	238.89			mg/L	2.5	12.5	06/29/12 17:28	ccp

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95294**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG324762													
WG324762ICV	ICV	06/20/12 17:56	WI120406-1	50.15		51.1	mg/L	101.9	90	110			
WG324762ICB	ICB	06/20/12 18:18				U	mg/L		-1.5	1.5			
WG325315													
WG325315LFB	LFB	06/28/12 20:17	WI120312-2	30		29.88	mg/L	99.6	90	110			
L95293-02DUP	DUP	06/29/12 1:55			64.9	64.92	mg/L				0	20	
L95293-03AS	AS	06/29/12 2:37	WI120312-2	30	27.75	56.4	mg/L	95.5	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L95294**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L95294**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L95294
Date Received: 06/22/2012 10:00
Received By: gac
Date Printed: 6/25/2012

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA15631	1.8	14	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.

L95294

CHAIN of CUSTODY

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

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001Z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

of Containers

SO4 by EPA 300 or EPA 375

SAMPLE IDENTIFICATION

DATE:TIME

Matrix

SIWELL

06/20/12 : 1317

GW

1

X

MO 2007-SC

6/18/12 : 1838

GW

1

X

Matrix

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7894

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

ALEXIS ALVAREZ

6/21/12 0900

AW: 6/22/12

1000

L95294 Chain of Custody

July 11, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L95422

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on June 29, 2012. This project has been assigned to ACZ's project number, L95422. Please reference this number in all future inquiries.

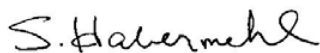
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L95422. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after August 11, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: M-10

ACZ Sample ID: **L95422-01**

Date Sampled: 06/25/12 13:34

Date Received: 06/29/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	07/10/12 5:44	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0061			mg/L	0.0001	0.0005	07/10/12 5:44	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	07/10/12 5:44	pmc
Cadmium, dissolved	M200.8 ICP-MS	0.0001	B		mg/L	0.0001	0.0005	07/10/12 5:44	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/06/12 13:18	aeb
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/06/12 13:18	aeb
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/06/12 13:18	aeb
Lead, dissolved	M200.8 ICP-MS	0.0010			mg/L	0.0001	0.0005	07/10/12 5:44	pmc
Magnesium, dissolved	M200.7 ICP	12.7			mg/L	0.2	1	07/06/12 13:18	aeb
Molybdenum, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/06/12 13:18	aeb
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.0006	0.003	07/10/12 5:44	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0011			mg/L	0.0001	0.0003	07/10/12 5:44	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	07/10/12 5:44	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.6		*	mg/L	0.1	0.5	07/03/12 16:32	mla
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.77		*	mg/L	0.02	0.1	07/11/12 0:08	pjb
Residue, Filterable (TDS) @180C	SM2540C	440			mg/L	10	20	06/29/12 15:37	jad
Sulfate	D516-02 - Turbidimetric	162		*	mg/L	5	30	07/09/12 22:15	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: CCGV

ACZ Sample ID: **L95422-02**

Date Sampled: 06/26/12 07:51

Date Received: 06/29/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	88.69			mg/L	0.5	2.5	07/06/12 15:52	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: M-20

ACZ Sample ID: **L95422-03**

Date Sampled: 06/26/12 11:42

Date Received: 06/29/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	1722.9			mg/L	25	125	07/05/12 22:38	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: M-9

ACZ Sample ID: **L95422-04**

Date Sampled: 06/27/12 14:28

Date Received: 06/29/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	07/10/12 5:47	pmc
Arsenic, dissolved	M200.8 ICP-MS	0.0054			mg/L	0.0001	0.0005	07/10/12 5:47	pmc
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	07/10/12 5:47	pmc
Cadmium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	07/10/12 5:47	pmc
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/06/12 13:27	aeb
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/06/12 13:27	aeb
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	07/06/12 13:27	aeb
Lead, dissolved	M200.8 ICP-MS	0.0008			mg/L	0.0001	0.0005	07/10/12 5:47	pmc
Magnesium, dissolved	M200.7 ICP	12.1			mg/L	0.2	1	07/06/12 13:27	aeb
Molybdenum, dissolved	M200.7 ICP	0.01	B		mg/L	0.01	0.05	07/06/12 13:27	aeb
Nickel, dissolved	M200.8 ICP-MS		U		mg/L	0.0006	0.003	07/10/12 5:47	pmc
Selenium, dissolved	M200.8 ICP-MS	0.0022			mg/L	0.0001	0.0003	07/10/12 5:47	pmc
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	07/10/12 5:47	pmc

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.3	B	*	mg/L	0.1	0.5	07/03/12 16:42	mla
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.69		*	mg/L	0.02	0.1	07/11/12 0:12	pjb
Residue, Filterable (TDS) @180C	SM2540C	320			mg/L	10	20	06/29/12 15:38	jad
Sulfate	D516-02 - Turbidimetric	81		*	mg/L	5	30	07/09/12 22:15	tcd

Arizona license number: AZ0102

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95422**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.02		.02098	mg/L	104.9	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0012	0.0012			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.01		.01052	mg/L	105.2	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.01	U	.00992	mg/L	99.2	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.01	U	.01005	mg/L	100.5	70	130	1.3	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05515	mg/L	110.3	90	110			
WG325904ICB	ICB	07/10/12 4:24				.00016	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.05005		.05075	mg/L	101.4	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.05005	U	.05556	mg/L	111	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.05005	U	.05614	mg/L	112.2	70	130	1.04	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.04768	mg/L	95.4	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.0501		.04778	mg/L	95.4	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.0501	U	.05408	mg/L	107.9	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.0501	U	.05333	mg/L	106.4	70	130	1.4	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05399	mg/L	108	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.0501		.05107	mg/L	101.9	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.0501	U	.05464	mg/L	109.1	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.0501	U	.05475	mg/L	109.3	70	130	0.2	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325717													
WG325717ICV	ICV	07/06/12 12:50	II120430-3	2		1.951	mg/L	97.6	95	105			
WG325717ICB	ICB	07/06/12 12:56				U	mg/L		-0.03	0.03			
WG325717LFB	LFB	07/06/12 13:08	II120606-2	.5		.522	mg/L	104.4	85	115			
L95422-01AS	AS	07/06/12 13:21	II120606-2	.5	U	.528	mg/L	105.6	85	115			
L95422-01ASD	ASD	07/06/12 13:24	II120606-2	.5	U	.517	mg/L	103.4	85	115	2.11	20	

FMI Gold & Copper - Sierrita
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Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325717													
WG325717ICV	ICV	07/06/12 12:50	II120430-3	2		2.005	mg/L	100.3	95	105			
WG325717ICB	ICB	07/06/12 12:56				U	mg/L		-0.03	0.03			
WG325717LFB	LFB	07/06/12 13:08	II120606-2	.5		.521	mg/L	104.2	85	115			
L95422-01AS	AS	07/06/12 13:21	II120606-2	.5	U	.524	mg/L	104.8	85	115			
L95422-01ASD	ASD	07/06/12 13:24	II120606-2	.5	U	.518	mg/L	103.6	85	115	1.15	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325717													
WG325717ICV	ICV	07/06/12 12:50	II120430-3	2		1.992	mg/L	99.6	95	105			
WG325717ICB	ICB	07/06/12 12:56				U	mg/L		-0.03	0.03			
WG325717LFB	LFB	07/06/12 13:08	II120606-2	.5		.531	mg/L	106.2	85	115			
L95422-01AS	AS	07/06/12 13:21	II120606-2	.5	U	.541	mg/L	108.2	85	115			
L95422-01ASD	ASD	07/06/12 13:24	II120606-2	.5	U	.534	mg/L	106.8	85	115	1.3	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325595													
WG325595ICV	ICV	07/03/12 9:56	WC120628-	2.002		1.94	mg/L	96.9	95	105			
WG325595ICB	ICB	07/03/12 10:03				U	mg/L		-0.3	0.3			
WG325639													
WG325639ICV	ICV	07/03/12 15:03	WC120628-	2.002		1.9	mg/L	94.9	95	105			
WG325639ICB	ICB	07/03/12 15:09				U	mg/L		-0.3	0.3			
WG325639LFB1	LFB	07/03/12 15:16	WC120601-	5.005		4.91	mg/L	98.1	90	110			
L95422-01AS	AS	07/03/12 16:35	WC120601-	5.005	.6	5.68	mg/L	101.5	90	110			
L95422-01DUP	DUP	07/03/12 16:38			.6	.64	mg/L				6.5	20	RA
WG325639LFB2	LFB	07/03/12 17:39	WC120601-	5.005		5.05	mg/L	100.9	90	110			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05304	mg/L	106.1	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.05005		.05055	mg/L	101	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.05005	U	.05188	mg/L	103.7	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.05005	U	.05188	mg/L	103.7	70	130	0	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325717													
WG325717ICV	ICV	07/06/12 12:50	II120430-3	100		100.93	mg/L	100.9	95	105			
WG325717ICB	ICB	07/06/12 12:56				U	mg/L		-0.6	0.6			
WG325717LFB	LFB	07/06/12 13:08	II120606-2	50.007		54.43	mg/L	108.8	85	115			
L95422-01AS	AS	07/06/12 13:21	II120606-2	50.007	12.7	67.54	mg/L	109.7	85	115			
L95422-01ASD	ASD	07/06/12 13:24	II120606-2	50.007	12.7	66.8	mg/L	108.2	85	115	1.1	20	

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Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325717													
WG325717ICV	ICV	07/06/12 12:50	II120430-3	2		2.022	mg/L	101.1	95	105			
WG325717ICB	ICB	07/06/12 12:56				U	mg/L		-0.03	0.03			
WG325717LFB	LFB	07/06/12 13:08	II120606-2	.5		.55	mg/L	110	85	115			
L95422-01AS	AS	07/06/12 13:21	II120606-2	.5	U	.565	mg/L	113	85	115			
L95422-01ASD	ASD	07/06/12 13:24	II120606-2	.5	U	.545	mg/L	109	85	115	3.6	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05274	mg/L	105.5	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0018	0.0018			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.05005		.04984	mg/L	99.6	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.05005	U	.04873	mg/L	97.4	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.05005	U	.04893	mg/L	97.8	70	130	0.41	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325992													
WG325992ICV	ICV	07/10/12 21:33	WI120706-1	2.416		2.335	mg/L	96.6	90	110			
WG325992ICB	ICB	07/10/12 21:34				U	mg/L		-0.06	0.06			
WG326001													
WG326001LFB1	LFB	07/10/12 23:43	WI120211-3	2		1.988	mg/L	99.4	90	110			
L95417-08AS	AS	07/11/12 0:02	WI120211-3	2	U	1.984	mg/L	99.2	90	110			
L95417-09DUP	DUP	07/11/12 0:05			U	U	mg/L				0	20	RA
WG326001LFB2	LFB	07/11/12 0:18	WI120211-3	2		2.069	mg/L	103.5	90	110			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325441													
WG325441PBW	PBW	06/29/12 15:15				U	mg/L		-20	20			
WG325441LCSW	LCSW	06/29/12 15:16	PCN39028	260		250	mg/L	96.2	80	120			
L95431-17DUP	DUP	06/29/12 15:44			470	470	mg/L				0	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05255	mg/L	105.1	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.05005		.04821	mg/L	96.3	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.05005	U	.05714	mg/L	114.2	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.05005	U	.05609	mg/L	112.1	70	130	1.85	20	

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Sulfate													
D516-02 - Turbidimetric													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325906													
WG325906ICB	ICB	07/09/12 18:10				U	mg/L		-3	3			
WG325906ICV	ICV	07/09/12 18:10	WI120625-2	20		20	mg/L	100	90	110			
WG325906LFB	LFB	07/09/12 22:12	WI120508-1	10		9	mg/L	90	90	110			
L95419-05AS	AS	07/09/12 22:24	SO4TURB50	10	910	937	mg/L	270	90	110			M3
L95419-04DUP	DUP	07/09/12 22:26			180	181	mg/L				0.6	20	
Sulfate													
M300.0 - Ion Chromatography													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325507													
WG325507ICV	ICV	07/02/12 14:03	WI120406-1	50.15		51.22	mg/L	102.1	90	110			
WG325507ICB	ICB	07/02/12 14:24				U	mg/L		-1.5	1.5			
WG325674													
WG325674LFB	LFB	07/05/12 13:29	WI120312-2	30		29.89	mg/L	99.6	90	110			
L95421-04DUP	DUP	07/05/12 19:07			1537.8	1537.6	mg/L				0	20	
L95421-05AS	AS	07/06/12 14:07	WI120312-2	30000	27250	57420	mg/L	100.6	90	110			
Thallium, dissolved													
M200.8 ICP-MS													
ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325904													
WG325904ICV	ICV	07/10/12 4:21	MS120628-1	.05		.05356	mg/L	107.1	90	110			
WG325904ICB	ICB	07/10/12 4:24				U	mg/L		-0.0003	0.0003			
WG325904LFB	LFB	07/10/12 4:27	MS120702-3	.05005		.05043	mg/L	100.8	85	115			
L95418-01AS	AS	07/10/12 5:28	MS120702-3	.05005	U	.05253	mg/L	105	70	130			
L95418-01ASD	ASD	07/10/12 5:31	MS120702-3	.05005	U	.05245	mg/L	104.8	70	130	0.15	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L95422**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95422-01	WG325639	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).
	WG326001	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325906	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.
L95422-04	WG325639	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).
	WG326001	Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	RA	Relative Percent Difference (RPD) was not used for data validation because the sample concentration is too low for accurate evaluation (< 10x MDL).
	WG325906	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.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L95422**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L95422
Date Received: 06/29/2012 09:02
Received By: ksj
Date Printed: 6/29/2012

Receipt Verification

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

Samples/Containers

	YES	NO	NA
8) Are all containers intact and with no leaks?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Are all labels on containers and are they intact and legible?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Do the sample labels and Chain of Custody match for Sample ID, Date, and Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11) For preserved bottle types, was the pH checked and within limits?	<input 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 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?
2877	5.3	15	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

Telephone: 520-393-2714

Telephone: 520-622-3222

Telephone:

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.

NO

ANALYSES REQUESTED (attach list or use quote number)

Quarterly

x

x

X

3

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

UPS Tracking # 1Z 867 7E4 23 1000 7901

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

DATE:TIME

16-29-12 9:02

July 16, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000001Z9

ACZ Project ID: L95465

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 03, 2012. This project has been assigned to ACZ's project number, L95465. Please reference this number in all future inquiries.

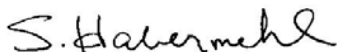
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L95465. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after August 16, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: M-8

ACZ Sample ID: **L95465-01**

Date Sampled: 06/29/12 12:32

Date Received: 07/03/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	24.00			mg/L	0.5	2.5	07/10/12 14:02	ccp

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L95465**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG325507													
WG325507ICV	ICV	07/02/12 14:03	WI120406-1	50.15		51.22	mg/L	102.1	90	110			
WG325507ICB	ICB	07/02/12 14:24				U	mg/L		-1.5	1.5			
WG325953													
WG325953LFB	LFB	07/10/12 12:59	WI120312-2	30		29.97	mg/L	99.9	90	110			
L95456-01DUP	DUP	07/10/12 13:41			164.7	166.02	mg/L				0.8	20	
L95465-01AS	AS	07/10/12 14:24	WI120312-2	30	24	53.09	mg/L	97	90	110			

FMI Gold & Copper - SierritaACZ Project ID: **L95465**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L95465**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001Z9

ACZ Project ID: L95465
Date Received: 07/03/2012 10:13
Received By: ksj
Date Printed: 7/3/2012

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 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?
-----	-----	-----	-----
2145	3.6	14	Yes

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



Laboratories, Inc.

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

195465

CHAIN of CUSTODY

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE:TIME

Matrix

of Containers

Sulfate

M-8

06/29/2012 12:32

GW

1

x

195465 Chain of Custody

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

REMARKS

UPS Tracking #1Z 867 7E4 23 1000 7910

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

Robert Carper

7/2/2012 14:00

hpl 7-2-12 10:13

August 10, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000002PM

ACZ Project ID: L95934

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on July 31, 2012. This project has been assigned to ACZ's project number, L95934. Please reference this number in all future inquiries.

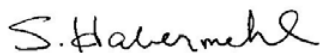
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L95934. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 10, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: MH-27

ACZ Sample ID: **L95934-01**

Date Sampled: 07/30/12 11:20

Date Received: 07/31/12

Sample Matrix: Ground Water

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, dissolved	M200.8 ICP-MS		U		mg/L	0.0004	0.002	08/03/12 12:05	msh
Arsenic, dissolved	M200.8 ICP-MS	0.0003	B		mg/L	0.0002	0.001	08/03/12 12:05	msh
Beryllium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	08/03/12 12:05	msh
Cadmium, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0001	0.0005	08/03/12 12:05	msh
Chromium, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	08/02/12 13:38	jic
Cobalt, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	08/02/12 13:38	jic
Copper, dissolved	M200.7 ICP		U		mg/L	0.01	0.05	08/02/12 13:38	jic
Lead, dissolved	M200.8 ICP-MS	0.0001	B		mg/L	0.0001	0.0005	08/03/12 12:05	msh
Magnesium, dissolved	M200.7 ICP	131			mg/L	0.2	1	08/02/12 13:38	jic
Molybdenum, dissolved	M200.7 ICP	0.04	B		mg/L	0.01	0.05	08/02/12 13:38	jic
Nickel, dissolved	M200.8 ICP-MS	0.0025	B		mg/L	0.0006	0.003	08/03/12 12:05	msh
Selenium, dissolved	M200.8 ICP-MS	0.0002	B		mg/L	0.0001	0.0003	08/03/12 12:05	msh
Thallium, dissolved	M200.8 ICP-MS		U		mg/L	0.0001	0.0005	08/03/12 12:05	msh

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Fluoride	SM4500F-C	0.6		*	mg/L	0.1	0.5	08/06/12 14:03	las
Nitrate/Nitrite as N	M353.2 - H2SO4 preserved	0.42			mg/L	0.02	0.1	08/09/12 14:17	tcd
Residue, Filterable (TDS) @180C	SM2540C	2550			mg/L	10	20	08/02/12 10:54	las
Sulfate	D516-02 - Turbidimetric	800		*	mg/L	100	500	08/09/12 19:40	tcd

Arizona license number: AZ0102

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000002PM

ACZ Project ID: **L95934**

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.02		.02004	mg/L	100.2	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0012	0.0012			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.01		.0103	mg/L	103	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.01	U	.00904	mg/L	90.4	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.01	U	.00902	mg/L	90.2	70	130	0.22	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.04976	mg/L	99.5	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0006	0.0006			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.05005		.04841	mg/L	96.7	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.05005	.0003	.04348	mg/L	86.3	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.05005	.0003	.04629	mg/L	91.9	70	130	6.26	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.04565	mg/L	91.3	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0003	0.0003			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.0501		.04627	mg/L	92.4	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.0501	U	.04469	mg/L	89.2	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.0501	U	.04564	mg/L	91.1	70	130	2.1	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.05035	mg/L	100.7	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0003	0.0003			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.0501		.04919	mg/L	98.2	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.0501	.0002	.0434	mg/L	86.2	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.0501	.0002	.04525	mg/L	89.9	70	130	4.17	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327526													
WG327526ICV	ICV	08/02/12 12:36	II120711-1	2		1.96	mg/L	98	95	105			
WG327526ICB	ICB	08/02/12 12:42				U	mg/L		-0.03	0.03			
WG327526LFB	LFB	08/02/12 12:55	II120717-3	.5		.492	mg/L	98.4	85	115			
L95916-01AS	AS	08/02/12 13:04	II120717-3	.5	U	.507	mg/L	97.4	85	115			
L95916-01ASD	ASD	08/02/12 13:07	II120717-3	.5	U	.504	mg/L	96.8	85	115	0.59	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000002PM

ACZ Project ID: **L95934**

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327526													
WG327526ICV	ICV	08/02/12 12:36	II120711-1	2		1.925	mg/L	96.3	95	105			
WG327526ICB	ICB	08/02/12 12:42				U	mg/L		-0.03	0.03			
WG327526LFB	LFB	08/02/12 12:55	II120717-3	.5		.479	mg/L	95.8	85	115			
L95916-01AS	AS	08/02/12 13:04	II120717-3	.5	U	.478	mg/L	95.6	85	115			
L95916-01ASD	ASD	08/02/12 13:07	II120717-3	.5	U	.473	mg/L	94.6	85	115	1.05	20	

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327526													
WG327526ICV	ICV	08/02/12 12:36	II120711-1	2		1.936	mg/L	96.8	95	105			
WG327526ICB	ICB	08/02/12 12:42				U	mg/L		-0.03	0.03			
WG327526LFB	LFB	08/02/12 12:55	II120717-3	.5		.482	mg/L	96.4	85	115			
L95916-01AS	AS	08/02/12 13:04	II120717-3	.5	U	.485	mg/L	97	85	115			
L95916-01ASD	ASD	08/02/12 13:07	II120717-3	.5	U	.485	mg/L	97	85	115	0	20	

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327656													
WG327656ICV	ICV	08/06/12 13:42	WC120730-	2.002		1.91	mg/L	95.4	95	105			
WG327656ICB	ICB	08/06/12 13:47				U	mg/L		-0.3	0.3			
WG327656LFB1	LFB	08/06/12 13:54	WC120601-	5.005		4.67	mg/L	93.3	90	110			
L95934-01AS	AS	08/06/12 14:06	WC120601-	5.005	.6	4.93	mg/L	86.5	90	110			M2
L95934-01DUP	DUP	08/06/12 14:09			.6	.65	mg/L				8	20	RA

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.05168	mg/L	103.4	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0003	0.0003			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.05005		.04993	mg/L	99.8	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.05005	.0001	.05016	mg/L	100	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.05005	.0001	.05213	mg/L	104	70	130	3.85	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327526													
WG327526ICV	ICV	08/02/12 12:36	II120711-1	100		100.25	mg/L	100.3	95	105			
WG327526ICB	ICB	08/02/12 12:42				U	mg/L		-0.6	0.6			
WG327526LFB	LFB	08/02/12 12:55	II120717-3	50.007		49.5	mg/L	99	85	115			
L95916-01AS	AS	08/02/12 13:04	II120717-3	50.007	4.6	53.81	mg/L	98.4	85	115			
L95916-01ASD	ASD	08/02/12 13:07	II120717-3	50.007	4.6	53.49	mg/L	97.8	85	115	0.6	20	

FMI Gold & Copper - Sierrita
Project ID: ZS000002PM

ACZ Project ID: **L95934**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327526													
WG327526ICV	ICV	08/02/12 12:36	II120711-1	2		1.97	mg/L	98.5	95	105			
WG327526ICB	ICB	08/02/12 12:42				U	mg/L		-0.03	0.03			
WG327526LFB	LFB	08/02/12 12:55	II120717-3	.5		.49	mg/L	98	85	115			
L95916-01AS	AS	08/02/12 13:04	II120717-3	.5	.04	.513	mg/L	94.6	85	115			
L95916-01ASD	ASD	08/02/12 13:07	II120717-3	.5	.04	.512	mg/L	94.4	85	115	0.2	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.0501	mg/L	100.2	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0018	0.0018			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.05005		.04946	mg/L	98.8	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.05005	.0025	.03901	mg/L	72.9	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.05005	.0025	.04175	mg/L	78.4	70	130	6.79	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327899													
WG327899ICV	ICV	08/09/12 14:05	WI120706-1	2.416		2.474	mg/L	102.4	90	110			
WG327899ICB	ICB	08/09/12 14:06				U	mg/L		-0.06	0.06			
WG327899LFB1	LFB	08/09/12 14:10	WI120211-3	2		1.97	mg/L	98.5	90	110			
L95848-02DUP	DUP	08/09/12 14:15			2.56	2.543	mg/L				0.7	20	
WG327899LFB2	LFB	08/09/12 14:44	WI120211-3	2		1.96	mg/L	98	90	110			
L95848-01AS	AS	08/09/12 16:18	WI120211-3	40	4	42.74	mg/L	96.9	90	110			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327525													
WG327525PBW	PBW	08/02/12 10:51				U	mg/L		-20	20			
WG327525LCSW	LCSW	08/02/12 10:52	PCN38662	260		270	mg/L	103.8	80	120			
L95955-03DUP	DUP	08/02/12 11:06			810	802	mg/L				1	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.05229	mg/L	104.6	90	110			
WG327542ICB	ICB	08/03/12 10:58				.0001	mg/L		-0.0003	0.0003			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.05005		.04969	mg/L	99.3	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.05005	.0002	.0447	mg/L	88.9	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.05005	.0002	.04996	mg/L	99.4	70	130	11.11	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000002PM

ACZ Project ID: **L95934**

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327943													
WG327943ICB	ICB	08/09/12 16:38				U	mg/L		-3	3			
WG327943ICV	ICV	08/09/12 16:38	WI120727-2	20		19.6	mg/L	98	90	110			
WG327943LFB	LFB	08/09/12 19:22	WI120508-1	10		9.6	mg/L	96	90	110			
L95930-10DUP	DUP	08/09/12 19:25			20	19	mg/L				5.1	20	RA
L95934-01AS	AS	08/09/12 19:40	SO4TURB10	10	800	760	mg/L	-400	90	110			M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327542													
WG327542ICV	ICV	08/03/12 10:54	MS120710-2	.05		.05175	mg/L	103.5	90	110			
WG327542ICB	ICB	08/03/12 10:58				U	mg/L		-0.0003	0.0003			
WG327542LFB	LFB	08/03/12 11:01	MS120802-3	.05005		.05014	mg/L	100.2	85	115			
L95934-01AS	AS	08/03/12 12:08	MS120802-3	.05005	U	.05142	mg/L	102.7	70	130			
L95934-01ASD	ASD	08/03/12 12:18	MS120802-3	.05005	U	.05341	mg/L	106.7	70	130	3.8	20	

FMI Gold & Copper - SierritaACZ Project ID: **L95934**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L95934-01	WG327656	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG327943	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L95934**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000002PM

ACZ Project ID: L95934
Date Received: 07/31/2012 09:45
Received By: ksj
Date Printed: 7/31/2012

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 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?
-----	-----	-----	-----
3742	5.9	15	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.

L95934

CHAIN OF CUSTODY

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

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: aaron_hilshorst@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-648-8844

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (check box for sample type)

Quote #:

Project/PO #: ZS000002PM

Reporting state for compliance testing:

Sampler's Name: Robert Carper

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION DATE/TIME Matrix

MH-27

7-30-12 11:20

GW

3

x

Quarterly

Matrix

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7956

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

RECEIVED BY:

DATE/TIME

RECEIVED BY:

DATE/TIME

[Signature]

7-30-12 11:20

[Signature]

7-31-12 9:45

L95934 Chain of Custody

August 21, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000002PM

ACZ Project ID: L96143

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 10, 2012. This project has been assigned to ACZ's project number, L96143. 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 L96143. 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 21, 2012. If the samples are determined to be hazardous, additional charges apply for disposal (typically \$11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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



Sue Webber has reviewed and
approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: MO-2007-3B

ACZ Sample ID: **L96143-01**

Date Sampled: 08/07/12 11:55

Date Received: 08/10/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	36.26			mg/L	0.5	2.5	08/16/12 19:08	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: MO-2007-3C

ACZ Sample ID: **L96143-02**

Date Sampled: 08/07/12 16:48

Date Received: 08/10/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	93.25			mg/L	2.5	12.5	08/16/12 19:50	jlf

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita

ACZ Project ID: **L96143**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG327284													
WG327284ICV	ICV	07/31/12 14:23	WI120709-7	50		50.56	mg/L	101.1	90	110			
WG327284ICB	ICB	07/31/12 14:44				U	mg/L		-1.5	1.5			
WG328304													
L96143-01DUP	DUP	08/16/12 19:29			36.26	36.21	mg/L				0.1	20	
L96143-02AS	AS	08/16/12 20:11	WI120312-2	150	93.25	246.73	mg/L	102.3	90	110			
WG328304LFB	LFB	08/17/12 0:45	WI120312-2	30		30.58	mg/L	101.9	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L96143**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L96143**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000002PM

ACZ Project ID: L96143
Date Received: 08/10/2012 09:55
Received By: ksj
Date Printed: 8/10/2012

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 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?
-----	-----	-----	-----
3647	3.4	12	Yes

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

August 28, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000002PM

ACZ Project ID: L96276

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 17, 2012. This project has been assigned to ACZ's project number, L96276. Please reference this number in all future inquiries.

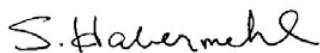
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L96276. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 28, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: MO-2007-6A

ACZ Sample ID: **L96276-01**

Date Sampled: 08/13/12 10:07

Date Received: 08/17/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	36.91		*	mg/L	0.5	2.5	08/25/12 0:00	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: MO-2007-6B

ACZ Sample ID: **L96276-02**

Date Sampled: 08/13/12 12:12

Date Received: 08/17/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	56.54		*	mg/L	0.5	2.5	08/25/12 0:21	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: MO-2007-4B

ACZ Sample ID: **L96276-03**

Date Sampled: 08/13/12 14:48

Date Received: 08/17/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.02		*	mg/L	0.5	2.5	08/25/12 0:42	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: MO-2007-4C

ACZ Sample ID: **L96276-04**

Date Sampled: 08/13/12 15:12

Date Received: 08/17/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	91.22		*	mg/L	0.5	2.5	08/25/12 1:03	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: MO-2007-4A

ACZ Sample ID: **L96276-05**

Date Sampled: 08/13/12 15:48

Date Received: 08/17/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	35.33		*	mg/L	0.5	2.5	08/25/12 1:25	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: NP-2

ACZ Sample ID: **L96276-06**

Date Sampled: 08/15/12 13:39

Date Received: 08/17/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	65.72			mg/L	0.5	2.5	08/25/12 2:07	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: MO-2009-1

ACZ Sample ID: **L96276-07**

Date Sampled: 08/15/12 15:31

Date Received: 08/17/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	102.40			mg/L	1	5	08/25/12 2:49	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM
Sample ID: DUP20120813A

ACZ Sample ID: **L96276-08**
Date Sampled: 08/13/12 00:00
Date Received: 08/17/12
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	91.48			mg/L	0.5	2.5	08/25/12 4:13	jlf

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita

ACZ Project ID: **L96276**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG328910													
WG328910ICV	ICV	08/23/12 17:39	WI120709-7	50		50.64	mg/L	101.3	90	110			
WG328910ICB	ICB	08/23/12 18:00				U	mg/L		-1.5	1.5			
WG328997													
WG328997LFB1	LFB	08/24/12 15:34	WI120822-4	30		28.88	mg/L	96.3	90	110			
L96223-03DUP	DUP	08/24/12 21:11			24.36	25.06	mg/L				2.8	20	
L96223-04AS	AS	08/24/12 21:53	WI120822-4	150	250.58	419.7	mg/L	112.7	90	110			M1
WG328997LFB2	LFB	08/25/12 1:46	WI120822-4	30		31.07	mg/L	103.6	90	110			
L96276-06DUP	DUP	08/25/12 2:28			65.72	65.28	mg/L				0.7	20	
L96276-07AS	AS	08/25/12 3:10	WI120822-4	60	102.4	167.36	mg/L	108.3	90	110			

FMI Gold & Copper - SierritaACZ Project ID: **L96276**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L96276-01	WG328997	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L96276-02	WG328997	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L96276-03	WG328997	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L96276-04	WG328997	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
L96276-05	WG328997	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L96276**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000002PM

ACZ Project ID: L96276
Date Received: 08/17/2012 09:44
Received By: ksj
Date Printed: 8/17/2012

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 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?
-----	-----	-----	-----
NA15985	3	17	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.

196276

CHAIN of CUSTODY

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

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSES REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000002PM

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION		DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375														
MO-2007-6A		08/13/12 ; 1007	GW	1	X														
MO-2007-6B		08/13/12 ; 1212	GW	1	X														
MO-2007-4B		08/13/12 ; 1448	GW	1	X														
MO-2007-4C		08/13/12 ; 1512	GW	1	X														
MO-2007-4A		08/13/12 ; 1548	GW	1	X														
NP-2		08/15/12 ; 1339	GW	1	X														
MO-2009-1		08/15/12 ; 1531	GW	1	X														
DUP20120813A		08/13/2012	GW	1	X														

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

REMARKS

UPS Tracking #1Z 867 7E4 23 1000 7974

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

RELINQUISHED BY:

DATE:TIME

RECEIVED BY:

DATE:TIME

ALEXIS ALVAREZ

08/16/12 ; 1500

September 12, 2012

Report to:

Jon Anderson
FMI Gold & Copper - Sierrita
6200 West Duval Mine Rd.
Green Valley, AZ 85614

Bill to:

Accounts Payable
FMI Gold & Copper - Sierrita
P.O. Box 2671
Phoenix, AZ 85002-2671

cc: Ben Daigneau

Project ID: ZS000002PM

ACZ Project ID: L96509

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on August 31, 2012. This project has been assigned to ACZ's project number, L96509. Please reference this number in all future inquiries.

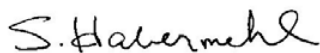
All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under L96509. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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 October 12, 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.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: CW-10

ACZ Sample ID: **L96509-01**

Date Sampled: 08/29/12 09:00

Date Received: 08/31/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	50.95			mg/L	0.5	2.5	09/05/12 3:26	jlf

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: CW-6

ACZ Sample ID: **L96509-02**

Date Sampled: 08/29/12 09:48

Date Received: 08/31/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	82.24			mg/L	0.5	2.5	09/06/12 15:17	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: CW-9

ACZ Sample ID: **L96509-03**

Date Sampled: 08/29/12 10:41

Date Received: 08/31/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	43.94			mg/L	0.5	2.5	09/06/12 15:59	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: GV-1

ACZ Sample ID: **L96509-04**

Date Sampled: 08/29/12 12:18

Date Received: 08/31/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	36.15			mg/L	0.5	2.5	09/06/12 16:41	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: GV-2

ACZ Sample ID: **L96509-05**

Date Sampled: 08/29/12 12:34

Date Received: 08/31/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	62.98			mg/L	0.5	2.5	09/06/12 17:02	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000002PM

Sample ID: DUP20120829A

ACZ Sample ID: **L96509-06**

Date Sampled: 08/29/12 00:00

Date Received: 08/31/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	63.26			mg/L	0.5	2.5	09/06/12 17:24	lhb

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita

ACZ Project ID: **L96509**

Sulfate

M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG328910													
WG328910ICV	ICV	08/23/12 17:39	WI120709-7	50		50.64	mg/L	101.3	90	110			
WG328910ICB	ICB	08/23/12 18:00				U	mg/L		-1.5	1.5			
WG329545													
WG329545LFB	LFB	09/04/12 17:35	WI120822-4	30		31.95	mg/L	106.5	90	110			
L96491-01DUP	DUP	09/04/12 23:12			479.5	487.7	mg/L				1.7	20	
L96502-01AS	AS	09/04/12 23:55	WI120822-4	30	38.34	66.56	mg/L	94.1	90	110			
WG329668													
WG329668LFB	LFB	09/06/12 14:14	WI120822-4	30		30.31	mg/L	101	90	110			
L96509-02DUP	DUP	09/06/12 15:38			82.24	82.41	mg/L				0.2	20	
L96509-03AS	AS	09/06/12 16:20	WI120822-4	30	43.94	72.13	mg/L	94	90	110			

FMI Gold & Copper - Sierrita

ACZ Project ID: **L96509**

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

FMI Gold & Copper - Sierrita

ACZ Project ID: **L96509**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000002PM

ACZ Project ID: L96509
Date Received: 08/31/2012 10:20
Received By: ksj
Date Printed: 8/31/2012

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
-----	-----	-----	-----
NA16085	1.1	17	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.

L96509

CHAIN of CUSTODY

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

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com,

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-648-8844

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

X

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

PROJECT INFORMATION

ANALYSIS REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000002PM

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE: TIME

Matrix

of Containers

SO4 by EPA 300 or EPA 375

CW-10

8/29/12 ; 0900

GW

1

X

CW-6

8/29/12 ; 0948

GW

1

X

CW-9

8/29/12 ; 1041

GW

1

X

GV-1

8/29/12 ; 1218

GW

1

X

GV-2

8/29/12 ; 1234

GW

1

X

DUP20120829A

8/29/12

GW

1

X

Matrix

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

REMARKS

UPS Tracking # 1Z 867 7E4 23 1000 7992

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

RELINQUISHED BY:

DATE: TIME

RECEIVED BY:

DATE: TIME

ALEXIS ALVAREZ

8/30/20 ; 1500

ALV 8/31/12

1020

Jon Anderson
FMI Gold & Copper - Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

May 09, 2012

Cc: Ben Daigneau

Project ID: ZS000001JL
ACZ Project ID: L94261– **SULFATE ONLY**

Jon Anderson:


Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 27, 2012. This project was assigned to ACZ's project number, **L94261**. Please reference this number in all future inquiries.

At the request of Phelps Dodge Sierrita, Inc. (PDSI), this laboratory report has been prepared to contain only information specific to samples and analytes identified by PDSI as evaluated pursuant to Mitigation Order No. P-500-06 with Arizona Department of Environmental Quality. Samples and analytes unrelated to the Mitigation Order, but which may be identified on the chain of custody and sample receipt, have been reported to PDSI in a separate report.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L94261**. 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 the requirements of NELAC.

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. 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. Please notify your Project Manager if you have other needs. If you have any questions, please contact your Project Manager or Customer Service Representative.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001JL

Sample ID: MH-14

ACZ Sample ID: **L94261-01**

Date Sampled: 04/25/12 00:00

Date Received: 04/27/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1700		*	mg/L	100	600	05/07/12 11:25	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001JL

Sample ID: M-18

ACZ Sample ID: **L94261-02**

Date Sampled: 04/25/12 00:00

Date Received: 04/27/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	2000		*	mg/L	100	500	05/07/12 11:25	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001JL

Sample ID: MH-16W

ACZ Sample ID: **L94261-03**

Date Sampled: 04/25/12 00:00

Date Received: 04/27/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	490		*	mg/L	30	100	05/07/12 11:13	ccp

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001JL

Sample ID: M-16

ACZ Sample ID: **L94261-04**

Date Sampled: 04/25/12 00:00

Date Received: 04/27/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1210		*	mg/L	40	200	05/07/12 13:41	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001JL

Sample ID: MH-15W

ACZ Sample ID: **L94261-05**

Date Sampled: 04/25/12 00:00

Date Received: 04/27/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1810		*	mg/L	60	300	05/07/12 13:51	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001JL

Sample ID: MH-21

ACZ Sample ID: **L94261-06**

Date Sampled: 04/24/12 00:00

Date Received: 04/27/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	910		*	mg/L	40	200	05/07/12 13:41	tcd

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001JL

Sample ID: MH-22

ACZ Sample ID: **L94261-07**

Date Sampled: 04/24/12 00:00

Date Received: 04/27/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	2700			mg/L	100	500	05/07/12 13:50	tcd

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001JL

ACZ Project ID: **L94261**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.02		.02147	mg/L	107.4	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0012	0.0012			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.01		.01039	mg/L	103.9	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.01	U	.00906	mg/L	90.6	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.01	U	.00917	mg/L	91.7	70	130	1.21	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.01	U	.0099	mg/L	99	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.01	U	.01037	mg/L	103.7	70	130	4.64	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.05239	mg/L	104.8	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0015	0.0015			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.05005		.05006	mg/L	100	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.05005	U	.05169	mg/L	103.3	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.05005	U	.05083	mg/L	101.6	70	130	1.68	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.05005	.0024	.05657	mg/L	108.2	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.05005	.0024	.0571	mg/L	109.3	70	130	0.93	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.04665	mg/L	93.3	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0003	0.0003			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.0501		.04605	mg/L	91.9	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.0501	U	.04813	mg/L	96.1	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.0501	U	.04852	mg/L	96.8	70	130	0.81	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.0501	U	.04995	mg/L	99.7	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.0501	U	.05053	mg/L	100.9	70	130	1.15	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.05066	mg/L	101.3	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0003	0.0003			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.0501		.04878	mg/L	97.4	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.0501	U	.04846	mg/L	96.7	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.0501	U	.04858	mg/L	97	70	130	0.25	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.0501	U	.04779	mg/L	95.4	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.0501	U	.04846	mg/L	96.7	70	130	1.39	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001JL

ACZ Project ID: **L94261**

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321948													
WG321948ICV	ICV	05/01/12 19:08	II120430-3	2		1.974	mg/L	98.7	95	105			
WG321948ICB	ICB	05/01/12 19:14				U	mg/L		-0.03	0.03			
WG321948LFB	LFB	05/01/12 19:27	II120423-4	.5		.518	mg/L	103.6	85	115			
L94259-06AS	AS	05/01/12 20:16	II120423-4	.5	U	.509	mg/L	101.8	85	115			
L94259-06ASD	ASD	05/01/12 20:20	II120423-4	.5	U	.514	mg/L	102.8	85	115	0.98	20	

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321948													
WG321948ICV	ICV	05/01/12 19:08	II120430-3	2		2.019	mg/L	101	95	105			
WG321948ICB	ICB	05/01/12 19:14				U	mg/L		-0.03	0.03			
WG321948LFB	LFB	05/01/12 19:27	II120423-4	.5		.518	mg/L	103.6	85	115			
L94259-06AS	AS	05/01/12 20:16	II120423-4	.5	U	.511	mg/L	102.2	85	115			
L94259-06ASD	ASD	05/01/12 20:20	II120423-4	.5	U	.516	mg/L	103.2	85	115	0.97	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321948													
WG321948ICV	ICV	05/01/12 19:08	II120430-3	2		2.001	mg/L	100.1	95	105			
WG321948ICB	ICB	05/01/12 19:14				U	mg/L		-0.03	0.03			
WG321948LFB	LFB	05/01/12 19:27	II120423-4	.5		.521	mg/L	104.2	85	115			
L94259-06AS	AS	05/01/12 20:16	II120423-4	.5	U	.523	mg/L	104.6	85	115			
L94259-06ASD	ASD	05/01/12 20:20	II120423-4	.5	U	.529	mg/L	105.8	85	115	1.14	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321941													
WG321941ICV	ICV	05/01/12 11:17	WC120426-	2.002		1.92	mg/L	95.9	95	105			
WG321941ICB	ICB	05/01/12 11:25				U	mg/L		-0.3	0.3			
WG321941LFB1	LFB	05/01/12 11:40	WC120124-	5		4.75	mg/L	95	90	110			
WG321941LFB2	LFB	05/01/12 15:25	WC120124-	5		4.64	mg/L	92.8	90	110			
L94257-05AS	AS	05/01/12 15:41	WC120124-	5	.2	4.93	mg/L	94.6	90	110			
L94257-05DUP	DUP	05/01/12 15:48			.2	.2	mg/L				0	20	RA
L94261-03AS	AS	05/01/12 17:42	WC120124-	5	.3	4.91	mg/L	92.2	90	110			
L94261-03DUP	DUP	05/01/12 17:49			.3	.26	mg/L				14.3	20	RA

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.05324	mg/L	106.5	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0003	0.0003			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.05005		.05059	mg/L	101.1	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.05005	U	.05263	mg/L	105.2	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.05005	U	.05243	mg/L	104.8	70	130	0.38	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.05005	.0008	.05293	mg/L	104.2	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.05005	.0008	.05273	mg/L	103.8	70	130	0.38	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001JL

ACZ Project ID: **L94261**

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321948													
WG321948ICV	ICV	05/01/12 19:08	II120430-3	100		101.18	mg/L	101.2	95	105			
WG321948ICB	ICB	05/01/12 19:14				U	mg/L		-0.6	0.6			
WG321948LFB	LFB	05/01/12 19:27	II120423-4	50.0051		53.55	mg/L	107.1	85	115			
L94259-06AS	AS	05/01/12 20:16	II120423-4	50.0051	36.4	88.62	mg/L	104.4	85	115			
L94259-06ASD	ASD	05/01/12 20:20	II120423-4	50.0051	36.4	89.87	mg/L	106.9	85	115	1.4	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321948													
WG321948ICV	ICV	05/01/12 19:08	II120430-3	2		2.044	mg/L	102.2	95	105			
WG321948ICB	ICB	05/01/12 19:14				U	mg/L		-0.03	0.03			
WG321948LFB	LFB	05/01/12 19:27	II120423-4	.5		.533	mg/L	106.6	85	115			
L94259-06AS	AS	05/01/12 20:16	II120423-4	.5	U	.536	mg/L	107.2	85	115			
L94259-06ASD	ASD	05/01/12 20:20	II120423-4	.5	U	.539	mg/L	107.8	85	115	0.56	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.05207	mg/L	104.1	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0018	0.0018			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.05005		.04983	mg/L	99.6	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.05005	U	.04566	mg/L	91.2	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.05005	U	.04523	mg/L	90.4	70	130	0.95	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.05005	.0012	.04556	mg/L	88.6	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.05005	.0012	.04637	mg/L	90.2	70	130	1.76	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322336													
WG322336ICV	ICV	05/08/12 22:27	WI120405-3	2.416		2.474	mg/L	102.4	90	110			
WG322336ICB	ICB	05/08/12 22:28				U	mg/L		-0.06	0.06			
WG322344													
WG322344LFB	LFB	05/09/12 0:01	WI120211-3	2		1.983	mg/L	99.2	90	110			
L94211-06AS	AS	05/09/12 0:03	WI120211-3	2	.21	2.274	mg/L	103.2	90	110			
L94261-01DUP	DUP	05/09/12 0:06			1.55	1.549	mg/L				0.1	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG321833													
WG321833PBW	PBW	04/28/12 12:20				U	mg/L		-20	20			
WG321833LCSW	LCSW	04/28/12 12:21	PCN39019	260		258	mg/L	99.2	80	120			
L94261-07DUP	DUP	04/28/12 12:44			5020	4982	mg/L				0.8	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001JL

ACZ Project ID: **L94261**

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.05349	mg/L	107	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0003	0.0003			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.05005		.04916	mg/L	98.2	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.05005	U	.05047	mg/L	100.8	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.05005	U	.04977	mg/L	99.4	70	130	1.4	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.05005	.0005	.0547	mg/L	108.3	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.05005	.0005	.05178	mg/L	102.5	70	130	5.48	20	

Sulfate

D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322220													
WG322220ICB	ICB	05/07/12 10:26				U	mg/L		-3	3			
WG322220ICV	ICV	05/07/12 10:26	WI120423-8	20		18.8	mg/L	94	90	110			
WG322220LFB	LFB	05/07/12 10:37	WI111111-3	10.03		10.4	mg/L	103.7	90	110			
L94259-01DUP	DUP	05/07/12 11:11			176	173.6	mg/L				1.4	20	
L94259-02AS	AS	05/07/12 11:11	SO4TURB5	10	139	131.9	mg/L	-71	90	110			M3
WG322243													
WG322243ICB	ICB	05/07/12 10:26				U	mg/L		-3	3			
WG322243ICV	ICV	05/07/12 10:26	WI120423-8	20		18.8	mg/L	94	90	110			
WG322243LFB	LFB	05/07/12 13:31	WI111111-3	10.03		10.4	mg/L	103.7	90	110			
L94206-01DUP	DUP	05/07/12 13:31			6	5.5	mg/L				8.7	20	RA
L94206-02AS	AS	05/07/12 13:31	WI111111-3	10.03	10	20.1	mg/L	100.7	90	110			
L94263-01AS	AS	05/07/12 13:45	SO4TURB30	9.99	1040	1050	mg/L	100.1	90	110			
L94261-07DUP	DUP	05/07/12 13:50			2700	2740	mg/L				1.5	20	

Thallium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322119													
WG322119ICV	ICV	05/04/12 2:49	MS120416-2	.05		.0538	mg/L	107.6	90	110			
WG322119ICB	ICB	05/04/12 2:53				U	mg/L		-0.0003	0.0003			
WG322119LFB	LFB	05/04/12 2:56	MS120430-3	.05005		.05039	mg/L	100.7	85	115			
L94173-01AS	AS	05/04/12 3:03	MS120430-3	.05005	U	.05245	mg/L	104.8	70	130			
L94173-01ASD	ASD	05/04/12 3:06	MS120430-3	.05005	U	.05277	mg/L	105.4	70	130	0.61	20	
L94261-03AS	AS	05/04/12 3:51	MS120430-3	.05005	U	.05284	mg/L	105.6	70	130			
L94261-03ASD	ASD	05/04/12 3:54	MS120430-3	.05005	U	.05195	mg/L	103.8	70	130	1.7	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94261**

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94261-01	WG322220	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.
L94261-02	WG322220	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.
L94261-03	WG322220	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.
L94261-04	WG322243	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).
L94261-05	WG322243	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).
L94261-06	WG322243	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).

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94261**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L94261
Date Received: 04/27/2012 09:47
Received By: gac
Date Printed: 4/30/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
3162	4.7	15

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

Notes

FMI Gold & Copper - Sierrita
ZS000001JL

ACZ Project ID: L94261
Date Received: 04/27/2012 09:47
Received By: gac
Date Printed: 4/30/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94261-01	MH-14		Y		Y							<input type="checkbox"/>
L94261-02	M-18		Y		Y							<input type="checkbox"/>
L94261-03	MH-16W		Y		Y							<input type="checkbox"/>
L94261-04	M-16		Y		Y							<input type="checkbox"/>
L94261-05	MH-15W		Y		Y							<input type="checkbox"/>
L94261-06	MH-21		Y		Y							<input type="checkbox"/>
L94261-07	MH-22		Y		Y							<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: gac

$$(\mathbb{C}[X]/N) \cong (\mathbb{C}[X] + (0)) \cong \mathbb{C}[X]$$

Name: Jon Anderson
Company: Freeport - McMoran Inc.
E-mail: jonathan-andersons@fmi.com

Address: 6200 W. Duval Mine Road
Green Valley, AZ 85644
Telephone: 520-393-2714

Name: Benjamin J. Paigneau
Company: Clear Creek associates

E-mail: bdaigneau@clearcreditassociates.com
Telephone: _____

Name: _____

Company: _____

E-mail: _____

Address: _____

 Telephone: _____

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

YES	
NO	

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

Are samples for SDWA Compliance Monitoring?

Yes

No

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

Sampler's Name: <u>Robert Carper</u>	Sampler's site Information	State <u>AZ</u>	Zip code	Time Zone
--------------------------------------	----------------------------	-----------------	----------	-----------

[illegible]

Matrix	SW (Surface Water) · GW (Ground Water) · WW (Waste Water) · DW (Drinking Water) · SL (Sludge) · SO (Soil) · OL (Oil) · Other (Specify)
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UPS Tracking # 1Z 867 7E4 23 1000 7876

UPS Tracking # 1Z 867 7E4 23 1000 7876
Benjamin J. Daigneau @ clear creek associates - Sulfates only Report

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

Field Log	4/26/2012	ALK 4/27/12	0947

Jon Anderson
FMI Gold & Copper - Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

May 18, 2012

Cc: Ben Daigneau

Project ID: ZS000001ZS
ACZ Project ID: L94380– **SULFATE ONLY**

Jon Anderson:

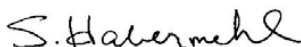
Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on May 04, 2012. This project was assigned to ACZ's project number, **L94380**. Please reference this number in all future inquiries.

At the request of Phelps Dodge Sierrita, Inc. (PDSI), this laboratory report has been prepared to contain only information specific to samples and analytes identified by PDSI as evaluated pursuant to Mitigation Order No. P-500-06 with Arizona Department of Environmental Quality. Samples and analytes unrelated to the Mitigation Order, but which may be identified on the chain of custody and sample receipt, have been reported to PDSI in a separate report.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L94380**. 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 the requirements of NELAC.

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. 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. Please notify your Project Manager if you have other needs. If you have any questions, please contact your Project Manager or Customer Service Representative.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001ZS

Sample ID: MH-26-A

ACZ Sample ID: **L94380-01**

Date Sampled: 05/02/12 12:02

Date Received: 05/04/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	9		*	mg/L	1	5	05/14/12 16:28	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001ZS

Sample ID: MH-26-B

ACZ Sample ID: **L94380-02**

Date Sampled: 05/01/12 15:17

Date Received: 05/04/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1680		*	mg/L	50	300	05/14/12 16:41	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001ZS

Sample ID: MH-25-A

ACZ Sample ID: **L94380-03**

Date Sampled: 05/01/12 11:23

Date Received: 05/04/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	13		*	mg/L	1	5	05/14/12 16:28	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001ZS

Sample ID: MH-26-C

ACZ Sample ID: **L94380-04**

Date Sampled: 05/01/12 14:28

Date Received: 05/04/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	820		*	mg/L	50	300	05/14/12 16:41	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001ZS

Sample ID: MH-25-B

ACZ Sample ID: **L94380-05**

Date Sampled: 05/01/12 12:08

Date Received: 05/04/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1690		*	mg/L	80	400	05/14/12 16:43	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001ZS

Sample ID: MH-25-C

ACZ Sample ID: **L94380-06**

Date Sampled: 05/01/12 10:47

Date Received: 05/04/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1290		*	mg/L	50	300	05/14/12 16:44	lhb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001ZS
Sample ID: DUP20120501A

ACZ Sample ID: **L94380-07**
Date Sampled: 05/01/12 00:00
Date Received: 05/04/12
Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1750		*	mg/L	80	400	05/14/12 16:46	lhb

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001ZS

ACZ Project ID: **L94380**

Antimony, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.02		.02001	mg/L	100.1	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0012	0.0012			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.01		.01002	mg/L	100.2	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.01	U	.0105	mg/L	105	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.01	U	.01047	mg/L	104.7	70	130	0.29	20	

Arsenic, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.05204	mg/L	104.1	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0015	0.0015			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.05005		.04946	mg/L	98.8	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.05005	.0061	.06182	mg/L	111.3	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.05005	.0061	.06407	mg/L	115.8	70	130	3.57	20	

Beryllium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.04759	mg/L	95.2	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0003	0.0003			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.0501		.04461	mg/L	89	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.0501	U	.05221	mg/L	104.2	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.0501	U	.0517	mg/L	103.2	70	130	0.98	20	

Cadmium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.05155	mg/L	103.1	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0003	0.0003			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.0501		.0491	mg/L	98	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.0501	U	.05225	mg/L	104.3	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.0501	U	.05253	mg/L	104.9	70	130	0.53	20	

Chromium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322357													
WG322357ICV	ICV	05/10/12 15:01	II120430-3	2		1.956	mg/L	97.8	95	105			
WG322357ICB	ICB	05/10/12 15:07				U	mg/L		-0.03	0.03			
WG322357LFB	LFB	05/10/12 15:20	II120507-3	.5		.505	mg/L	101	85	115			
L94379-01AS	AS	05/10/12 15:26	II120507-3	.5	U	.51	mg/L	102	85	115			
L94379-01ASD	ASD	05/10/12 15:29	II120507-3	.5	U	.516	mg/L	103.2	85	115	1.17	20	
L94380-04AS	AS	05/10/12 16:09	II120507-3	.5	U	.499	mg/L	99.8	85	115			
L94380-04ASD	ASD	05/10/12 16:12	II120507-3	.5	U	.502	mg/L	100.4	85	115	0.6	20	

FMI Gold & Copper - Sierrita
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Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322357													
WG322357ICV	ICV	05/10/12 15:01	II120430-3	2		1.994	mg/L	99.7	95	105			
WG322357ICB	ICB	05/10/12 15:07				U	mg/L		-0.03	0.03			
WG322357LFB	LFB	05/10/12 15:20	II120507-3	.5		.513	mg/L	102.6	85	115			
L94379-01AS	AS	05/10/12 15:26	II120507-3	.5	U	.517	mg/L	103.4	85	115			
L94379-01ASD	ASD	05/10/12 15:29	II120507-3	.5	U	.515	mg/L	103	85	115	0.39	20	
L94380-04AS	AS	05/10/12 16:09	II120507-3	.5	U	.496	mg/L	99.2	85	115			
L94380-04ASD	ASD	05/10/12 16:12	II120507-3	.5	U	.504	mg/L	100.8	85	115	1.6	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322357													
WG322357ICV	ICV	05/10/12 15:01	II120430-3	2		1.983	mg/L	99.2	95	105			
WG322357ICB	ICB	05/10/12 15:07				U	mg/L		-0.03	0.03			
WG322357LFB	LFB	05/10/12 15:20	II120507-3	.5		.516	mg/L	103.2	85	115			
L94379-01AS	AS	05/10/12 15:26	II120507-3	.5	U	.521	mg/L	104.2	85	115			
L94379-01ASD	ASD	05/10/12 15:29	II120507-3	.5	U	.525	mg/L	105	85	115	0.76	20	
L94380-04AS	AS	05/10/12 16:09	II120507-3	.5	U	.532	mg/L	106.4	85	115			
L94380-04ASD	ASD	05/10/12 16:12	II120507-3	.5	U	.535	mg/L	107	85	115	0.56	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322457													
WG322457ICV	ICV	05/10/12 14:33	WC120508-	2.002		1.9	mg/L	94.9	95	105			
WG322457ICB	ICB	05/10/12 14:41				U	mg/L		-0.3	0.3			
WG322457LFB1	LFB	05/10/12 15:02	WC120124-	5		4.6	mg/L	92	90	110			
L94178-01AS	AS	05/10/12 15:10	WC120124-	5	.8	5.08	mg/L	85.6	90	110			M2
L94178-01DUP	DUP	05/10/12 15:16			.8	.68	mg/L				16.2	20	RA
L94380-07AS	AS	05/10/12 16:24	WC120124-	5	.1	4.47	mg/L	87.4	90	110			M2
L94380-07DUP	DUP	05/10/12 16:27			.1	.16	mg/L				46.2	20	RA
WG322457LFB2	LFB	05/10/12 17:28	WC120124-	5		4.54	mg/L	90.8	90	110			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.05264	mg/L	105.3	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0003	0.0003			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.05005		.04996	mg/L	99.8	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.05005	.0011	.05358	mg/L	104.9	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.05005	.0011	.05287	mg/L	103.4	70	130	1.33	20	

FMI Gold & Copper - Sierrita
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Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322357													
WG322357ICV	ICV	05/10/12 15:01	II120430-3	100		100.65	mg/L	100.7	95	105			
WG322357ICB	ICB	05/10/12 15:07				U	mg/L		-0.6	0.6			
WG322357LFB	LFB	05/10/12 15:20	II120507-3	50.007		51.37	mg/L	102.7	85	115			
L94379-01AS	AS	05/10/12 15:26	II120507-3	50.007	2.1	54.42	mg/L	104.6	85	115			
L94379-01ASD	ASD	05/10/12 15:29	II120507-3	50.007	2.1	54.56	mg/L	104.9	85	115	0.26	20	
L94380-04AS	AS	05/10/12 16:09	II120507-3	50.007	57.8	109.4	mg/L	103.2	85	115			
L94380-04ASD	ASD	05/10/12 16:12	II120507-3	50.007	57.8	110.6	mg/L	105.6	85	115	1.09	20	

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322357													
WG322357ICV	ICV	05/10/12 15:01	II120430-3	2		2.028	mg/L	101.4	95	105			
WG322357ICB	ICB	05/10/12 15:07				U	mg/L		-0.03	0.03			
WG322357LFB	LFB	05/10/12 15:20	II120507-3	.5		.519	mg/L	103.8	85	115			
L94379-01AS	AS	05/10/12 15:26	II120507-3	.5	U	.52	mg/L	104	85	115			
L94379-01ASD	ASD	05/10/12 15:29	II120507-3	.5	U	.52	mg/L	104	85	115	0	20	
L94380-04AS	AS	05/10/12 16:09	II120507-3	.5	U	.516	mg/L	103.2	85	115			
L94380-04ASD	ASD	05/10/12 16:12	II120507-3	.5	U	.515	mg/L	103	85	115	0.19	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.05081	mg/L	101.6	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0018	0.0018			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.05005		.04796	mg/L	95.8	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.05005	.0012	.04903	mg/L	95.6	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.05005	.0012	.04928	mg/L	96.1	70	130	0.51	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322706													
WG322706ICV	ICV	05/15/12 22:18	WI120405-3	2.416		2.527	mg/L	104.6	90	110			
WG322706ICB	ICB	05/15/12 22:19				U	mg/L		-0.06	0.06			
WG322712													
WG322712LFB1	LFB	05/16/12 0:36	WI120211-3	2		1.962	mg/L	98.1	90	110			
L94380-01AS	AS	05/16/12 0:39	WI120211-3	2	1.09	3.127	mg/L	101.9	90	110			
L94380-02DUP	DUP	05/16/12 0:41			1.79	1.794	mg/L				0.2	20	
WG322712LFB2	LFB	05/16/12 1:10	WI120211-3	2		1.969	mg/L	98.5	90	110			

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322315													
WG322315PBW	PBW	05/08/12 14:30				U	mg/L		-20	20			
WG322315LCSW	LCSW	05/08/12 14:30	PCN39020	260		250	mg/L	96.2	80	120			
L94394-02DUP	DUP	05/08/12 14:44			240	246	mg/L				2.5	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001ZS

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Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.0541	mg/L	108.2	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0003	0.0003			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.05005		.05024	mg/L	100.4	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.05005	.0005	.05836	mg/L	115.6	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.05005	.0005	.05763	mg/L	114.1	70	130	1.26	20	

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322619													
WG322619ICB	ICB	05/14/12 15:14				U	mg/L		-3	3			
WG322619ICV	ICV	05/14/12 15:14	WI120508-3	20		19.5	mg/L	97.5	90	110			
WG322619LFB	LFB	05/14/12 16:25	WI120508-1	10		9.8	mg/L	98	90	110			
L94375-01DUP	DUP	05/14/12 16:27			26	26.5	mg/L				1.9	20	
L94380-01AS	AS	05/14/12 16:28	WI120508-1	10	9	11.4	mg/L	24	90	110			M2

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG322494													
WG322494ICV	ICV	05/11/12 18:53	MS120416-2	.05		.05309	mg/L	106.2	90	110			
WG322494ICB	ICB	05/11/12 18:56				U	mg/L		-0.0003	0.0003			
WG322494LFB	LFB	05/11/12 18:59	MS120430-3	.05005		.0492	mg/L	98.3	85	115			
L94380-01AS	AS	05/11/12 20:06	MS120430-3	.05005	U	.05218	mg/L	104.3	70	130			
L94380-01ASD	ASD	05/11/12 20:09	MS120430-3	.05005	U	.05178	mg/L	103.5	70	130	0.77	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: L94380

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94380-01	WG322457	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L94380-02	WG322457	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L94380-03	WG322457	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L94380-04	WG322457	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L94380-05	WG322457	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L94380-06	WG322457	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
L94380-07	WG322357	Chromium, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
		Cobalt, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
		Copper, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
		Molybdenum, dissolved	M200.7 ICP	D1	Sample required dilution due to matrix.
	WG322457	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).
	WG322619	Sulfate	D516-02 - Turbidimetric	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.

FMI Gold & Copper - Sierrita

ACZ Project ID: **L94380**

No certification qualifiers associated with this analysis

FMI Gold & Copper - Sierrita
ZS000001ZS

ACZ Project ID: L94380
Date Received: 05/04/2012 09:00
Received By: ksj
Date Printed: 5/7/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?			X
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id		Temp (°C)	Rad (µR/hr)
3049		5.9	15

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

Notes

FMI Gold & Copper - Sierrita
ZS000001ZS

ACZ Project ID: L94380
Date Received: 05/04/2012 09:00
Received By: ksj
Date Printed: 5/7/2012

Sample Container Preservation

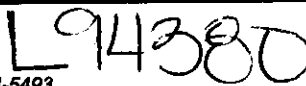
SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94380-01	MH-26-A		Y		Y							<input type="checkbox"/>
L94380-02	MH-26-B		Y		Y							<input type="checkbox"/>
L94380-03	MH-25-A		Y		Y							<input type="checkbox"/>
L94380-04	MH-26-C		Y		Y							<input type="checkbox"/>
L94380-05	MH-25-B		Y		Y							<input type="checkbox"/>
L94380-06	MH-25-C		Y		Y							<input type="checkbox"/>
L94380-07	DUP20120501A		Y		Y							<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj



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

References

Name: Jon Anderson	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: jonathan_anderson@fmi.com	Telephone: 520-393-2714

Copy of Report to

Name: Ben Daigneau	E-mail: bdaigneau@clearcreekassociates.com
Company: Clear Creek Associates	Telephone: 520-622-3222

Invoice to

Name:		Address:
Company:		
E-mail:		Telephone:

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

YES
NO

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

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

Are samples for CO DW Compliance Monitoring?

YES
NO

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

PROJECT INFORMATION

ANALYSES REQUIRED (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

Copy of report to Ben Daigneau contains only "SO4" results with QC Summary.

UPS Tracking #1Z 867 7E4 23 1000 7885

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
Robert Carper	5/2/12 14:00	ALC 5/4/12	0900
	5/3/12		

Jon Anderson
FMI Gold & Copper - Sierrita
P.O. Box 527
6200 West Duval Mine Road
Green Valley, AZ 85622-0527

June 08 2012

Cc: Ben Daigneau

Project ID: ZS000001Z9
ACZ Project ID: L94788– **SULFATE ONLY**

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on April 25, 2012. This project was assigned to ACZ's project number, **L94788**. Please reference this number in all future inquiries.

At the request of Phelps Dodge Sierrita, Inc. (PDSI), this laboratory report has been prepared to contain only information specific to samples and analytes identified by PDSI as evaluated pursuant to Mitigation Order No. P-500-06 with Arizona Department of Environmental Quality. Samples and analytes unrelated to the Mitigation Order, but which may be identified on the chain of custody and sample receipt, have been reported to PDSI in a separate report.

All analyses were performed according to ACZ's Quality Assurance Plan. The enclosed results relate only to the samples received under **L94788**. 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 the requirements of NELAC.

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

ACZ disposes of samples and sub-samples thirty days after the analytical results are reported to the client. That time frame has elapsed for this project. 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. Please notify your Project Manager if you have other needs. If you have any questions, please contact your Project Manager or Customer Service Representative.



Scott Habermehl has reviewed
and approved this report.



FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MH-29

ACZ Sample ID: **L94788-01**

Date Sampled: 05/21/12 10:36

Date Received: 05/25/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/06/12 15:36	mpb

Arizona license number: **AZ0102**

FMI Gold & Copper - Sierrita

Project ID: ZS000001Z9

Sample ID: MH-28

ACZ Sample ID: **L94788-02**

Date Sampled: 05/21/12 11:50

Date Received: 05/25/12

Sample Matrix: Ground Water

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1600		*	mg/L	100	500	06/06/12 15:36	mpb

Arizona license number: **AZ0102**

Report Header Explanations

<i>Batch</i>	A distinct set of samples analyzed at a specific time
<i>Found</i>	Value of the QC Type of interest
<i>Limit</i>	Upper limit for RPD, in %.
<i>Lower</i>	Lower Recovery Limit, in % (except for LCSS, mg/Kg)
<i>MDL</i>	Method Detection Limit. Same as Minimum Reporting Limit. 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>

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94788**

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.02		.02066	mg/L	103.3	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0012	0.0012			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.01		.0111	mg/L	111	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.01	U	.01046	mg/L	104.6	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.01	U	.01054	mg/L	105.4	70	130	0.76	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05446	mg/L	108.9	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0015	0.0015			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.05048	mg/L	100.9	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.05534	mg/L	110.6	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.05566	mg/L	111.2	70	130	0.58	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.04933	mg/L	98.7	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.0501		.04993	mg/L	99.7	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.0501	U	.05158	mg/L	103	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.0501	U	.05224	mg/L	104.3	70	130	1.27	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05182	mg/L	103.6	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.0501		.04963	mg/L	99.1	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.0501	U	.05027	mg/L	100.3	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.0501	U	.05154	mg/L	102.9	70	130	2.49	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		1.956	mg/L	97.8	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.508	mg/L	101.6	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.508	mg/L	101.6	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.505	mg/L	101	85	115	0.59	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94788**

Cobalt, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		1.997	mg/L	99.9	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.504	mg/L	100.8	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.506	mg/L	101.2	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.5	mg/L	100	85	115	1.19	20	

Copper, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		1.992	mg/L	99.6	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.51	mg/L	102	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.513	mg/L	102.6	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.511	mg/L	102.2	85	115	0.39	20	

Fluoride

SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323683													
WG323683ICV	ICV	06/01/12 11:42	WC120531-	2.002		1.92	mg/L	95.9	95	105			
WG323683ICB	ICB	06/01/12 11:45				U	mg/L		-0.3	0.3			
WG323685													
WG323685ICV	ICV	06/01/12 13:38	WC120531-	2.002		1.92	mg/L	95.9	95	105			
WG323685ICB	ICB	06/01/12 13:42				U	mg/L		-0.3	0.3			
WG323685LFB1	LFB	06/01/12 13:49	WC120124-	5		5.1	mg/L	102	90	110			
L94787-14AS	AS	06/01/12 14:51	WC120124-	5	.3	5.12	mg/L	96.4	90	110			
L94787-14DUP	DUP	06/01/12 14:54			.3	.34	mg/L				12.5	20	RA
WG323685LFB2	LFB	06/01/12 15:37	WC120124-	5		5.05	mg/L	101	90	110			

Lead, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05212	mg/L	104.2	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.049	mg/L	97.9	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.04961	mg/L	99.1	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.05057	mg/L	101	70	130	1.92	20	

Magnesium, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	100		101.38	mg/L	101.4	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.6	0.6			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	50.007		51.69	mg/L	103.4	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	50.007	.7	53.03	mg/L	104.6	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	50.007	.7	52.55	mg/L	103.7	85	115	0.91	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94788**

Molybdenum, dissolved

M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323539													
WG323539ICV	ICV	05/30/12 22:24	II120430-3	2		2.018	mg/L	100.9	95	105			
WG323539ICB	ICB	05/30/12 22:30				U	mg/L		-0.03	0.03			
WG323539LFB	LFB	05/30/12 22:42	II120509-2	.5		.522	mg/L	104.4	85	115			
L94723-02AS	AS	05/30/12 22:51	II120509-2	.5	U	.527	mg/L	105.4	85	115			
L94723-02ASD	ASD	05/30/12 22:54	II120509-2	.5	U	.52	mg/L	104	85	115	1.34	20	

Nickel, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05174	mg/L	103.5	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0018	0.0018			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.04696	mg/L	93.8	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.04713	mg/L	94.2	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.04739	mg/L	94.7	70	130	0.55	20	

Nitrate/Nitrite as N

M353.2 - H2SO4 preserved

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323865													
WG323865ICV	ICV	06/05/12 22:33	WI120405-3	2.416		2.379	mg/L	98.5	90	110			
WG323865ICB	ICB	06/05/12 22:34				U	mg/L		-0.06	0.06			
WG323867													
WG323867LFB	LFB	06/05/12 23:39	WI120211-3	2		2.033	mg/L	101.7	90	110			
L94788-01AS	AS	06/05/12 23:41	WI120211-3	2	.38	2.454	mg/L	103.7	90	110			
L94788-02DUP	DUP	06/05/12 23:44			1.04	1.04	mg/L				0	20	

Residue, Filterable (TDS) @180C

SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323390													
WG323390PBW	PBW	05/25/12 15:15				U	mg/L		-20	20			
WG323390LCSW	LCSW	05/25/12 15:15	PCN39024	260		258	mg/L	99.2	80	120			
L94797-03DUP	DUP	05/25/12 15:29			970	970	mg/L				0	20	

Selenium, dissolved

M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05147	mg/L	102.9	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.04555	mg/L	91	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	.0005	.05265	mg/L	104.2	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	.0005	.05374	mg/L	106.4	70	130	2.05	20	

FMI Gold & Copper - Sierrita
 Project ID: ZS000001Z9

ACZ Project ID: **L94788**

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323927													
WG323927ICB	ICB	06/06/12 14:52				U	mg/L		-3	3			
WG323927ICV	ICV	06/06/12 14:52	WI120523-4	20		20.9	mg/L	104.5	90	110			
WG323927LFB	LFB	06/06/12 15:13	WI120508-1	10		9.8	mg/L	98	90	110			
L94788-01DUP	DUP	06/06/12 15:36			1600	1640	mg/L				2.5	20	
L94788-02AS	AS	06/06/12 15:36	SO4TURB10	10	1600	1880	mg/L	2800	90	110			M3

Thallium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG323661													
WG323661ICV	ICV	06/01/12 4:59	MS120416-2	.05		.05387	mg/L	107.7	90	110			
WG323661ICB	ICB	06/01/12 5:02				U	mg/L		-0.0003	0.0003			
WG323661LFB	LFB	06/01/12 5:05	MS120531-3	.05005		.05013	mg/L	100.2	85	115			
L94642-01AS	AS	06/01/12 5:12	MS120531-3	.05005	U	.05096	mg/L	101.8	70	130			
L94642-01ASD	ASD	06/01/12 5:14	MS120531-3	.05005	U	.05199	mg/L	103.9	70	130	2	20	

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ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L94788-01	WG323685	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).
	WG323927	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.
L94788-02	WG323685	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).
	WG323927	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.

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No certification qualifiers associated with this analysis

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ACZ Project ID: L94788
Date Received: 05/25/2012 09:11
Received By: ksj
Date Printed: 5/25/2012

Receipt Verification

	YES	NO	NA
1) Does this project require special handling procedures such as CLP protocol?			X
2) Are the custody seals on the cooler intact?	X		
3) Are the custody seals on the sample containers intact?			X
4) Is there a Chain of Custody or other directive shipping papers present?	X		
5) Is the Chain of Custody complete?	X		
6) Is the Chain of Custody in agreement with the samples received?	X		
7) Is there enough sample for all requested analyses?	X		
8) Are all samples within holding times for requested analyses?	X		
9) Were all sample containers received intact?	X		
10) Are the temperature blanks present?			X
11) Are the trip blanks (VOA and/or Cyanide) present?			X
12) Are samples requiring no headspace, headspace free?			X
13) Do the samples that require a Foreign Soils Permit have one?			X

Exceptions: If you answered no to any of the above questions, please describe

N/A

Contact (For any discrepancies, the client must be contacted)

N/A

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/hr)
Na15437	2.3	15

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

Notes

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ZS000001Z9

ACZ Project ID: L94788
Date Received: 05/25/2012 09:11
Received By: ksj
Date Printed: 5/25/2012

Sample Container Preservation

SAMPLE	CLIENT ID	R < 2	G < 2	BK < 2	Y < 2	YG < 2	B < 2	O < 2	T > 12	N/A	RAD	ID
L94788-01	MH-29		Y		Y							<input type="checkbox"/>
L94788-02	MH-28		Y		Y							<input type="checkbox"/>

Sample Container Preservation Legend

Abbreviation	Description	Container Type	Preservative/Limits
R	Raw/Nitric	RED	pH must be < 2
B	Filtered/Sulfuric	BLUE	pH must be < 2
BK	Filtered/Nitric	BLACK	pH must be < 2
G	Filtered/Nitric	GREEN	pH must be < 2
O	Raw/Sulfuric	ORANGE	pH must be < 2
P	Raw/NaOH	PURPLE	pH must be > 12 *
T	Raw/NaOH Zinc Acetate	TAN	pH must be > 12
Y	Raw/Sulfuric	YELLOW	pH must be < 2
YG	Raw/Sulfuric	YELLOW GLASS	pH must be < 2
N/A	No preservative needed	Not applicable	
RAD	Gamma/Beta dose rate	Not applicable	must be < 250 µR/hr

* pH check performed by analyst prior to sample preparation

Sample IDs Reviewed By: ksj



Laboratories, Inc.

L94788

CHAIN of CUSTODY

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

Report to:

Name: Jon Anderson

Company: Freeport-McMoRan Sierrita Inc.

E-mail: jonathan_anderson@fmi.com

Address: 6200 W. Duval Mine Road

Green Valley, AZ 85614

Telephone: 520-393-2714

Copy of Report to:

Name: Ben Daigneau

Company: Clear Creek Associates

E-mail: bdaigneau@clearcreekassociates.com

Telephone: 520-622-3222

Invoice to:

Name:

Company:

E-mail:

Address:

Telephone:

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

YES

NO

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

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

Are samples for CO DW Compliance Monitoring?

YES

NO

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

PROJECT INFORMATION

ANALYSIS REQUESTED (attach list or use quote number)

Quote #:

Project/PO #: ZS000001Z9

Reporting state for compliance testing:

Sampler's Name:

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION

DATE/TIME

Matrix

of Containers

Quarterly

MH-29

05/21/12 : 10:36

GW

3

X

MH-28

05/21/12 : 1150

GW

3

X

Matrix

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

REMARKS

Copy of report to Ben Daigneau contains only "SO4" results with QC Summary.

UPS Tracking # 12867 7E4 23 1000 8099

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

RELINQUISHED BY:

DATE/TIME

RECEIVED BY:

DATE/TIME

ALEXIS ALVAREZ

05/24/12 : 1430