FREEPORT-MCMORAN COPPER & GOLD

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

April 19, 2013

Via Certified Mail # 7011 1150 0000 0283 8980
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 Fourth Quarter 2012 and First Quarter 2013. 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 the Fourth Quarter 2012 and First Quarter 2013, prepared by Clear Creek Associates for Freeport-McMoRan Sierrita Inc. (Sierrita). This document provides results of groundwater monitoring conducted during the fourth quarter of 2012 and the first quarter of 2013, 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,

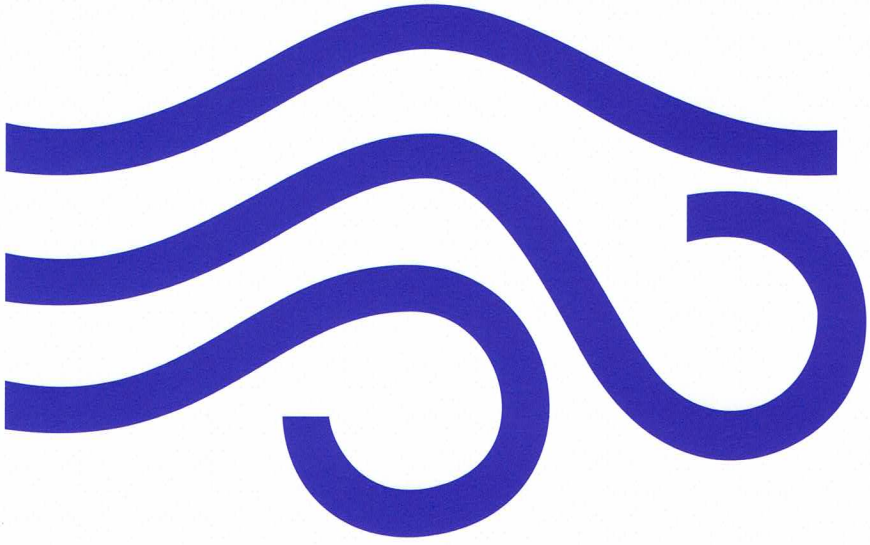
Martha G. Mottley
Chief Environmental Engineer
Freeport-McMoRan Sierrita Inc.

MGM/ms
Attachment
20130419_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 FOURTH QUARTER 2012 AND FIRST QUARTER 2013

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

April 15, 2013

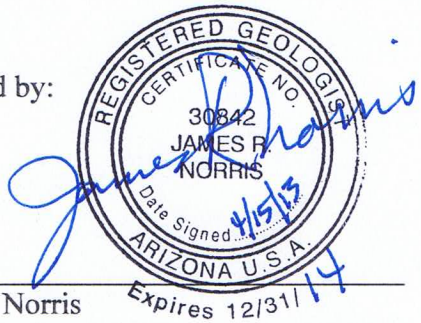
SEMIANNUAL GROUNDWATER MONITORING REPORT FOR SAMPLES COLLECTED DURING FOURTH QUARTER 2012 AND FIRST QUARTER 2013

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

April 15, 2013

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1. INTRODUCTION

This report provides the results of groundwater monitoring conducted in the fourth quarter 2012 and first quarter 2013 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 fourth quarter 2012 and first quarter 2013 are tabulated in Table 2 and Table 3, respectively. Figure 2 shows the concentrations of dissolved sulfate in the wells sampled in the fourth 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 first quarter 2013. The highest sulfate concentration measured at co-located wells was used for concentration contouring[1]. Sulfate concentrations are reported as received from the laboratory with no modifications to the number of significant figures. Groundwater elevations in the fourth quarter 2012 and first quarter 2013 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. Fourth quarter 2012 and first quarter 2013 groundwater elevation data are 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 fourth quarter 2012 and first quarter 2013, and is included as Appendix A. Analytical laboratory reports for samples collected in fourth quarter 2012 and first quarter 2013 are provided in portable document format on the compact diskette in Appendix B. As determined by the analytical data verification review, all data are of acceptable quality for use in the groundwater monitoring program conducted pursuant to the Mitigation Order.

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[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 1,280 feet for fourth quarter 2012 and 1,380 feet for first quarter 2013, 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 394 feet per year determined using an average hydraulic gradient of 0.00871 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.

3. FINDINGS

This semiannual data report provides the results of groundwater monitoring conducted in the vicinity of the STI for the fourth quarter 2012 and first quarter 2013. Groundwater samples were collected from 28 plume area wells and depth to water measurements were collected from 29 wells during the fourth quarter 2012. In the first quarter 2013, 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-1 , which was not operational during fourth 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 east 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 north to well TMM-1 (Figures 2 and 3). Comparison of the fourth quarter 2012 and the first quarter 2013 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-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). Sulfate concentrations at CW-6 appear to have an increasing trend after 2010, but are variable in magnitude and require additional measurements to confirm the trend. The time series graph for GV-02-GVDWID indicates that sulfate concentrations have been generally 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, MO-2007-6A and MO-2009-1; decrease at MO-2007-3C and MO-2007-6B; and increase at NP-2 and MO-2007-4C. The October 2012 sample from MO-2007-4A appears to be anomalous and was not considered in determining the trend.
- Data presented in the time series graphs indicate that sulfate concentrations increased in wells MO-2007-1B and MO-2007-1C along the north 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. The apparent decline in concentration for the last sample at MO-2007-1C needs to be verified by future sampling.

- 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 typically slightly higher in the first and second quarters than during the third and fourth quarters. The June 2007 and August 2007 water levels at NP-2 and the October 2012 water level at MO-2007-3B appear to be anomalous and were not used for trend analysis.

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	Quarterly Sampling First Quarter	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth 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	Quarterly Sampling First Quarter	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth 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	Quarterly Sampling First Quarter	Annual Sampling Second Quarter	Quarterly Sampling Third Quarter	Semiannual Sampling Fourth 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 Fourth Quarter 2012 and First Quarter 2013 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
CW-3	627483	12/13/12	7.64	24.1	473	63.84
		12/13/12 DUP	7.64	24.1	473	64.04
CW-6	627485	12/12/12	7.47	23.6	541	82.98
		2/6/13	7.32	24.0	457	76.54
CW-9	588121	12/12/12	7.75	26.6	382	42.14
		2/6/13	7.43	26.7	325	39.87
CW-10	207982	12/12/12	7.77	29.3	392	52.33
		2/6/13	7.52	29.3	332	47.91
ESP-1	623102	NS - Pump out of service due to electrical problems				
ESP-2	623103	11/21/12	7.55	28.8	333	26.79
ESP-3	623104	11/21/12	7.59	28.4	327	35.4
ESP-4	623105	11/12/12	7.60	26.3	1337	618.5
GV-01-GVDWID	603428	11/15/12	7.27	23.9	450	33.95
		1/29/13	7.34	24.9	373	38.61
GV-02-GVDWID	603429	11/15/12	7.55	23.4	543	63.97
		1/29/13	7.35	22.7	457	61.02
		1/29/2013 DUP	7.35	22.7	457	61.23
M-8	87390	10/29/12	7.62	25.7	419	16.45
M-10	501653	10/29/12	7.88	27.0	645	158
MH-28	903648	10/9/12	6.97	26.8	2980	1900
MH-29	903649	10/9/12	6.97	26.3	2710	1700
MO-2007-1A	907342	10/24/12	7.69	25.1	368	16.5
MO-2007-1B	907210	10/24/12	7.56	26.2	1460	975.8
MO-2007-1C	907209	10/24/12	8.40	26.5	694	239.2
		10/24/12 DUP	8.40	26.5	694	235.26
MO-2007-3B	906816	10/10/12	7.94	28.1	390	37.01
		1/8/13	8.10	27.0	374	33.77
MO-2007-3C	906817	10/10/12	8.04	29.4	487	99.13
		1/8/13	8.09	26.5	431	62.35
		1/8/13 DUP	8.09	26.5	431	62.62
MO-2007-4A	907213	10/23/12	7.48	27.2	380	94.87
		2/21/13	7.53	28.6	337	33.48
MO-2007-4B	907212	10/23/12	7.72	27.9	364	34.37
		2/21/13	7.75	25.7	299	32.01

TABLE 2
Analytical Results for Fourth Quarter 2012 and First Quarter 2013 Groundwater Monitoring

Well Name	ADWR 55 Registry No.	Sample Date	pH (SU)	Temperature (deg C)	Specific Conductance (µS/cm)	Sulfate, Dissolved (mg/L)
MO-2007-4C	907211	10/23/12	8.86	28.5	436	94.65
		2/21/13	7.97	28.4	384	90.93
MO-2007-5B	907456	11/6/12	7.53	26.6	1420	453.9
MO-2007-5C	907457	11/6/12	8.43	26.3	763	262.57
MO-2007-6A	907607	10/18/12	7.77	28.8	368	30.42
		1/8/13	7.70	27.6	354	25.17
MO-2007-6B	907606	10/18/12	7.82	29.8	383	50.70
		1/8/13	7.68	27.2	380	37.31
MO-2009-1	910458	11/29/12	8.64	26.5	480	94.26
		1/8/13	8.79	27.0	522	98.57
NP-2	605898	11/29/12	8.02	24.1	396	70.13
		2/20/13	7.94	23.6	376	69.34
TMM-1	616156	11/23/12	7.64	22.8	479	<0.5
		11/23/12 DUP	7.64	22.8	479	<0.5

Notes:

ADWR = Arizona Department of Water Resources

SU = Standard Units

deg C = degrees Celsius

µS/cm = microsiemens per centimeter

mg/L = milligrams per Liter

NS = not sampled

DUP = Duplicate sample

TABLE 3
Groundwater Elevation Data for Fourth Quarter 2012 and First Quarter 2013

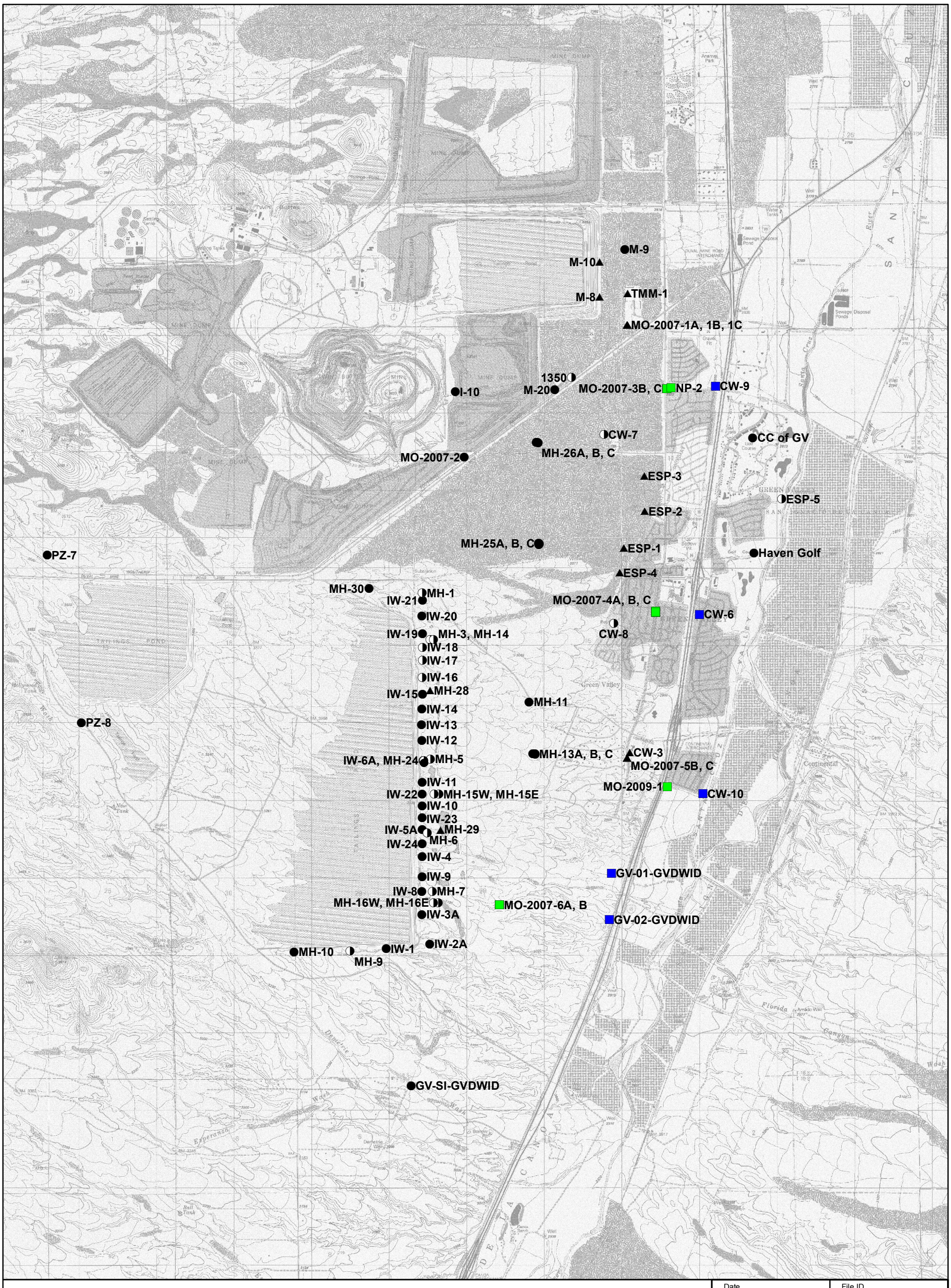
Well Name	ADWR 55 Registry No.	Survey Source	UTM North (m)	UTM East (m)	Measuring Point Elevation (ft amsl)	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)
CW-3	627483	HGC	3523809.985	500047.663	2941.71	12/13/12	278.81	2662.90
CW-6	627485	CWC	3525794.239	500891.072	2867.00	12/12/12	256.33	2610.67
						2/6/13	254.67	2612.33
CW-9	588121	CWC	3528740.784	501072.040	2834.30	12/12/12	317.48	2516.82
						2/6/13	313.90	2520.40
CW-10	207982	CWC	3523455.502	500913.364	2868.50	12/12/12	199.93	2668.57
						2/6/13	197.87	2670.63
ESP-1	623102	Sierrita	3526448.677	499969.682	2953.43	11/21/12	358.70	2594.73
ESP-2	623103	Sierrita	3526924.656	500241.637	2934.60	11/21/12	348.11	2586.49
ESP-3	623104	Sierrita	3527377.239	500234.067	2935.80	11/21/12	357.92	2577.88
ESP-4	623105	Sierrita	3526132.758	499916.830	2958.60	11/12/12	358.92	2599.68
GV-01-GVDWID	603428	GVDWID	3522254.157	499812.869	2942.35	11/15/12	239.00	2703.35
						1/29/13	238.61	2703.74
GV-02-GVDWID	603429	GVDWID	3521654.457	499786.207	2930.47	11/15/12	214.51	2715.96
						1/29/13	209.49	2720.98
M-8	87390	Sierrita	3529692.237	499658.916	2999.53	10/29/12	472.66	2526.87
M-10	501653	Sierrita	3530143.114	499659.027	3005.68	10/29/12	486.64	2519.04
MH-28	903548	Sierrita	3524609.980	497471.427	3142.18	10/9/12	403.77	2738.41
MH-29	903649	Sierrita	3522805.518	497604.326	3123.15	10/9/12	365.70	2757.45
MO-2007-1A	907342	Sierrita	3529331.380	500016.947	2967.65	10/24/12	435.12	2532.53
MO-2007-1B	907210	Sierrita	3529325.119	500021.574	2966.82	10/24/12	435.62	2531.20
MO-2007-1C	907209	Sierrita	3529328.959	500013.405	2968.58	10/24/12	433.08	2535.50
MO-2007-3B	906816	Sierrita	3528508.801	500522.491	2912.15	10/10/12	420.52	2491.63
						1/8/13	362.33	2549.82
MO-2007-3C	906817	Sierrita	3528508.743	500529.713	2911.90	10/10/12	366.50	2545.40
						1/8/13	362.59	2549.31
MO-2007-4A	907213	Sierrita	3525634.956	500383.682	2923.63	10/23/12	314.17	2609.46
						2/21/13	311.70	2611.93
MO-2007-4B	907212	Sierrita	3525613.952	500380.947	2923.57	10/23/12	315.28	2608.29
						2/21/13	311.79	2611.78
MO-2007-4C	907211	Sierrita	3525624.484	500382.217	2923.66	10/23/12	316.47	2607.19
						2/21/13	312.89	2610.77
MO-2007-5B	907456	Sierrita	3523743.376	500013.850	2944.35	11/6/12	280.33	2664.02
MO-2007-5C	907457	Sierrita	3523736.459	500014.152	2944.91	11/6/12	286.84	2658.07

TABLE 3
Groundwater Elevation Data for Fourth Quarter 2012 and First Quarter 2013

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)
MO-2007-6A	907607	Sierrita	3521842.050	498367.161	3043.37	10/18/12	316.94	2726.43
						1/8/13	321.98	2721.39
MO-2007-6B	907606	Sierrita	3521849.495	498367.887	3043.05	10/18/12	332.52	2710.53
						1/8/13	333.92	2709.13
MO-2009-1	910458	Sierrita	3523369.438	500534.089	2890.78	11/29/12	229.30	2661.48
					2890.78	1/8/13	229.63	2661.15
NP-2	605898	HGC	3528517.116	500582.904	2906.56	11/29/12	360.79	2545.77
						2/20/13	356.92	2549.64
TMM-1	616156	HGC	3529736.231	500018.323	2967.08	11/23/12	443.30	2523.78

Notes:
ADWR = Arizona Department of Water Resources
amsl = above mean sea level
CWC = Community Water Company of Green Valley
ft = feet
GVDWID = Green Valley Domestic Water Improvement District
HGC = Hydro Geo Chem, Inc.
m = meters
Sierrita = Freeport-McMoRan Sierrita 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

Scale

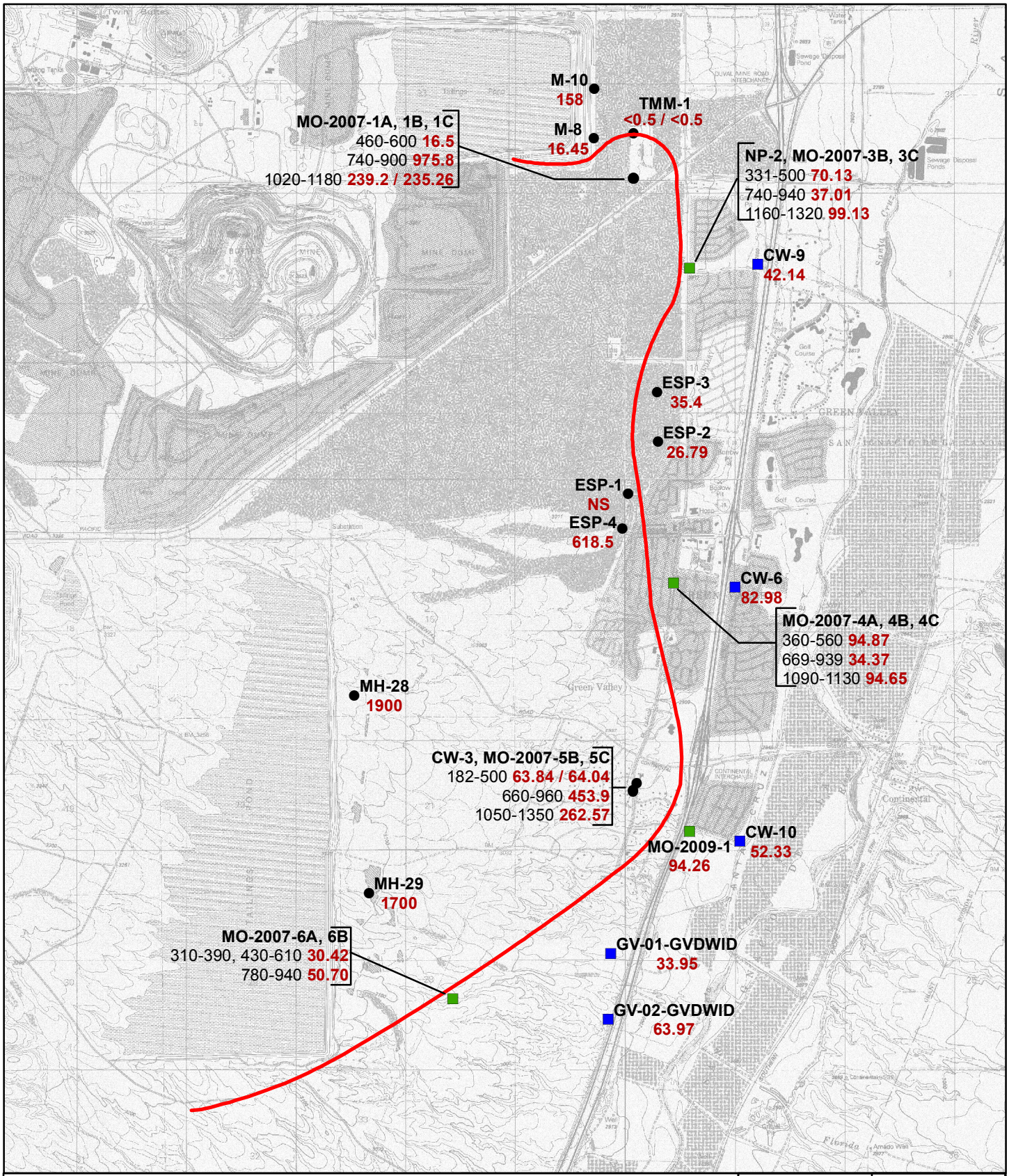
0 2,000 4,000 8,000

Feet

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

CLEAR CREEK ASSOCIATES

FIGURE 1
Sampling Locations for
Pre-Implementation Groundwater
Monitoring



Legend

250 mg/L Sulfate Concentration Contour

● **CW-9** Well ID
42.14 Sulfate Concentration (mg/L)
Duplicate Results Separated by "/"
NS Not Sampled

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

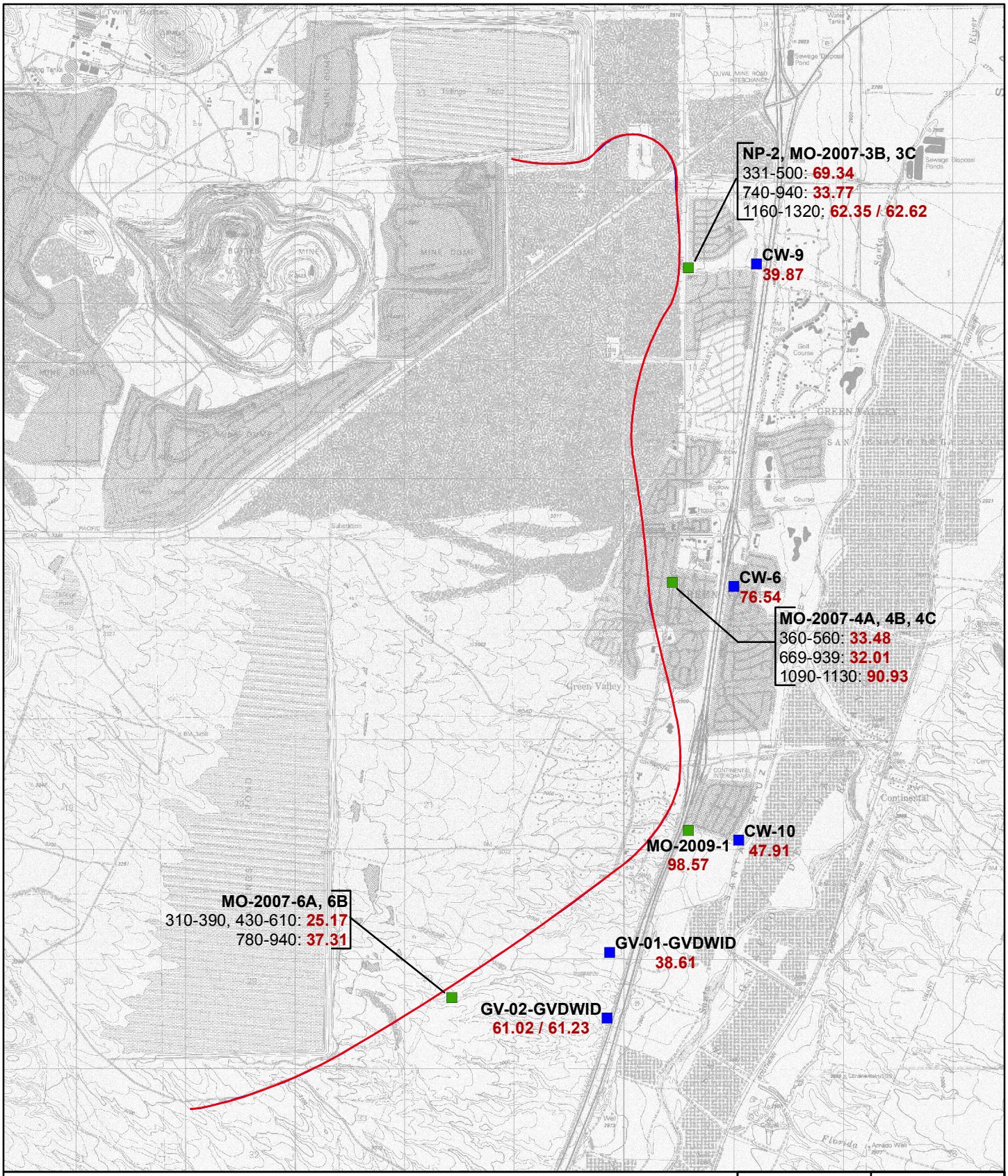
Well Symbols
- Monitoring Well
- Water Supply Well
- Sentinel Well

0 1,900 3,800
Feet

CLEAR CREEK ASSOCIATES

File ID 055039-077
Date 1/30/13

FIGURE 2
Sulfate Concentrations in Groundwater
Fourth Quarter 2012



Legend

250 mg/L Sulfate Concentration Contour

CW-9 Well ID
39.87 Sulfate Concentration (mg/L)
Duplicate Results Separated by "/"

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

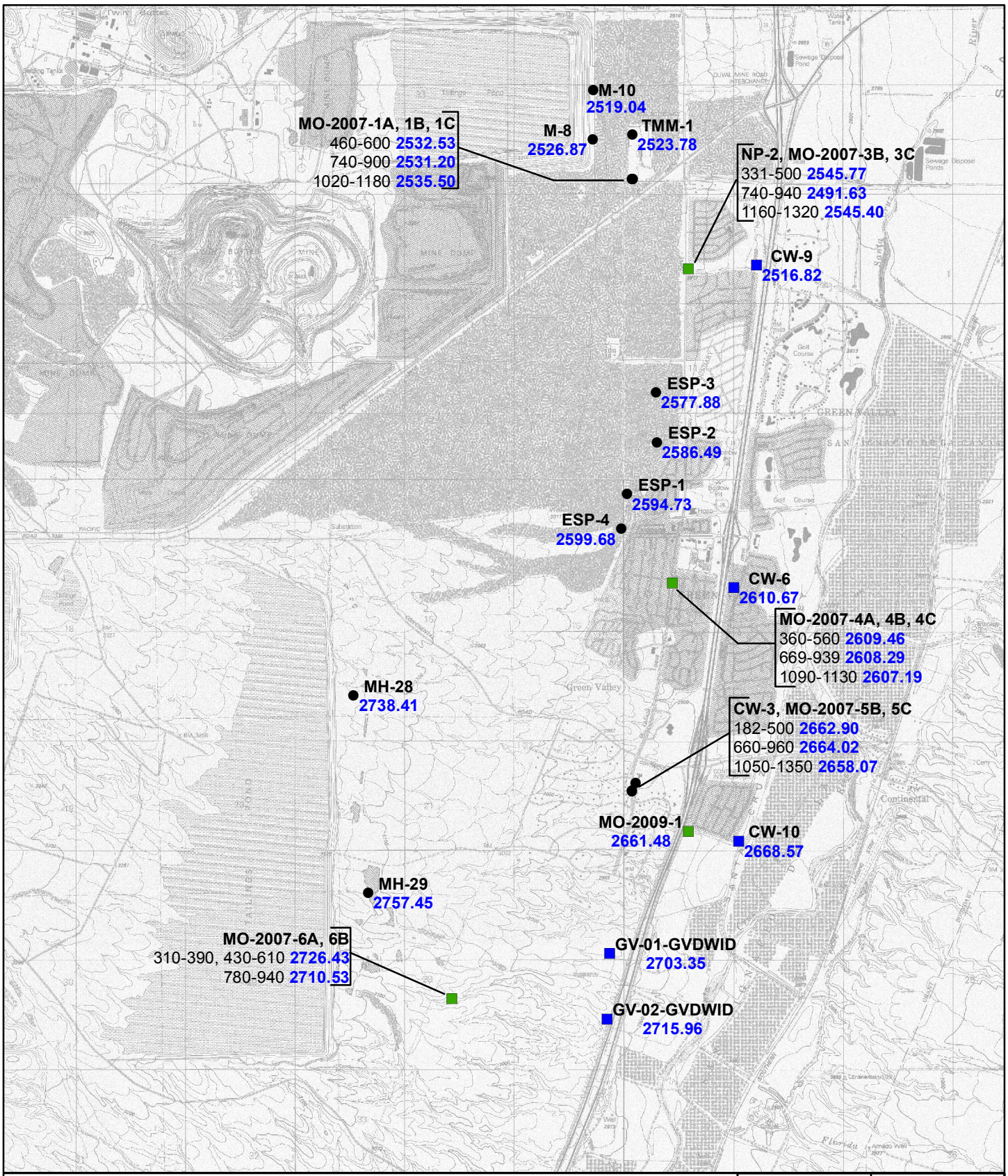
Well Symbols
- Water Supply Well
- Sentinel Well

0 1,900 3,800
Feet

CLEAR CREEK ASSOCIATES

File ID 055039-079
Date 3/12/13

FIGURE 3
Sulfate Concentrations in Groundwater
First Quarter 2013



Legend

● **CW-9** Well ID
2516.82 Groundwater Elevation (ft amsl)

Well Symbols
- Monitoring Well
- Water Supply Well
- Sentinel Well

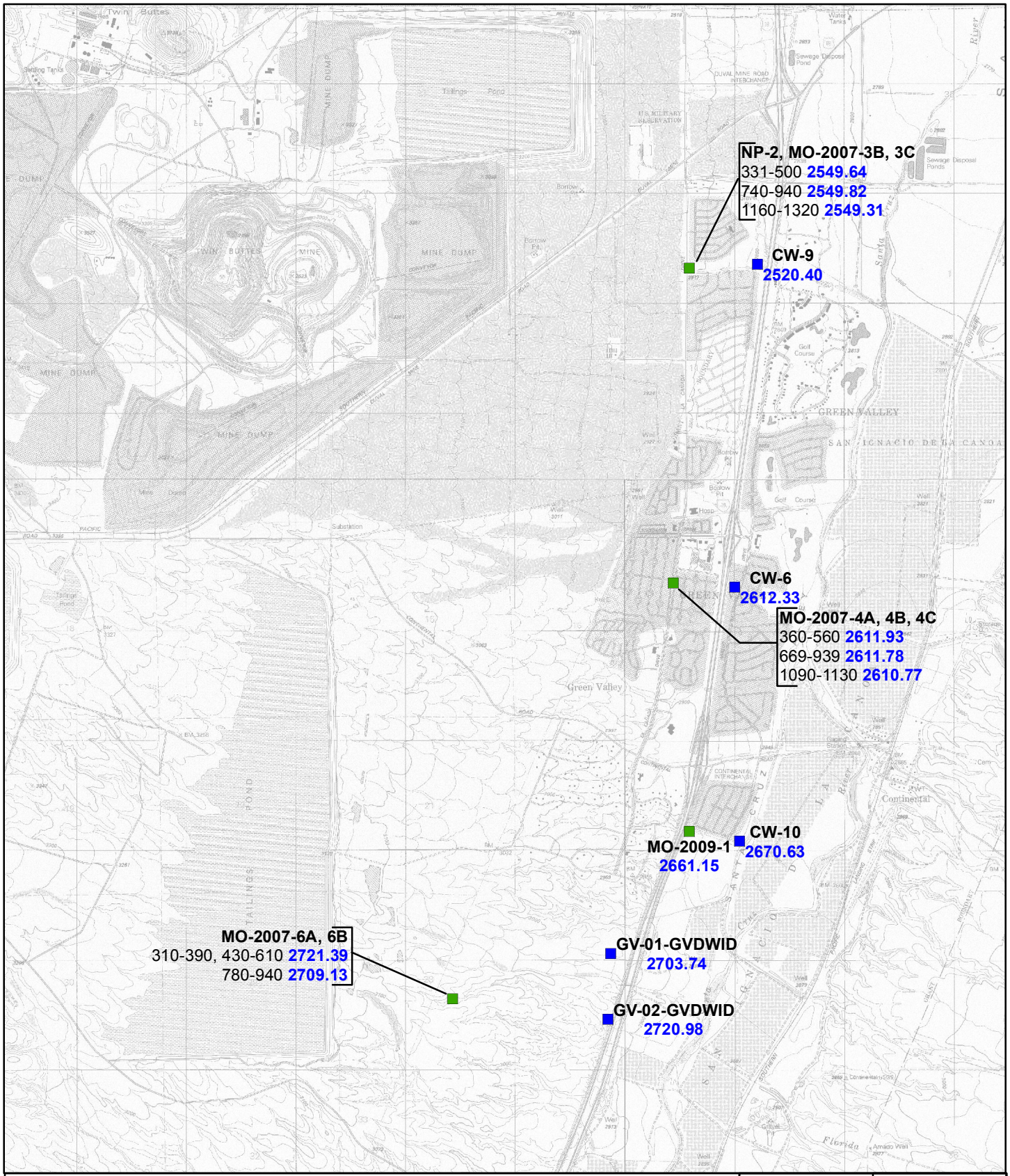
0 1,900 3,800
Feet

Co-Located Wells
Screened Interval (ft bls): **Groundwater Elevation (ft amsl)**

CLEAR CREEK ASSOCIATES

File ID 055039-078
Date 1/30/13

FIGURE 4
Groundwater Elevations
Fourth Quarter 2012



Legend

● **CW-9** Well ID
2520.40 Groundwater Elevation (ft amsl)

Well Symbols
- Water Supply Well
- Sentinel Well

0 1,900 3,800
Feet

Co-Located Wells
Screened Interval (ft bls): **Groundwater Elevation (ft amsl)**

CLEAR CREEK ASSOCIATES

File ID 055039-080
Date 3/12/13

FIGURE 5
Groundwater Elevations
First Quarter 2013

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

April 15, 2013

TABLE OF CONTENTS

1. INTRODUCTION

This report summarizes the data verification review of groundwater samples collected and analyzed during the fourth quarter 2012 and first quarter 2013 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 47 samples collected are contained in 14 reports with the ACZ Project numbers 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 any modifications to be made regarding the usability and data validation status of the laboratory test results.

ACZ Project ID	Wells Reported
Fourth Quarter 2012 Number of well samples collected: 28 Number of duplicate samples collected: 3 Total number of samples collected: 31	
L97324	MO-2007-3B, MO-2007-3C
L97433	MO-2007-6A, MO-2007-6B
L97745	MO-2007-5B, MO-2007-5C
L97624	M-8, M-10
L97916	ESP-4, GV-1, GV-2
L98019	ESP-2, ESP-3, TMM-1, DUP20121123A
L98130	NP-2, MO-2009-1
L97554	MO-2007-4A, MO-2007-4B, MO-2007-4C, MO-2007-1A, MO-2007-1B, MO-2007-1C, DUP20121024A
L98363	CW-10, CW-6, CW-9, CW-3, DUP20121213A
L97323	MH-28, MH-29,
First Quarter 2013 Number of well samples collected: 14 Number of duplicate samples collected: 2 Total number of samples collected: 16	
L10127	MO-2007-3B, MO-2007-6B, MO-2007-3C, MO-2007-6A, MO-2009-1, DUP20120108A
L10460	GV-1, GV-2, DUP20130129A
L10576	CW-10, CW-6, CW-9
L10813	NP-2, MO-2007-4B, MO-2007-4A, MO-2007-4C

2. LABORATORY QUALITY CONTROL

As specified in the QAPP, laboratory QC was maintained for all analyses 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 are discussed in the following subsections.

The review of laboratory QC included a review to identify any qualified data and an assessment of 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 for 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 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 L97324. The "M2" qualifier was not used in fourth quarter 2012 or first quarter 2013. The "M3" qualifier was used on the L97555, L97624, and L97323 reports. In all cases where an "M1" or "M3" qualifier was used, the method control sample recovery was checked to ensure that it was 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 analytical method. 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 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 was not used for data validation if the sample concentration was 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. The DQIs include the following:

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

Each of the DQIs are 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 of the analytical results 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, five field duplicate samples were collected by Sierrita for filtered sulfate analysis. Three were collected in the fourth quarter 2012 (DUP20121123A, DUP20121024A, and DUP20121213A) and two were collected in the first quarter 2013 (DUP20130108A and DUP20130129A). The collection of three field duplicate samples in the fourth quarter 2012 and two field duplicate samples in first quarter 2013 meets 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.

Results of the field duplicate samples collected are provided in the table below. The range of RPD values was 0 to 1.66 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
L98019	TMM-1	DUP20121123A	<0.5	<0.5	0.00%
L87554	MO-2007-1C	DUP20121024A	239.2	235.26	1.66%
L98363	CW-3	DUP20121213A	63.84	64.04	0.31%
L10127	MO-2007-3C	DUP20130108A	62.35	62.82	0.75%
L10460	GV-2	DUP20130129A	61.02	61.23	0.34%

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 was managed in this dataset through 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 determined 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 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 provide a good representation of groundwater quality at the locations. The analytical data are representative of groundwater conditions because the analyses were conducted using 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 satisfy the QA/QC criteria for this project and are 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

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

Analytical Report

January 16, 2013

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: ZS0000033Y
ACZ Project ID: L10127

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on January 10, 2013. This project has been assigned to ACZ's project number, L10127. 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 L10127. 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 February 16, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-3B

ACZ Sample ID: ***L10127-01***
Date Sampled: *01/08/13 10:25*
Date Received: *01/10/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	33.77			mg/L	0.5	2.5	01/11/13 14:47	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-6B

ACZ Sample ID: ***L10127-02***
Date Sampled: *01/08/13 12:25*
Date Received: *01/10/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	37.31			mg/L	0.5	2.5	01/11/13 15:29	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-3C

ACZ Sample ID: ***L10127-03***
Date Sampled: *01/08/13 13:22*
Date Received: *01/10/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	62.35			mg/L	0.5	2.5	01/15/13 11:48	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-6A

ACZ Sample ID: ***L10127-04***
Date Sampled: *01/08/13 13:36*
Date Received: *01/10/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	25.17			mg/L	0.5	2.5	01/11/13 17:15	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2009-1

ACZ Sample ID: ***L10127-05***
Date Sampled: *01/08/13 15:10*
Date Received: *01/10/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	98.57			mg/L	1	5	01/11/13 17:36	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: DUP20120108A

ACZ Sample ID: ***L10127-06***
Date Sampled: *01/08/13 00:00*
Date Received: *01/10/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	62.62			mg/L	0.5	2.5	01/11/13 17:57	lhb

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L10127***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334290													
WG334290ICV	ICV	11/15/12 19:21	WI120912-1	50		51.75	mg/L	103.5	90	110			
WG334290ICB	ICB	11/15/12 19:42				U	mg/L		-1.5	1.5			
WG337156													
WG337156LFB	LFB	01/11/13 12:41	WI121018-8	30		30.32	mg/L	101.1	90	110			
L10127-01DUP	DUP	01/11/13 15:08			33.77	33.7	mg/L				0.2	20	
L10127-02AS	AS	01/11/13 15:50	WI121018-8	30	37.31	66.9	mg/L	98.6	90	110			
L10127-06DUP	DUP	01/11/13 18:18			62.62	62.79	mg/L				0.3	20	
L10149-01AS	AS	01/15/13 12:31	WI121018-8	150	193.93	336.93	mg/L	95.3	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L10127***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L10127***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000033Y

ACZ Project ID: L10127
Date Received: 01/10/2013 10:23
Received By: ksj
Date Printed: 1/10/2013

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3224	1	13	Yes

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

ACZ Laboratories, Inc. L10127

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

CHAIN of CUSTODY

Report to:

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: 520-648-8844

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 [ ]
If yes, please include state forms. Results will be reported to PQL. NO [x]

PROJECT INFORMATION

Quote #:
Project/PO #: ZS0000033Y
Reporting state for compliance testing:
Sampler's Name: Jeff Joy
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2007-3B	1/8/13 : 1025	GW	1	x							
MO-2007-6B	1/8/13 : 1225	GW	1	x							
MO-2007-3C	1/8/13 : 1322	GW	1	x							
MO-2007-6A	1/8/13 : 1336	GW	1	x							
MO-2009-1	1/8/13 : 1510	GW	1	x							
DUP20120108A	1/8/13 : 0000	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 1001 083 5

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY	DATE/TIME
Jeff Joy	1/9/13 : 1530		1-10-13 10:23

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

L10127 Chain of Custody

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

Analytical Report

February 12, 2013

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: ZS000003Q8
ACZ Project ID: L10460

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on February 01, 2013. This project has been assigned to ACZ's project number, L10460. 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 L10460. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after March 12, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000003Q8
Sample ID: GV-1

ACZ Sample ID: ***L10460-01***
Date Sampled: *01/29/13 08:32*
Date Received: *02/01/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	38.61			mg/L	0.5	2.5	02/07/13 14:53	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000003Q8
Sample ID: GV-2

ACZ Sample ID: ***L10460-02***
Date Sampled: *01/29/13 09:05*
Date Received: *02/01/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	61.02			mg/L	0.5	2.5	02/07/13 15:35	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000003Q8
Sample ID: DUP20130129A

ACZ Sample ID: ***L10460-03***
Date Sampled: *01/29/13 00:00*
Date Received: *02/01/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	61.23			mg/L	0.5	2.5	02/07/13 15:56	lhb

Arizona license number: AZ0102

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

Inorganic Reference

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L10460***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG337946													
WG337946ICV	ICV	01/24/13 14:08	WI130122-1	50		49.8	mg/L	99.6	90	110			
WG337946ICB	ICB	01/24/13 14:29				U	mg/L		-1.5	1.5			
WG338617													
WG338617LFB	LFB	02/07/13 13:49	WI121018-8	30		30.29	mg/L	101	90	110			
L10453-02DUP	DUP	02/07/13 14:31			123.21	123.58	mg/L				0.3	20	
L10460-01AS	AS	02/07/13 15:14	WI121018-8	30	38.61	68.12	mg/L	98.4	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L10460***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L10460***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L10460
Date Received: 02/01/2013 10:15
Received By: ksj
Date Printed: 2/1/2013

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3739	3.8	15	Yes

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

ACZ Laboratories, Inc. L10460

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

CHAIN OF CUSTODY

Report To:

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: 520-648-8844

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 [X]

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

PROJECT INFORMATION

Quote #:

Project/PO #: ZS000003Q8

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (Preservation codes below)

SAMPLE IDENTIFICATION	DATE TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
GV-1	1/29/13 : 0832	GW	1	X							
GV-2	1/29/13 : 0905	GW	1	X							
DUP20130129A	1/29/13 : 0000	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 1001 085 3

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

RELINQUISHED BY:	DATE TIME	RECEIVED BY	DATE TIME
Jeff Joy	1/31/13 : 1530		2.1.13 10:15

L10460 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

February 20, 2013

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: ZS000003Q8
ACZ Project ID: L10576

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on February 08, 2013. This project has been assigned to ACZ's project number, L10576. 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 L10576. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after March 20, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000003Q8
Sample ID: CW-10

ACZ Sample ID: ***L10576-01***
Date Sampled: *02/06/13 08:51*
Date Received: *02/08/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	47.91			mg/L	0.5	2.5	02/18/13 23:07	tcd

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000003Q8
Sample ID: CW-6

ACZ Sample ID: ***L10576-02***
Date Sampled: *02/06/13 09:21*
Date Received: *02/08/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	76.54			mg/L	0.5	2.5	02/18/13 23:28	tcd

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000003Q8
Sample ID: CW-9

ACZ Sample ID: ***L10576-03***
Date Sampled: *02/06/13 10:09*
Date Received: *02/08/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	39.87			mg/L	0.5	2.5	02/18/13 23:49	tcd

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L10576***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG337946													
WG337946ICV	ICV	01/24/13 14:08	WI130122-1	50		49.8	mg/L	99.6	90	110			
WG337946ICB	ICB	01/24/13 14:29				U	mg/L		-1.5	1.5			
WG339146													
WG339146LFB1	LFB	02/18/13 18:33	WI121018-8	30		30.6	mg/L	102	90	110			
L10533-01DUP	DUP	02/18/13 19:15			87.86	90.7	mg/L				3.2	20	
L10550-02AS	AS	02/18/13 22:46	WI121018-8	30	4.29	34.74	mg/L	101.5	90	110			
L10576-03DUP	DUP	02/19/13 0:10			39.87	39.92	mg/L				0.1	20	
L10627-04AS	AS	02/19/13 0:53	WI121018-8	30	1.39	31.65	mg/L	100.9	90	110			
WG339146LFB2	LFB	02/19/13 4:45	WI121018-8	30		30.66	mg/L	102.2	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L10576***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L10576***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L10576
Date Received: 02/08/2013 10:37
Received By: ksj
Date Printed: 2/8/2013

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
2446	3.4	15	Yes

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

ACZ Laboratories, Inc. L10576

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

CHAIN of CUSTODY

Report to:

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: 520-648-8844

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

PROJECT INFORMATION

Quote #:
Project/PO #: ZS000003Q8
Reporting state for compliance testing:
Sampler's Name: Jeff Joy
Are any samples NRC licensable material? Yes No

ANALYSIS REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
CW-10	2/6/13 : 0851	GW	1	X							
CW-6	2/6/13 : 0921	GW	1	X							
CW-9	2/6/13 : 1009	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 1001 094 2

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

RELINQUISHED BY:	DATE:TIME	RECEIVED BY:	DATE:TIME
Jeff Joy	2/7/13 : 1530		
		WPC 2-8-13 10:37	

L10576 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

March 05, 2013

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: ZS000003Q8
ACZ Project ID: L10813

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on February 22, 2013. This project has been assigned to ACZ's project number, L10813. 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 L10813. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after April 05, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000003Q8
Sample ID: NP-2

ACZ Sample ID: ***L10813-01***
Date Sampled: *02/20/13 10:57*
Date Received: *02/22/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	69.34			mg/L	0.5	2.5	03/01/13 20:50	jlf

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000003Q8
Sample ID: MO-2007-4B

ACZ Sample ID: ***L10813-02***
Date Sampled: *02/21/13 11:08*
Date Received: *02/22/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	32.01			mg/L	0.5	2.5	03/01/13 21:32	jlf

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000003Q8
Sample ID: MO-2007-4A

ACZ Sample ID: ***L10813-03***
Date Sampled: *02/21/13 12:13*
Date Received: *02/22/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	33.48			mg/L	0.5	2.5	03/01/13 22:15	jlf

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000003Q8
Sample ID: MO-2007-4C

ACZ Sample ID: ***L10813-04***
Date Sampled: *02/21/13 12:25*
Date Received: *02/22/13*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	90.93			mg/L	0.5	2.5	03/01/13 22:36	jlf

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L10813***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG337946													
WG337946ICV	ICV	01/24/13 14:08	WI130122-1	50		49.8	mg/L	99.6	90	110			
WG337946ICB	ICB	01/24/13 14:29				U	mg/L		-1.5	1.5			
WG339734													
L10813-01DUP	DUP	03/01/13 21:11			69.34	68.62	mg/L				1	20	
L10813-02AS	AS	03/01/13 21:53	WI121018-8	30	32.01	60.22	mg/L	94	90	110			
WG339734LFB	LFB	03/02/13 1:46	WI121018-8	30		31.15	mg/L	103.8	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L10813***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L10813***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000003Q8

ACZ Project ID: L10813
Date Received: 02/22/2013 10:22
Received By: ksj
Date Printed: 2/22/2013

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3224	0.4	13	Yes

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

ACZ Laboratories, Inc.

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

L10813

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: 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: NO
If yes, please include state forms. Results will be reported to PQL.

PROJECT INFORMATION

Quote #:
Project/PO #: ZS0000003Q8
Reporting state for compliance testing:
Sampler's Name: JEFF JOY
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	Sulfate							
NP-2	2/20/13 : 1057	GW	1	X							
MO-2007-4B	2/21/13 : 1108	GW	1	X							
MO-2007-4A	2/21/13 : 1213	GW	1	X							
MO-2007-4C	2/21/13 : 1225	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

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

UPS Tracking # 1Z 867 7E4 23 1001 096 0

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
	2/21/13 1530		2-22-13 10:22

L10813 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

October 22, 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: L97324

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 12, 2012. This project has been assigned to ACZ's project number, L97324. 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 L97324. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after November 22, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000002PM
Sample ID: MO-2007-3B

ACZ Sample ID: ***L97324-01***
Date Sampled: *10/10/12 10:54*
Date Received: *10/12/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	37.01			mg/L	0.5	2.5	10/18/12 3:31	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS000002PM
Sample ID: MO-2007-3C

ACZ Sample ID: ***L97324-02***
Date Sampled: *10/10/12 13:57*
Date Received: *10/12/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	99.13		*	mg/L	2.5	12.5	10/18/12 4:13	lhb

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L97324***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG329935													
WG329935ICV	ICV	09/12/12 14:16	WI120912-1	50		51.68	mg/L	103.4	90	110			
WG329935ICB	ICB	09/12/12 14:37				U	mg/L		-1.5	1.5			
WG332358													
L97298-01DUP	DUP	10/18/12 1:03			U	U	mg/L				0	20	RA
L97299-01AS	AS	10/18/12 1:45	WI120822-4	15000	22717	40039	mg/L	115.5	90	110			M1
L97324-01AS	AS	10/18/12 3:52	WI120822-4	30	37.01	69.96	mg/L	109.8	90	110			
WG332358LFB	LFB	10/18/12 13:38	WI120822-4	30		30.98	mg/L	103.3	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97324***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L97324-02	WG332358	Sulfate	M300.0 - Ion Chromatography	M1	Matrix spike recovery was high, the recovery of the associated control sample (LCS or LFB) was acceptable.
			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).

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

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97324***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000002PM

ACZ Project ID: L97324
Date Received: 10/12/2012 10:10
Received By: ksj
Date Printed: 10/13/2012

Receipt Verification

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

The 'sampled by' field on the Chain of Custody was not completed.

7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?		X	

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA16387	4.5	15	Yes

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

ACZ Laboratories, Inc. L97324

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

CHAIN of CUSTODY

Report to:

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

PROJECT INFORMATION

Quote #:
Project/PO #: ZS000002PM
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE : TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2007-3B	10/10/12 : 1054	GW	1	X							
MO-2007-3C	10/10/12 : 1357	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 8017

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	10/11/12 1500		10-12-12 10:10

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

L97324 Chain of Custody

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

Analytical Report

October 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: ZS0000033Y
ACZ Project ID: L97433

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 19, 2012. This project has been assigned to ACZ's project number, L97433. 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 L97433. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-6A

ACZ Sample ID: ***L97433-01***
Date Sampled: *10/18/12 11:28*
Date Received: *10/19/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	30.42			mg/L	0.5	2.5	10/25/12 19:28	tcd

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-6B

ACZ Sample ID: ***L97433-02***
Date Sampled: *10/18/12 11:37*
Date Received: *10/19/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	50.70			mg/L	0.5	2.5	10/25/12 20:10	tcd

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.

(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.

(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.

(4) EPA SW-846. Test Methods for Evaluating Solid Waste.

(5) Standard Methods for the Examination of Water and Wastewater.

Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.

(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

(5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L97433***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG329935													
WG329935ICV	ICV	09/12/12 14:16	WI120912-1	50		51.68	mg/L	103.4	90	110			
WG329935ICB	ICB	09/12/12 14:37				U	mg/L		-1.5	1.5			
WG332923													
WG332923LFB	LFB	10/25/12 18:46	WI120822-4	30		32.41	mg/L	108	90	110			
L97433-01DUP	DUP	10/25/12 19:49			30.42	30.43	mg/L				0	20	
L97433-02AS	AS	10/25/12 20:31	WI120822-4	30	50.7	80.11	mg/L	98	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97433***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97433***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000033Y

ACZ Project ID: L97433
Date Received: 10/19/2012 09:34
Received By: ksj
Date Printed: 10/19/2012

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA16428	3.6	15	Yes

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

ACZ Laboratories, Inc. 197433

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

CHAIN of CUSTODY

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: 520-648-8844

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

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 [X]

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

PROJECT INFORMATION

Quote #:

Project/PO #: ZS0000033Y

Reporting state for compliance testing:

Sampler's Name: J Joy

Are any samples NRC licensable material? Yes No

SAMPLE IDENTIFICATION	DATE / TIME	Code	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2007-6A	10/18/12 : 1128	GW	1	X							
MO-2007-6B	10/18/12 : 1137	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 8026

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

RELINQUISHED BY:	DATE / TIME:	RECEIVED BY:	DATE / TIME:
Jeffrey T. Joy	~~10/18/12~~ : 1330		

197433 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

November 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

Project ID: ZS0000033Y
ACZ Project ID: L97554

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 26, 2012. This project has been assigned to ACZ's project number, L97554. 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 L97554. 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 December 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-4A

ACZ Sample ID: ***L97554-01***
Date Sampled: *10/23/12 15:21*
Date Received: *10/26/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	94.87			mg/L	0.5	2.5	11/02/12 23:06	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-4B

ACZ Sample ID: ***L97554-02***
Date Sampled: *10/23/12 14:38*
Date Received: *10/26/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	34.37			mg/L	0.5	2.5	11/02/12 23:48	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-4C

ACZ Sample ID: ***L97554-03***
Date Sampled: *10/23/12 15:56*
Date Received: *10/26/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	94.65			mg/L	0.5	2.5	11/03/12 1:12	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-1A

ACZ Sample ID: ***L97554-04***
Date Sampled: *10/24/12 14:33*
Date Received: *10/26/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	16.50			mg/L	0.5	2.5	11/03/12 1:34	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-1B

ACZ Sample ID: ***L97554-05***
Date Sampled: *10/24/12 13:52*
Date Received: *10/26/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	975.8			mg/L	10	50	11/05/12 18:04	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-1C

ACZ Sample ID: ***L97554-06***
Date Sampled: *10/24/12 16:33*
Date Received: *10/26/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	239.2			mg/L	5	25	11/03/12 2:16	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: DUP20121024A

ACZ Sample ID: ***L97554-07***
Date Sampled: *10/24/12 00:00*
Date Received: *10/26/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	235.26			mg/L	2.5	12.5	11/05/12 18:25	lhb

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L97554***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG329935													
WG329935ICV	ICV	09/12/12 14:16	WI120912-1	50		51.68	mg/L	103.4	90	110			
WG329935ICB	ICB	09/12/12 14:37				U	mg/L		-1.5	1.5			
WG333398													
WG333398LFB1	LFB	11/02/12 12:54	WI121018-8	30		31.84	mg/L	106.1	90	110			
WG333398LFB2	LFB	11/02/12 22:45	WI121018-8	30		30.47	mg/L	101.6	90	110			
L97554-01DUP	DUP	11/02/12 23:27			94.87	94.54	mg/L				0.3	20	
L97554-02AS	AS	11/03/12 0:51	WI121018-8	30	34.37	64.6	mg/L		90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97554***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97554***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000033Y

ACZ Project ID: L97554
Date Received: 10/26/2012 10:47
Received By: ksj
Date Printed: 10/26/2012

Receipt Verification

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

The 'sampled by' field on the Chain of Custody was not completed.

7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?		X	

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3621	0.5	16	Yes

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

ACZ Laboratories, Inc. L97554

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

CHAIN OF CUSTODY

Name: Jon Anderson	Address:
Company:	
E-mail: jonathan_anderson@fmi.com	Telephone:

Name: Ben Daigneau	E-mail: bdaigneau@deercreekassociates.com
Company:	Telephone: 520-622-3222

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

If sample(s) received past holding time (HT), or if insufficient HT remains to complete analysis before expiration, shall ACZ proceed with requested short HT analyses? YES ☐ NO ☐

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

Are samples for SDWA Compliance Monitoring? Yes ☐ No ☐

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

Sampler's Name: _____ Sampler's site Information State ☐ Zip code ☐ Time Zone ☐

Quote #:

Project/PO #: ZS0000033Y

Reporting state for compliance testing:

Check box if samples include NRC licensed material? ☐

			# of Containers	Sulfite						
MO-2007-4A	10/23/12 1521	GW	1	X						
MO-2007-4B	10/23/12 1438	GW	1	X						
MO-2007-4C	10/23/12 1556	GW	1	X						
MO-2007-1A	10/24/12 1453	GW	1	X						
MO-2007-1B	10/24/12 1352	GW	1	X						
MO-2007-1C	10/24/12 1633	GW	1	X						
DUP20121024A	10/24/12	GW	1	X						

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

UPS 1Z 867 7E4 23 1001 1736

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

Jon Anderson	10/25/12 1515	FOG	10.26.12 10:47

FRMAD050.02.11.11 White - Return with sample. Yellow - Retain for your records.

L97554 Chain of Custody

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

Analytical Report

November 26, 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: ZS0000033Y
ACZ Project ID: L97745

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 08, 2012. This project has been assigned to ACZ's project number, L97745. 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 L97745. 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 December 26, 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-5B

ACZ Sample ID: ***L97745-01***
Date Sampled: *11/06/12 10:39*
Date Received: *11/08/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	453.9			mg/L	5	25	11/20/12 14:32	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2007-5C

ACZ Sample ID: ***L97745-02***
Date Sampled: *11/06/12 15:14*
Date Received: *11/08/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	262.57			mg/L	1.5	7.5	11/20/12 14:53	lhb

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

Analytical Spike (Post Digestion)
Analytical Spike (Post Digestion) Duplicate
Continuing Calibration Blank
Continuing Calibration Verification standard
Sample Duplicate
Initial Calibration Blank
Initial Calibration Verification standard
Inter-element Correction Standard - A plus B solutions
Laboratory Control Sample - Soil
Laboratory Control Sample - Soil Duplicate
Laboratory Control Sample - Water
Laboratory Control Sample - Water Duplicate
Laboratory Fortified Blank
Laboratory Fortified Matrix
Laboratory Fortified Matrix Duplicate
Laboratory Reagent Blank
Matrix Spike
Matrix Spike Duplicate
Prep Blank - Soil
Prep Blank - Water
Practical Quantitation Verification standard
Serial Dilution

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L97745***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334290													
WG334290ICV	ICV	11/15/12 19:21	WI120912-1	50		51.75	mg/L	103.5	90	110			
WG334290ICB	ICB	11/15/12 19:42				U	mg/L		-1.5	1.5			
WG334463													
WG334463LFB1	LFB	11/20/12 13:49	WI121018-8	30		29.55	mg/L	98.5	90	110			
L97747-01DUP	DUP	11/20/12 15:35			17.3	17.3	mg/L				0	20	
WG334463LFB2	LFB	11/21/12 0:02	WI121018-8	30		30.42	mg/L	101.4	90	110			
L97747-02AS	AS	11/21/12 11:18	WI121018-8	30	7.34	37.59	mg/L	100.8	90	110			

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97745***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97745***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000033Y

ACZ Project ID: L97745
Date Received: 11/08/2012 09:56
Received By: ksj
Date Printed: 11/8/2012

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3449	0.5	16	Yes

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

ACZ Laboratories, Inc.

L97745

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

CHAIN of CUSTODY

Report To

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: 520-648-8844

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? 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 CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL.	YES	
	NO	X

PROJECT INFORMATION

Quote #:

Project/PO #: ZS0000033Y

Reporting state for compliance testing:

Sampler's Name: Jeffrey Joy

Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
MO-2007-5B	11/6/12 : 1039	GW	1	X							
MO-2007-5C	11/6/12 : 1514	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 1001 075 5

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

RELINQUISHED BY:	DATE/TIME:	RECEIVED BY:	DATE/TIME:
	11/7/12 : 1530		11/8/12 9:56

L97745 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

November 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: ZS0000033Y
ACZ Project ID: L97916

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 16, 2012. This project has been assigned to ACZ's project number, L97916. 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 L97916. 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 December 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: ESP-4

ACZ Sample ID: ***L97916-01***
Date Sampled: *11/12/12 09:27*
Date Received: *11/16/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	618.5			mg/L	5	25	11/26/12 23:35	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: GV-1

ACZ Sample ID: ***L97916-02***
Date Sampled: *11/15/12 09:11*
Date Received: *11/16/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	33.95			mg/L	0.5	2.5	11/26/12 23:56	lhb

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: GV-2

ACZ Sample ID: ***L97916-03***
Date Sampled: *11/15/12 09:50*
Date Received: *11/16/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	63.97			mg/L	0.5	2.5	11/27/12 0:17	lhb

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L97916***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334290													
WG334290ICV	ICV	11/15/12 19:21	WI120912-1	50		51.75	mg/L	103.5	90	110			
WG334290ICB	ICB	11/15/12 19:42				U	mg/L		-1.5	1.5			
WG334651													
WG334651LFB	LFB	11/26/12 18:18	WI121018-8	30		27.77	mg/L	92.6	90	110			
L97936-01DUP	DUP	11/27/12 1:00			23.33	22.83	mg/L				2.2	20	
L97938-01AS	AS	11/27/12 1:42	WI121018-8	150	128	266.59	mg/L	92.4	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97916***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97916***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000033Y

ACZ Project ID: L97916
Date Received: 11/16/2012 09:16
Received By: ksj
Date Printed: 11/16/2012

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA16591	5.2	17	Yes

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

ACZ Laboratories, Inc. L97916

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: 520-648-8844

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? 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 CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL.

YES [ ] NO [X]

PROJECT INFORMATION

Quote #:
Project/PO #: ZS0000033Y
Reporting state for compliance testing:
Sampler's Name: Jeff Joy
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE/TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
ESP-4	11/12/12 : 0927	GW	1	X							
GV-1	11/15/12 : 0911	GW	1	X							
GV-2	11/15/12 : 0950	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 1001 076 4

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

RELINQUISHED BY:	DATE/TIME	RECEIVED BY:	DATE/TIME
Jeffrey Joy	11/15/12 : 1530		11/16/12 9:11

L97916 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

December 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: ZS0000033Y
ACZ Project ID: L98019

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 27, 2012. This project has been assigned to ACZ's project number, L98019. 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 L98019. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after January 10, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: ESP-2

ACZ Sample ID: ***L98019-01***
Date Sampled: *11/21/12 11:04*
Date Received: *11/27/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	26.79			mg/L	0.5	2.5	12/04/12 14:08	tcd

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: ESP-3

ACZ Sample ID: ***L98019-02***
Date Sampled: *11/21/12 13:26*
Date Received: *11/27/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	350.4			mg/L	5	25	12/04/12 14:29	tcd

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: TMM-1

ACZ Sample ID: ***L98019-03***
Date Sampled: *11/23/12 11:39*
Date Received: *11/27/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography		U		mg/L	0.5	2.5	12/04/12 14:50	tcd

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: DUP20121123A

ACZ Sample ID: ***L98019-04***
Date Sampled: *11/23/12 00:00*
Date Received: *11/27/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography		U		mg/L	0.5	2.5	12/04/12 15:54	tcd

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L98019***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334290													
WG334290ICV	ICV	11/15/12 19:21	WI120912-1	50		51.75	mg/L	103.5	90	110			
WG334290ICB	ICB	11/15/12 19:42				U	mg/L		-1.5	1.5			
WG335183													
WG335183LFB1	LFB	12/04/12 12:01	WI120822-4	30		30.03	mg/L	100.1	90	110			
L98001-01DUP	DUP	12/04/12 12:44			3799	3767	mg/L				0.8	20	
L98001-02AS	AS	12/04/12 13:26	WI120822-4	3000	4207	7121	mg/L	97.1	90	110			
WG335183LFB2	LFB	12/04/12 22:13	WI120822-4	30		31	mg/L	103.3	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L98019***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L98019***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000033Y

ACZ Project ID: L98019
Date Received: 11/27/2012 10:54
Received By: gac
Date Printed: 11/28/2012

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
2292	4.1	16	Yes

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

ACZ Laboratories, Inc.

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

L98019

CHAIN of CUSTODY

Report to:

Name: Jonathan Anderson	Address: 6200 W. Duval Mine Road
Company: Freeport-McMoRan Sierrita Inc.	Green Valley, AZ 85614
E-mail: Jonathan_Anderson@fmi.com	Telephone: 520-648-8844

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

PROJECT INFORMATION

Quote #:
Project/PO #: ZS0000033Y
Reporting state for compliance testing:
Sampler's Name: Jeff Joy
Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
ESP - 2	11/21/12 : 1104	GW	1	X							
ESP - 3	11/21/12 : 1326	GW	1	X							
TMM - 1	11/23/12 : 1139	GW	1	X							
DUP20121123A	11/23/12	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 1001 078 2

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

RELINQUISHED BY:	DATE TIME	RECEIVED BY:	DATE TIME
Jeff Joy	11/26/12 : 1530		
		[illegible] 11-27-12	10:54

L98019 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

December 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: ZS0000033Y
ACZ Project ID: L98130

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on November 30, 2012. This project has been assigned to ACZ's project number, L98130. 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 L98130. Each section of this report has been reviewed and approved by the appropriate Laboratory Supervisor, or a qualified substitute.

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

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

All samples and sub-samples associated with this project will be disposed of after January 10, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: NP-2

ACZ Sample ID: ***L98130-01***
Date Sampled: *11/29/12 10:16*
Date Received: *11/30/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	70.13			mg/L	0.5	2.5	12/05/12 2:27	tcd

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MO-2009-1

ACZ Sample ID: ***L98130-02***
Date Sampled: *11/29/12 12:54*
Date Received: *11/30/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	94.26			mg/L	1	5	12/05/12 2:48	tcd

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

(1) EPA 600/4-83-020. Methods for Chemical Analysis of Water and Wastes, March 1983.

(2) EPA 600/R-93-100. Methods for the Determination of Inorganic Substances in Environmental Samples, August 1993.

(3) EPA 600/R-94-111. Methods for the Determination of Metals in Environmental Samples - Supplement I, May 1994.

(4) EPA SW-846. Test Methods for Evaluating Solid Waste.

(5) Standard Methods for the Examination of Water and Wastewater.

Comments

(1) QC results calculated from raw data. Results may vary slightly if the rounded values are used in the calculations.

(2) Soil, Sludge, and Plant matrices for Inorganic analyses are reported on a dry weight basis.

(3) Animal matrices for Inorganic analyses are reported on an "as received" basis.

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

(5) If the MDL equals the PQL or the MDL column is omitted, the PQL is the reporting limit.

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L98130***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334290													
WG334290ICV	ICV	11/15/12 19:21	WI120912-1	50		51.75	mg/L	103.5	90	110			
WG334290ICB	ICB	11/15/12 19:42				U	mg/L		-1.5	1.5			
WG335183													
WG335183LFB1	LFB	12/04/12 12:01	WI120822-4	30		30.03	mg/L	100.1	90	110			
WG335183LFB2	LFB	12/04/12 22:13	WI120822-4	30		31	mg/L	103.3	90	110			
L98110-03DUP	DUP	12/04/12 22:56			45.66	45.58	mg/L				0.2	20	
L98110-04AS	AS	12/05/12 13:33	WI120822-4	30	U	29.85	mg/L	99.5	90	110			

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L98130***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

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

Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L98130***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000033Y

ACZ Project ID: L98130
Date Received: 11/30/2012 10:47
Received By: ksj
Date Printed: 11/30/2012

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA16672	0.6	13	Yes

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

ACZ Laboratories, Inc.

L98130

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

CHAIN of CUSTODY

Report to:

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: 520-648-8844

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 [X]

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

PROJECT INFORMATION

Quote #:

Project/PO #: ZS0000033Y

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

ANALYSIS REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
NP-2	11/29/12 : 1016	GW	1	X							
MO-2009-1	11/29/12 : 1254	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 1001 079 1

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

RELINQUISHED BY:	DATE TIME	RECEIVED BY	DATE TIME
Jeffrey Joy	11/29/12 : 1530	[illegible]	11-30-12 10:40

L98130 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

January 02, 2013

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: ZS0000033Y
ACZ Project ID: L98363

Jon Anderson:

Enclosed are the analytical results for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on December 14, 2012. This project has been assigned to ACZ's project number, L98363. 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 L98363. 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 February 02, 2013. If the samples are determined to be hazardous, additional charges apply for disposal (typically $11/sample). If you would like the samples to be held longer than ACZ's stated policy or to be returned, please contact your Project Manager or Customer Service Representative for further details and associated costs. ACZ retains analytical raw data reports for ten years.

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

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: CW-10

ACZ Sample ID: ***L98363-01***
Date Sampled: *12/12/12 08:33*
Date Received: *12/14/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	52.33			mg/L	0.5	2.5	12/26/12 12:15	tcd

Arizona license number: AZ0102

ACZ Laboratories, Inc.
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Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: CW-6

ACZ Sample ID: ***L98363-02***
Date Sampled: *12/12/12 09:09*
Date Received: *12/14/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	82.98			mg/L	1	5	12/27/12 11:55	tcd

Arizona license number: AZ0102

ACZ Laboratories, Inc.
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Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: CW-9

ACZ Sample ID: ***L98363-03***
Date Sampled: *12/12/12 09:50*
Date Received: *12/14/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	42.14			mg/L	0.5	2.5	12/26/12 13:40	tcd

Arizona license number: AZ0102

ACZ Laboratories, Inc.
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Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: CW-3

ACZ Sample ID: ***L98363-04***
Date Sampled: *12/13/12 09:36*
Date Received: *12/14/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	63.84			mg/L	0.5	2.5	12/26/12 14:01	tcd

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: DUP20121213A

ACZ Sample ID: ***L98363-05***
Date Sampled: *12/13/12 00:00*
Date Received: *12/14/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	M300.0 - Ion Chromatography	64.04			mg/L	0.5	2.5	12/26/12 14:22	tcd

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L98363***

Sulfate M300.0 - Ion Chromatography

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG334290													
WG334290ICV	ICV	11/15/12 19:21	WI120912-1	50		51.75	mg/L	103.5	90	110			
WG334290ICB	ICB	11/15/12 19:42				U	mg/L		-1.5	1.5			
WG336320													
WG336320LFB	LFB	12/26/12 11:54	WI121018-8	30		30.37	mg/L	101.2	90	110			
L98363-01DUP	DUP	12/26/12 12:36			52.33	52.22	mg/L				0.2	20	
L98363-02AS	AS	12/27/12 12:16	WI121018-8	60	82.98	145.01	mg/L	103.4	90	110			

ACZ Laboratories, Inc.
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Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L98363***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION

No extended qualifiers associated with this analysis

ACZ Laboratories, Inc.
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Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L98363***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS0000033Y

ACZ Project ID: L98363
Date Received: 12/14/2012 09:32
Received By: ksj
Date Printed: 12/14/2012

Receipt Verification

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

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
3670	1.4	15	Yes

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

ACZ Laboratories, Inc. L98363

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

CHAIN OF CUSTODY

Report To

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: 520-648-8844

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? 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 CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL.

YES [ ] NO [X]

PROJECT INFORMATION

Quote #:

Project/PO #: ZS0000033Y

Reporting state for compliance testing:

Sampler's Name: Jeff Joy

Are any samples NRC licensable material? Yes No

ANALYSES REQUESTED (attach list or use quote number)

SAMPLE IDENTIFICATION	DATE / TIME	Matrix	# of Containers	SO4 by EPA 300 or EPA 375							
CW - 10	12/12/12 : 0833	GW	1	X							
CW - 6	12/12/12 : 0909	GW	1	X							
CW - 9	12/12/12 : 0950	GW	1	X							
CW - 3	12/13/12 : 0936	GW	1	X							
DUP20121213A	12/13/12 : 0000	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 1001 081 7

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

RELINQUISHED BY:	DATE / TIME	RECEIVED BY:	DATE / TIME
Jeffrey T Joy	12/13/12 : 1530		12-14-12 9:32

L98363 Chain of Custody

FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

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

Analytical Report

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

January 8, 2013

Cc: Ben Daigneau

Project ID: ZS000002PM
ACZ Project ID: L97323– **SULFATE ONLY**

Jon Anderson:

Enclosed are analytical reports for sample(s) submitted to ACZ Laboratories, Inc. (ACZ) on October 12, 2012. This project was assigned to ACZ's project number, **L97323**. 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 **L97323**. 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.

S. Habermehl

Scott Habermehl has reviewed
and approved this report.

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MH-14

ACZ Sample ID: ***L97323-01***
Date Sampled: *10/09/12 11:02*
Date Received: *10/12/12*
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	10/23/12 10:33	tcd

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MH-28

ACZ Sample ID: ***L97323-02***
Date Sampled: *10/09/12 11:42*
Date Received: *10/12/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1900		*	mg/L	100	500	10/23/12 11:55	tcd

Arizona license number: AZ0102

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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MH-15W

ACZ Sample ID: ***L97323-03***
Date Sampled: *10/09/12 13:11*
Date Received: *10/12/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1800		*	mg/L	100	500	10/23/12 11:55	tcd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MH-29

ACZ Sample ID: ***L97323-04***
Date Sampled: *10/09/12 14:04*
Date Received: *10/12/12*
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	500	10/23/12 11:57	tcd

Arizona license number: AZ0102

ACZ Laboratories, Inc.
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Inorganic Analytical Results

FMI Gold & Copper - Sierrita
Project ID: ZS0000033Y
Sample ID: MH-16W

ACZ Sample ID: ***L97323-05***
Date Sampled: *10/09/12 15:02*
Date Received: *10/12/12*
Sample Matrix: *Ground Water*

Wet Chemistry

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Sulfate	D516-02 - Turbidimetric	1800		*	mg/L	100	500	10/23/12 11:57	tcd

Arizona license number: AZ0102

Report Header Explanations

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

QC Sample Types

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

QC Sample Type Explanations

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

ACZ Qualifiers (Qual)

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

Method References

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

Comments

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

For a complete list of ACZ's Extended Qualifiers, please click: http://www.acz.com/public/extquallist.pdf

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L97323***

Antimony, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332545													
WG332545ICV	ICV	10/20/12 0:43	MS121001-5	.02		.0218	mg/L	109	90	110			
WG332545ICB	ICB	10/20/12 0:47				U	mg/L		-0.0012	0.0012			
WG332545LFB	LFB	10/20/12 0:50	MS121009-6	.01		.01105	mg/L	110.5	85	115			
L97318-01AS	AS	10/20/12 0:57	MS121009-6	.02	U	.02054	mg/L	102.7	70	130			
L97318-01ASD	ASD	10/20/12 1:00	MS121009-6	.02	U	.02132	mg/L	106.6	70	130	3.73	20	

Arsenic, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332545													
WG332545ICV	ICV	10/20/12 0:43	MS121001-5	.05		.05315	mg/L	106.3	90	110			
WG332545ICB	ICB	10/20/12 0:47				U	mg/L		-0.0006	0.0006			
WG332545LFB	LFB	10/20/12 0:50	MS121009-6	.05005		.05224	mg/L	104.4	85	115			
L97318-01AS	AS	10/20/12 0:57	MS121009-6	.1001	U	.10396	mg/L	103.9	70	130			
L97318-01ASD	ASD	10/20/12 1:00	MS121009-6	.1001	U	.10082	mg/L	100.7	70	130	3.07	20	

Beryllium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332545													
WG332545ICV	ICV	10/20/12 0:43	MS121001-5	.05		.04855	mg/L	97.1	90	110			
WG332545ICB	ICB	10/20/12 0:47				U	mg/L		-0.00015	0.00015			
WG332545LFB	LFB	10/20/12 0:50	MS121009-6	.0501		.05004	mg/L	99.9	85	115			
L97318-01AS	AS	10/20/12 0:57	MS121009-6	.1002	.0005	.09628	mg/L	95.6	70	130			
L97318-01ASD	ASD	10/20/12 1:00	MS121009-6	.1002	.0005	.09656	mg/L	95.9	70	130	0.29	20	

Cadmium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332545													
WG332545ICV	ICV	10/20/12 0:43	MS121001-5	.05		.05083	mg/L	101.7	90	110			
WG332545ICB	ICB	10/20/12 0:47				U	mg/L		-0.0003	0.0003			
WG332545LFB	LFB	10/20/12 0:50	MS121009-6	.0501		.05105	mg/L	101.9	85	115			
L97318-01AS	AS	10/20/12 0:57	MS121009-6	.1002	.002	.10118	mg/L	99	70	130			
L97318-01ASD	ASD	10/20/12 1:00	MS121009-6	.1002	.002	.10244	mg/L	100.2	70	130	1.24	20	

Chromium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332228													
WG332228ICV	ICV	10/16/12 19:41	II120914-1	2		1.959	mg/L	98	95	105			
WG332228ICB	ICB	10/16/12 19:47				U	mg/L		-0.03	0.03			
WG332228LFB	LFB	10/16/12 20:00	II121001-3	.5		.502	mg/L	100.4	85	115			
L97321-01AS	AS	10/16/12 20:09	II121001-3	.5	U	.493	mg/L	98.6	85	115			
L97321-01ASD	ASD	10/16/12 20:12	II121001-3	.5	U	.496	mg/L	99.2	85	115	0.61	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L97323***

Cobalt, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332228													
WG332228ICV	ICV	10/16/12 19:41	II120914-1	2		2.018	mg/L	100.9	95	105			
WG332228ICB	ICB	10/16/12 19:47				U	mg/L		-0.03	0.03			
WG332228LFB	LFB	10/16/12 20:00	II121001-3	.5		.495	mg/L	99	85	115			
L97321-01AS	AS	10/16/12 20:09	II121001-3	.5	U	.486	mg/L	97.2	85	115			
L97321-01ASD	ASD	10/16/12 20:12	II121001-3	.5	U	.494	mg/L	98.8	85	115	1.63	20	

Copper, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332228													
WG332228ICV	ICV	10/16/12 19:41	II120914-1	2		1.972	mg/L	98.6	95	105			
WG332228ICB	ICB	10/16/12 19:47				U	mg/L		-0.03	0.03			
WG332228LFB	LFB	10/16/12 20:00	II121001-3	.5		.504	mg/L	100.8	85	115			
L97321-01AS	AS	10/16/12 20:09	II121001-3	.5	U	.5	mg/L	100	85	115			
L97321-01ASD	ASD	10/16/12 20:12	II121001-3	.5	U	.501	mg/L	100.2	85	115	0.2	20	

Fluoride SM4500F-C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332483													
WG332483ICV	ICV	10/19/12 10:04	WC121017-	2.002		2	mg/L	99.9	95	105			
WG332483ICB	ICB	10/19/12 10:12				U	mg/L		-0.3	0.3			
WG332505													
WG332505ICV	ICV	10/19/12 11:59	WC121017-	2.002		1.89	mg/L	94.7	95	105			
WG332505ICB	ICB	10/19/12 12:06				U	mg/L		-0.3	0.3			
WG332505LFB1	LFB	10/19/12 12:21	WC121017-	5.005		4.98	mg/L	99.5	90	110			
WG332505LFB2	LFB	10/19/12 16:01	WC121017-	5.005		5.07	mg/L	101.3	90	110			
L97318-05AS	AS	10/19/12 16:16	WC121017-	5.005	2.1	4.1	mg/L	40	90	110			M2
L97318-05DUP	DUP	10/19/12 16:23			2.1	2.03	mg/L				3.4	20	

Lead, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332545													
WG332545ICV	ICV	10/20/12 0:43	MS121001-5	.05		.0502	mg/L	100.4	90	110			
WG332545ICB	ICB	10/20/12 0:47				U	mg/L		-0.0003	0.0003			
WG332545LFB	LFB	10/20/12 0:50	MS121009-6	.05005		.04697	mg/L	93.8	85	115			
L97318-01AS	AS	10/20/12 0:57	MS121009-6	.1001	U	.09608	mg/L	96	70	130			
L97318-01ASD	ASD	10/20/12 1:00	MS121009-6	.1001	U	.0951	mg/L	95	70	130	1.03	20	

Magnesium, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332228													
WG332228ICV	ICV	10/16/12 19:41	II120914-1	100		100.65	mg/L	100.7	95	105			
WG332228ICB	ICB	10/16/12 19:47				U	mg/L		-0.6	0.6			
WG332228LFB	LFB	10/16/12 20:00	II121001-3	50.00131		50.73	mg/L	101.5	85	115			
L97321-01AS	AS	10/16/12 20:09	II121001-3	50.00131	.3	50.53	mg/L	100.5	85	115			
L97321-01ASD	ASD	10/16/12 20:12	II121001-3	50.00131	.3	49.24	mg/L	97.9	85	115	2.59	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L97323***

Molybdenum, dissolved M200.7 ICP

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332228													
WG332228ICV	ICV	10/16/12 19:41	II120914-1	2		1.999	mg/L	100	95	105			
WG332228ICB	ICB	10/16/12 19:47				U	mg/L		-0.03	0.03			
WG332228LFB	LFB	10/16/12 20:00	II121001-3	.5		.512	mg/L	102.4	85	115			
L97321-01AS	AS	10/16/12 20:09	II121001-3	.5	U	.506	mg/L	101.2	85	115			
L97321-01ASD	ASD	10/16/12 20:12	II121001-3	.5	U	.488	mg/L	97.6	85	115	3.62	20	

Nickel, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332545													
WG332545ICV	ICV	10/20/12 0:43	MS121001-5	.05		.05061	mg/L	101.2	90	110			
WG332545ICB	ICB	10/20/12 0:47				U	mg/L		-0.0018	0.0018			
WG332545LFB	LFB	10/20/12 0:50	MS121009-6	.05005		.0508	mg/L	101.5	85	115			
L97318-01AS	AS	10/20/12 0:57	MS121009-6	.1001	.019	.12	mg/L	100.9	70	130			
L97318-01ASD	ASD	10/20/12 1:00	MS121009-6	.1001	.019	.1145	mg/L	95.4	70	130	4.69	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
WG332724													
WG332724ICV	ICV	10/23/12 18:55	WI121009-1	2.416		2.491	mg/L	103.1	90	110			
WG332724ICB	ICB	10/23/12 18:56				U	mg/L		-0.06	0.06			
WG332734													
WG332734LFB1	LFB	10/23/12 23:28	WI120814-9	2		2.09	mg/L	104.5	90	110			
L97217-06AS	AS	10/23/12 23:30	WI120814-9	2	.45	2.56	mg/L	105.5	90	110			
L97321-01DUP	DUP	10/23/12 23:33			U	U	mg/L				0	20	RA
WG332734LFB2	LFB	10/24/12 0:03	WI120814-9	2		2.084	mg/L	104.2	90	110			

Residue, Filterable (TDS) @180C SM2540C

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332021													
WG332021PBW	PBW	10/12/12 13:00				U	mg/L		-20	20			
WG332021LCSW	LCSW	10/12/12 13:01	PCN41151	260		244	mg/L	93.8	80	120			
L97323-04DUP	DUP	10/12/12 13:29			2970	2968	mg/L				0.1	20	
WG332102													
WG332102PBW	PBW	10/15/12 11:45				16	mg/L		-20	20			
WG332102LCSW	LCSW	10/15/12 11:45	PCN41151	260		270	mg/L	103.8	80	120			
L97332-08DUP	DUP	10/15/12 11:59			4060	4072	mg/L				0.3	20	

Selenium, dissolved M200.8 ICP-MS

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332545													
WG332545ICV	ICV	10/20/12 0:43	MS121001-5	.05		.05143	mg/L	102.9	90	110			
WG332545ICB	ICB	10/20/12 0:47				U	mg/L		-0.0003	0.0003			
WG332545LFB	LFB	10/20/12 0:50	MS121009-6	.05005		.05096	mg/L	101.8	85	115			
L97318-01AS	AS	10/20/12 0:57	MS121009-6	.1001	.0006	.10106	mg/L	100.4	70	130			
L97318-01ASD	ASD	10/20/12 1:00	MS121009-6	.1001	.0006	.10158	mg/L	100.9	70	130	0.51	20	

FMI Gold & Copper - Sierrita

ACZ Project ID: ***L97323***

Sulfate D516-02 - Turbidimetric

ACZ ID	Type	Analyzed	PCN/SCN	QC	Sample	Found	Units	Rec	Lower	Upper	RPD	Limit	Qual
WG332667													
WG332667ICB	ICB	10/23/12 8:16				U	mg/L		-3	3			
WG332667ICV	ICV	10/23/12 8:16	WI121015-8	20		21.9	mg/L	109.5	90	110			
WG332667LFB	LFB	10/23/12 10:05	WI120508-1	10		9.6	mg/L	96	90	110			
L97310-01DUP	DUP	10/23/12 10:08			3	2.4	mg/L				22.2	20	RA
L97311-02AS	AS	10/23/12 10:08	WI120508-1	10	11	21.5	mg/L	105	90	110			
WG332680													
WG332680ICB	ICB	10/23/12 8:16				U	mg/L		-3	3			
WG332680ICV	ICV	10/23/12 8:16	WI121015-8	20		21.9	mg/L	109.5	90	110			
WG332680LFB	LFB	10/23/12 10:59	WI120508-1	10		9.5	mg/L	95	90	110			
L97323-02DUP	DUP	10/23/12 11:55			1900	1810	mg/L				4.9	20	
L97323-03AS	AS	10/23/12 11:55	SO4TURB10	10	1800	1790	mg/L	-100	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
WG332545													
WG332545ICV	ICV	10/20/12 0:43	MS121001-5	.05		.05015	mg/L	100.3	90	110			
WG332545ICB	ICB	10/20/12 0:47				U	mg/L		-0.0003	0.0003			
WG332545LFB	LFB	10/20/12 0:50	MS121009-6	.05005		.04888	mg/L	97.7	85	115			
L97318-01AS	AS	10/20/12 0:57	MS121009-6	.1001	U	.10126	mg/L	101.2	70	130			
L97318-01ASD	ASD	10/20/12 1:00	MS121009-6	.1001	U	.0997	mg/L	99.6	70	130	1.55	20	

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

Inorganic Extended Qualifier Report

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97323***

ACZ ID	WORKNUM	PARAMETER	METHOD	QUAL	DESCRIPTION
L97323-01	WG332505	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG332734	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).
	WG332667	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).
L97323-02	WG332545	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG332505	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG332734	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).
	WG332680	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.
L97323-03	WG332545	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG332505	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG332734	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).
	WG332680	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.
L97323-04	WG332545	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG332505	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG332734	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).
	WG332680	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.
L97323-05	WG332545	Beryllium, dissolved	M200.8 ICP-MS	VC	CCV recovery was above the acceptance limits. Target analyte was not detected in the sample [< MDL].
	WG332505	Fluoride	SM4500F-C	M2	Matrix spike recovery was low, the recovery of the associated control sample (LCS or LFB) was acceptable.
	WG332734	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).
	WG332680	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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Certification Qualifiers

FMI Gold & Copper - Sierrita ACZ Project ID: ***L97323***

No certification qualifiers associated with this analysis

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

Sample Receipt

FMI Gold & Copper - Sierrita
ZS000002PM

ACZ Project ID: L97323
Date Received: 10/12/2012 10:10
Received By: ksj
Date Printed: 10/13/2012

Receipt Verification

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

The 'sampled by' field on the Chain of Custody was not completed.

7) Were any changes made to the Chain of Custody prior to ACZ receiving the samples?		X	

Samples/Containers

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

Chain of Custody Related Remarks

Client Contact Remarks

Shipping Containers

Cooler Id	Temp (°C)	Rad (µR/Hr)	Custody Seal Intact?
NA16387	4.5	15	Yes

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

ACZ Laboratories, Inc. L97323

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:
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? 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 CO DW Compliance Monitoring? If yes, please include state forms. Results will be reported to PQL.

YES [ ] NO [X]

PROJECT INFORMATION

Quote #:
Project/PO #: ZS000002PM
Reporting state for compliance testing:
Sampler's Name:
Are any samples NRC licensable material? Yes No

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

SAMPLE IDENTIFICATION	DATE:TIME	Matrix	# of Containers	Quarterly
MH-14	10/09/12 : 1102	GW	3	X
MH-28	10/09/12 : 1142	GW	3	X
MH-15W	10/09/12 : 1311	GW	3	X
MH-29	10/09/12 : 1404	GW	3	X
MH-16W	10/09/12 : 1502	GW	3	X
MH-22	10/11/12 : 1302	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 8017
**PLEASE RUSH ANALYTICAL FOR MH-22

COPY

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	10/11/12 1500		10.12.12 10:10

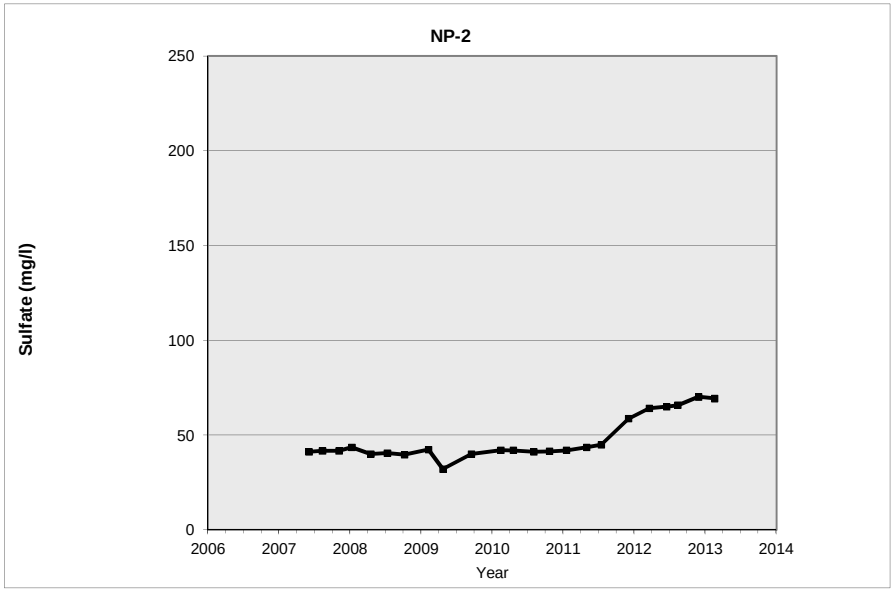
L97323 Chain of Custody

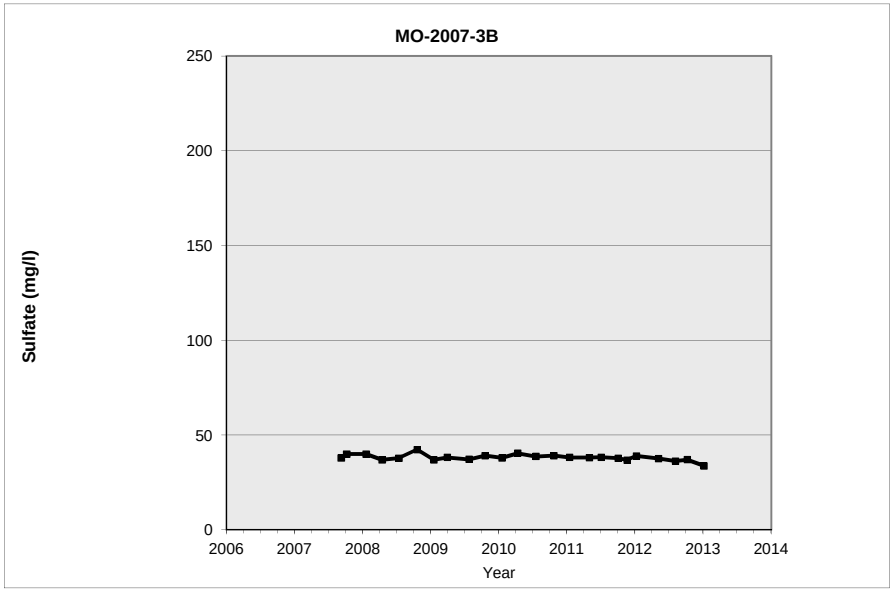
FRMAD050.01.15.09 White - Return with sample. Yellow - Retain for your records.

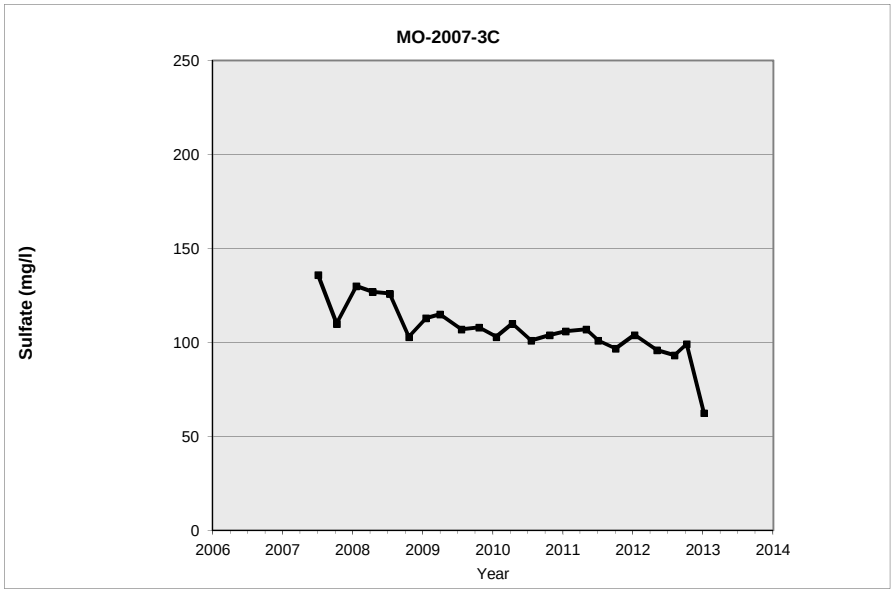
APPENDIX C

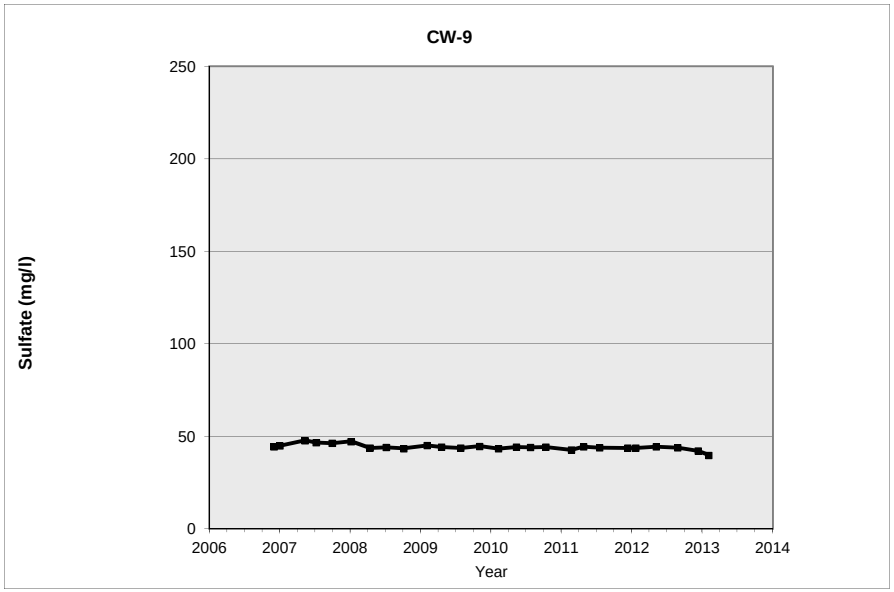
TIME SERIES GRAPHS OF SULFATE CONCENTRATION

FIGURE C.1
SULFATE CONCENTRATION OVER TIME FOR WELLS
NP-2, MO-2007-3B, MO-2007-3C, AND CW-9



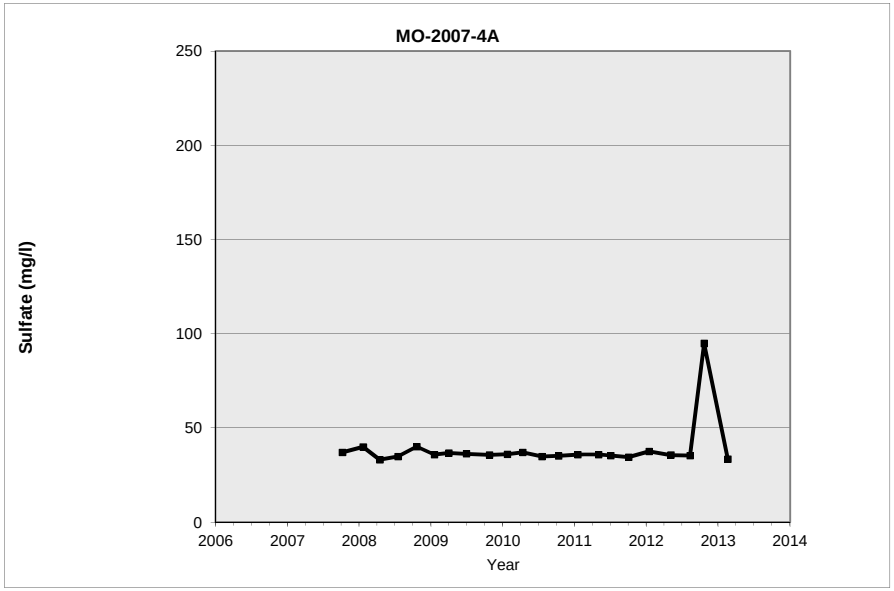


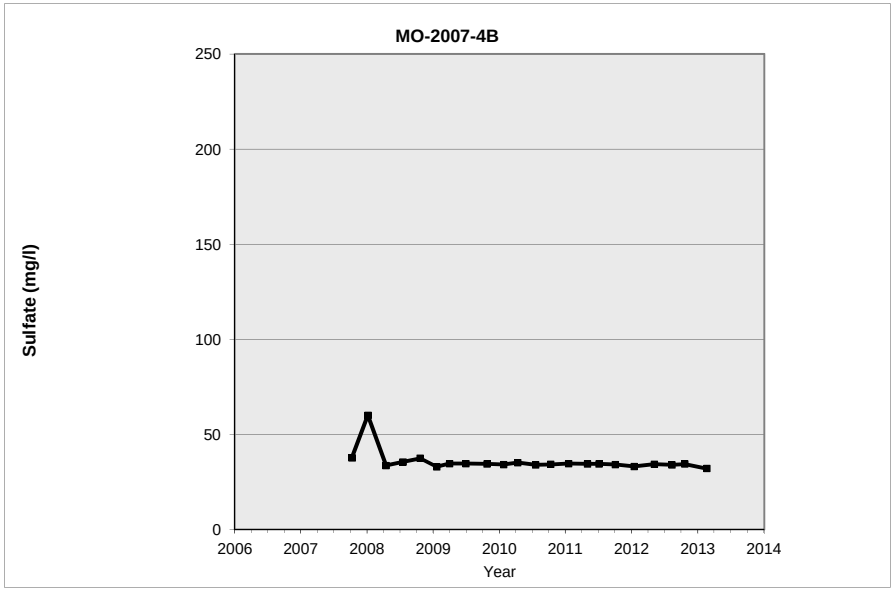


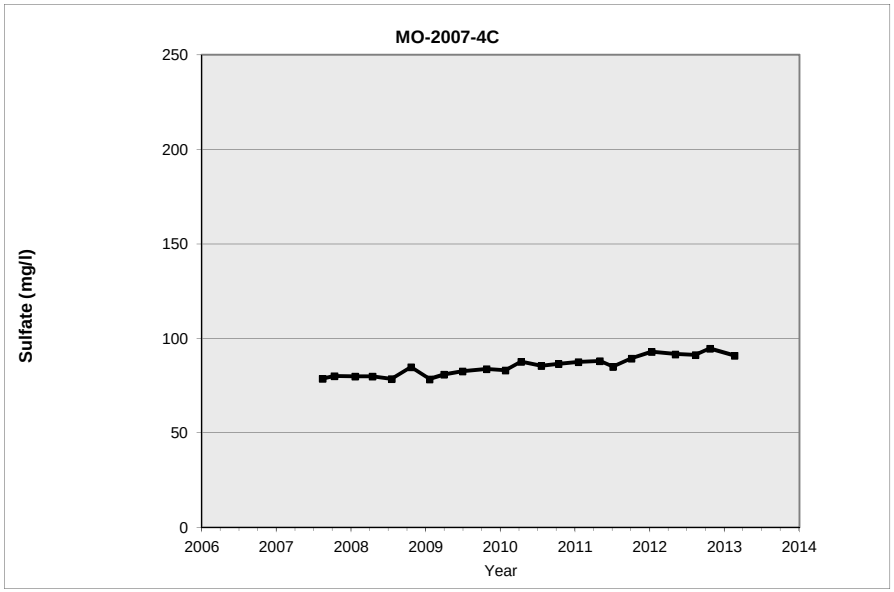


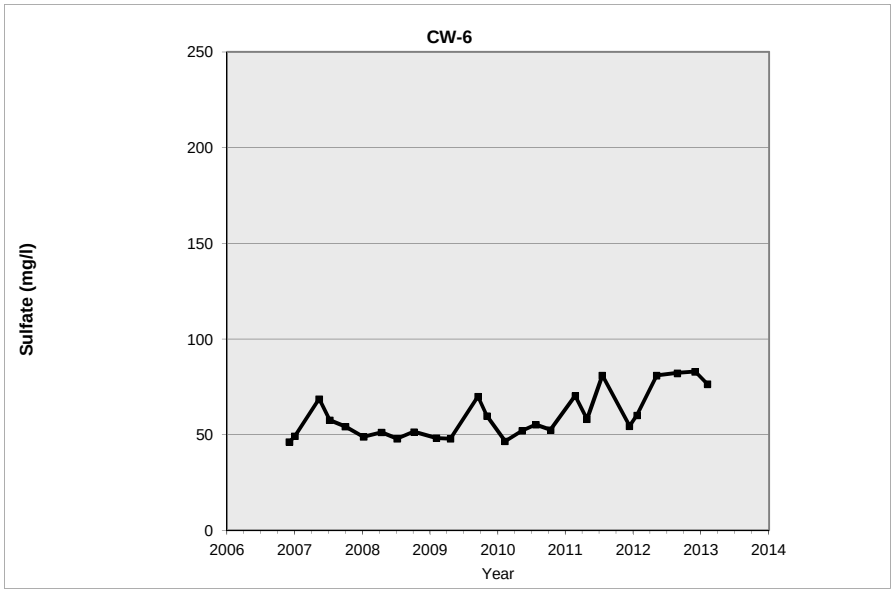
CLEAR CREEK ASSOCIATES

FIGURE C.2
SULFATE CONCENTRATION OVER TIME FOR WELLS
MO-2007-4A, MO-2007-4B, MO-2007-4C, AND CW-6



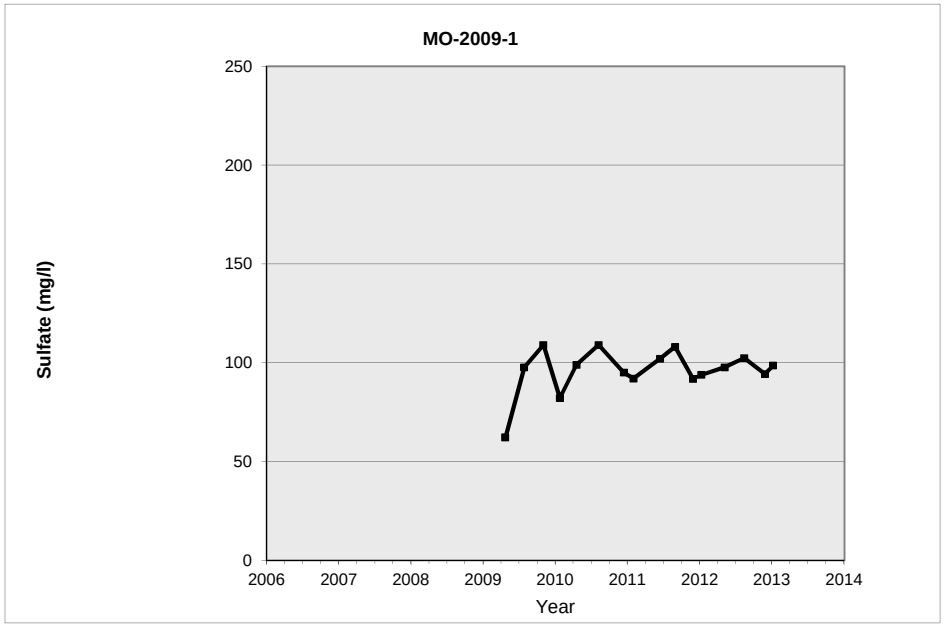






CLEAR CREEK ASSOCIATES

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



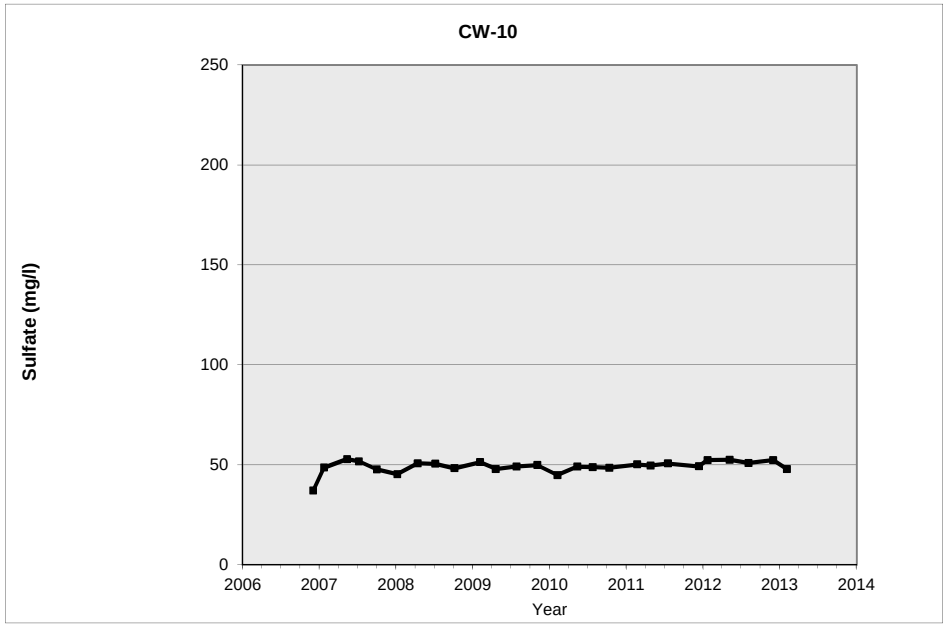
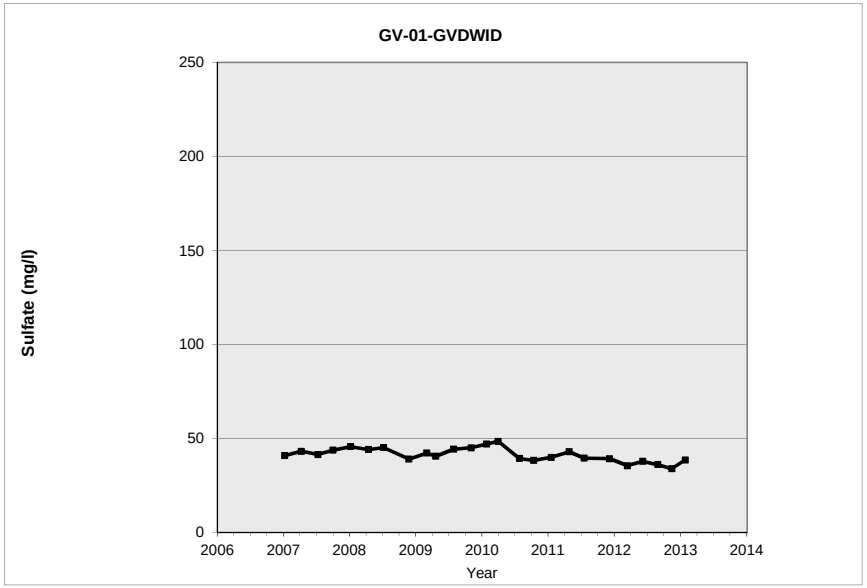
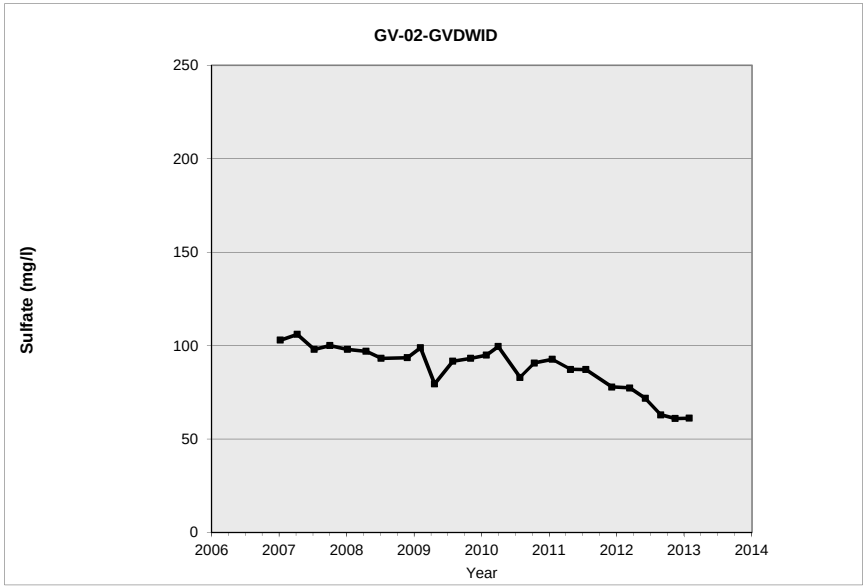
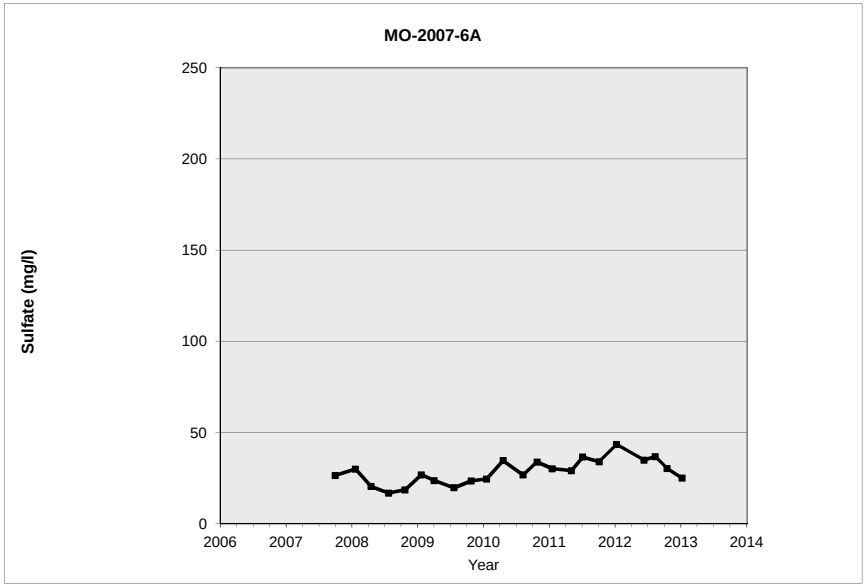


FIGURE C.4
SULFATE CONCENTRATION OVER TIME FOR WELLS
GV-01-GVDWID, GV-02-GVDWID, MO-2007-6A, AND MO-2007-6B







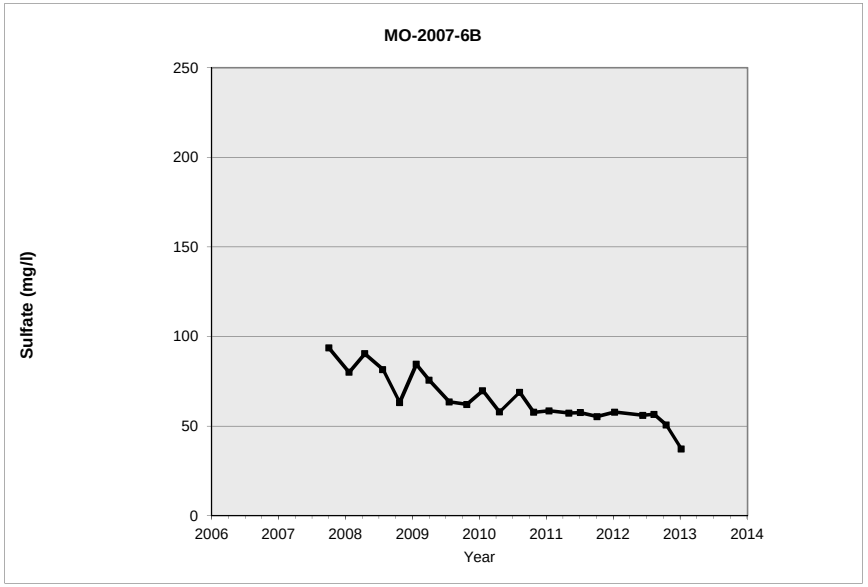
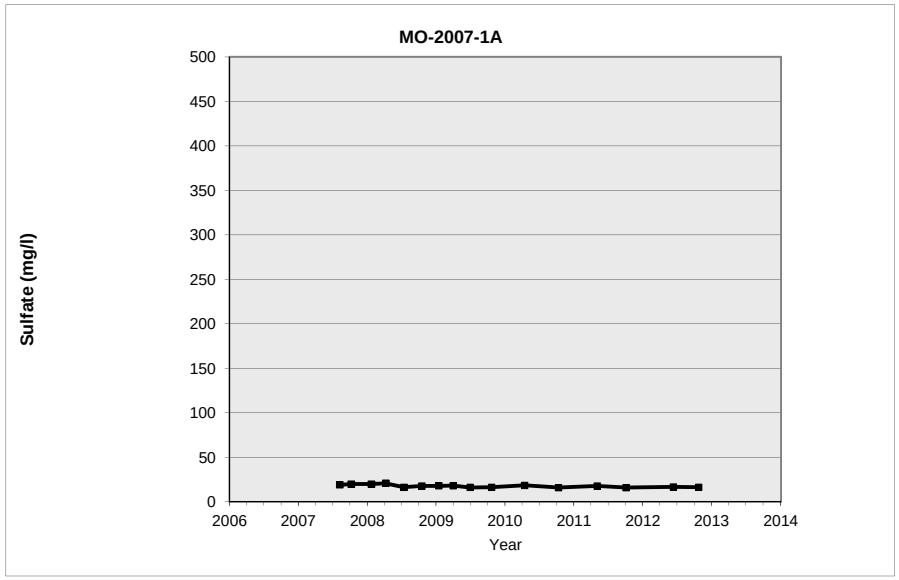
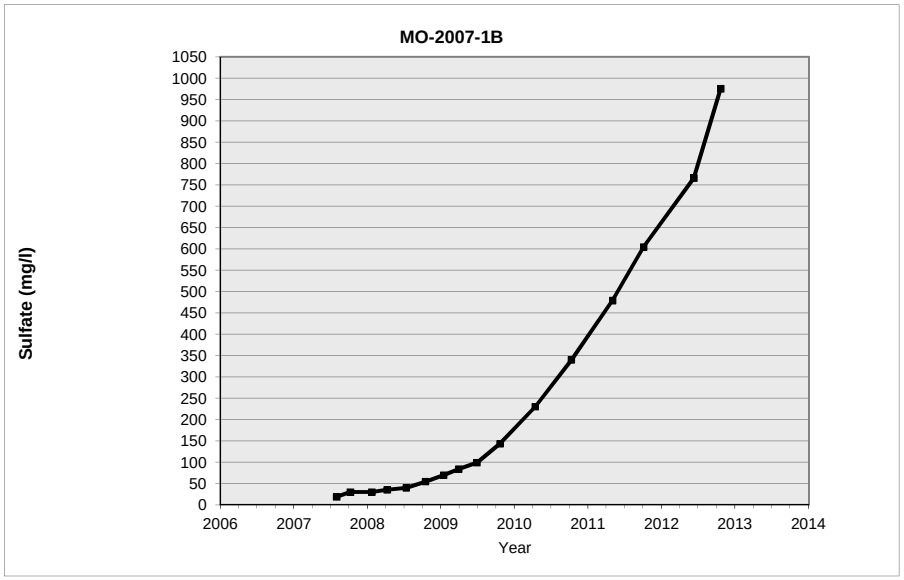


FIGURE C.5
SULFATE CONCENTRATION OVER TIME FOR WELLS
MO-2007-1A, MO-2007-1B, AND MO-2007-1C





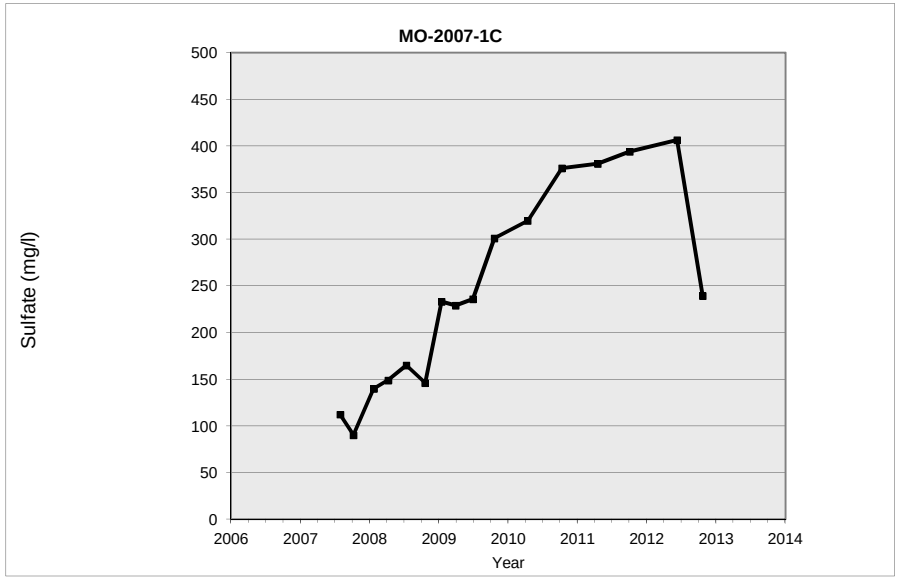
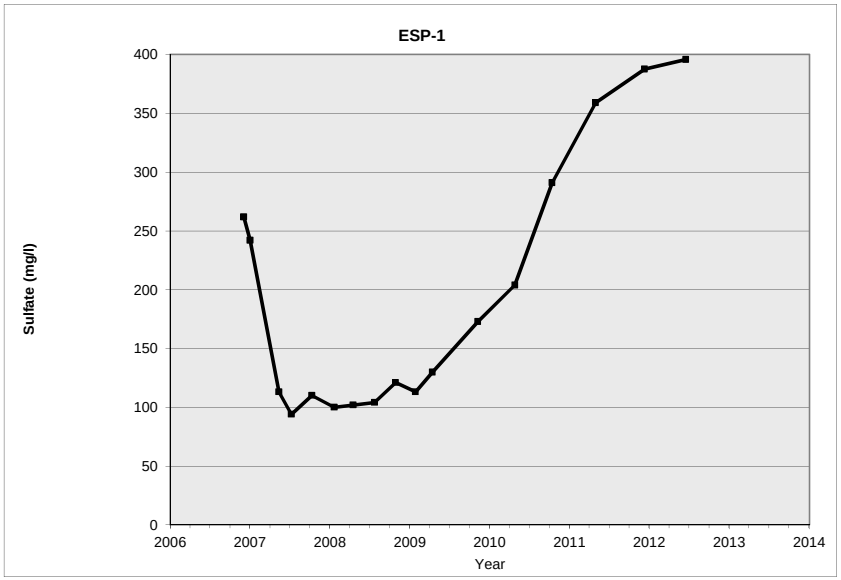
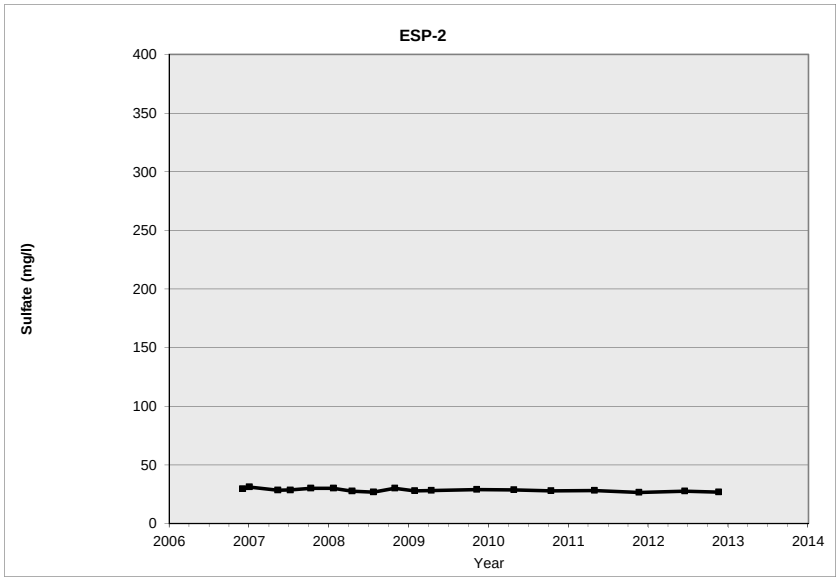


FIGURE C.6
SULFATE CONCENTRATION OVER TIME FOR WELLS
ESP-1, ESP-2, AND ESP-3





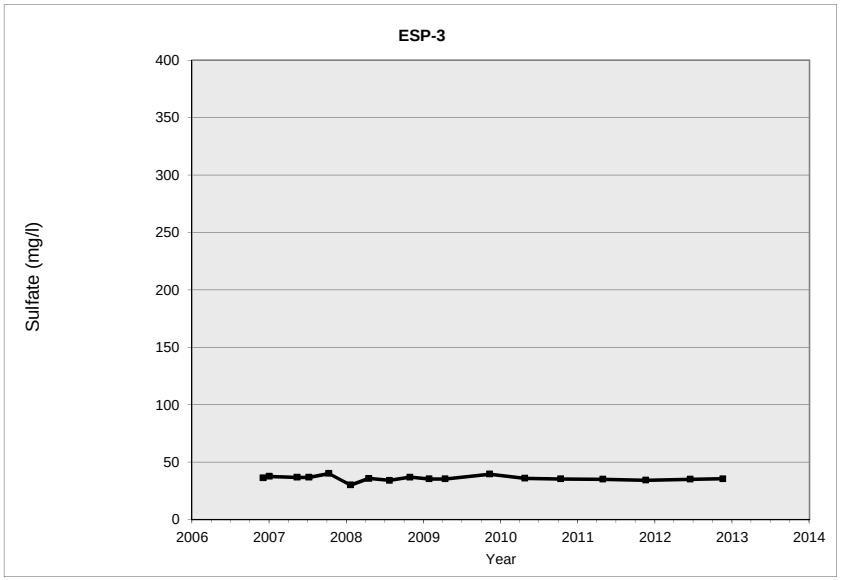


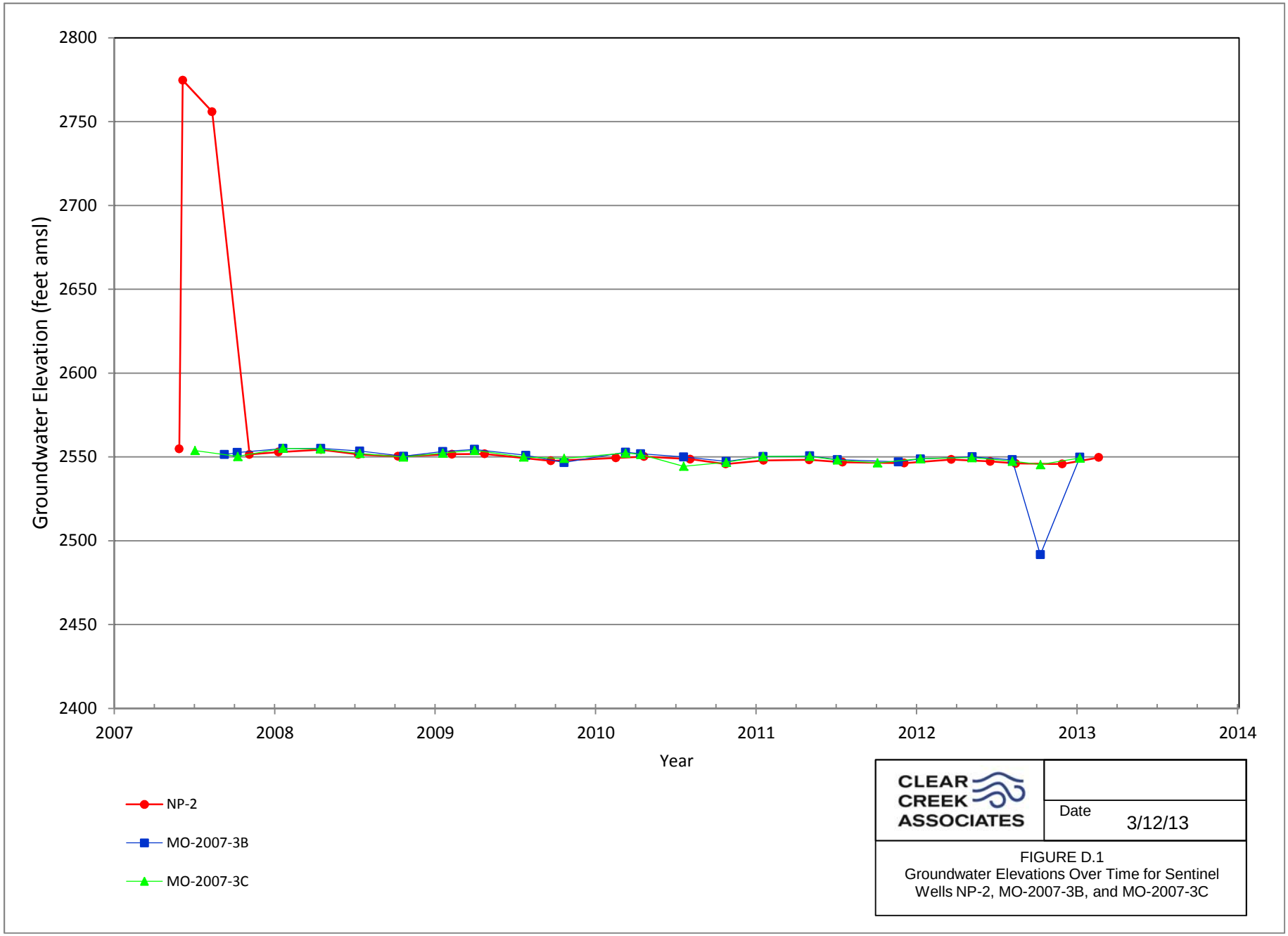
TABLE C.1
Sulfate Concentration Over Time

	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**	**Q42012**	**Q12013**
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	12/12/2012 82.98	2/6/2013 76.54
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	12/12/2012 42.14	2/6/2013 39.87
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	12/12/2012 52.33	2/6/2013 47.91
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	NS	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	11/21/2012 26.79	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	11/21/2012 35.4	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	11/15/2012 33.95	1/29/2013 38.61
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	11/15/2012 63.97	1/29/2013 61.02
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	10/24/2012 16.5	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	10/24/2012 975.8	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	10/24/2012 239.2	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	10/10/2012 37.01	1/8/2013 33.77
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	10/10/2012 99.13	1/8/2013 62.35
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	10/23/2012 94.87	2/21/2013 33.48
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	10/23/2012 34.37	2/21/2013 32.01
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	10/23/2012 94.65	2/21/2013 90.93
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	10/18/2012 30.42	1/8/2013 25.17
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	10/18/2012 50.70	1/8/2013 37.31
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	11/29/2012 94.26	1/8/2013 98.57
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	11/29/2012 70.13	2/20/2013 69.34

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

APPENDIX D

TIME SERIES GRAPHS OF GROUNDWATER ELEVATION



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Date 3/12/13

FIGURE D.1
Groundwater Elevations Over Time for Sentinel Wells NP-2, MO-2007-3B, and MO-2007-3C

N:\Projects\G & K\055039_Sierrita Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2012 Q4 and 2013 Q1 Semiannual Report\GW Elevation Time Series for Sentinel Wells.xls

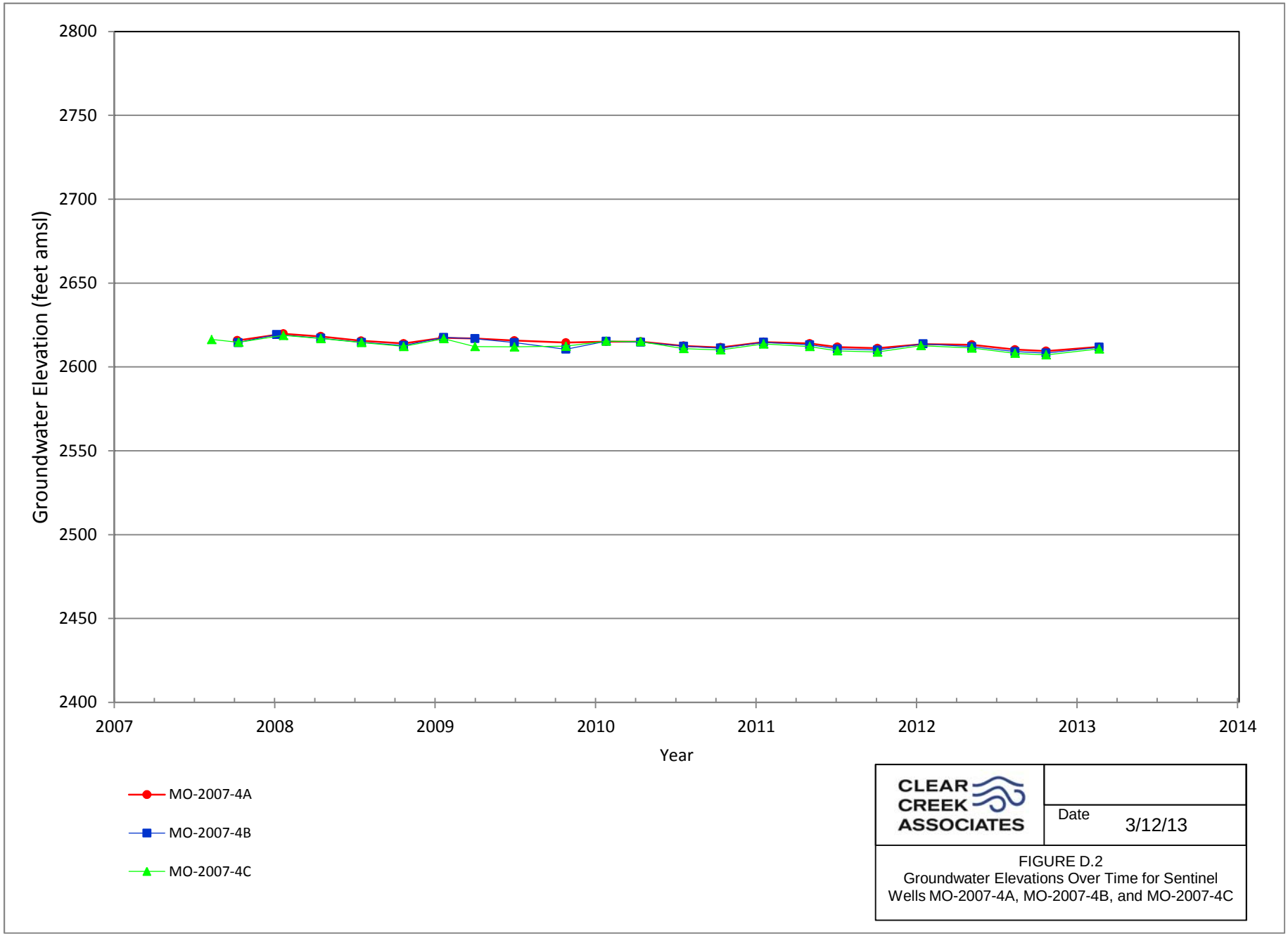

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FIGURE D.2
Groundwater Elevations Over Time for Sentinel Wells MO-2007-4A, MO-2007-4B, and MO-2007-4C

N:\Projects\G & K\055039_Sierrita Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2012 Q4 and 2013 Q1 Semiannual Report\GW Elevation Time Series for Sentinel Wells.xls

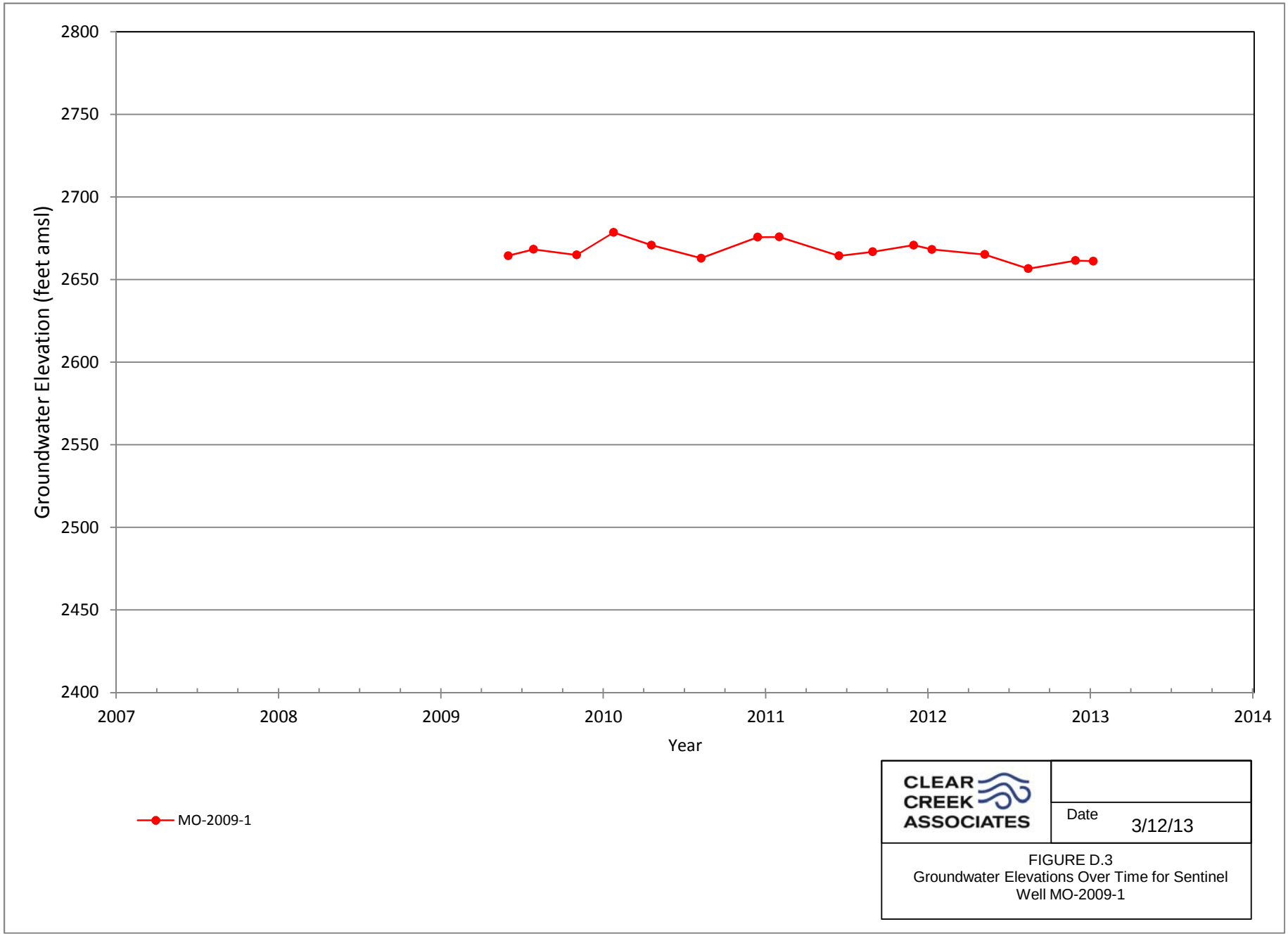

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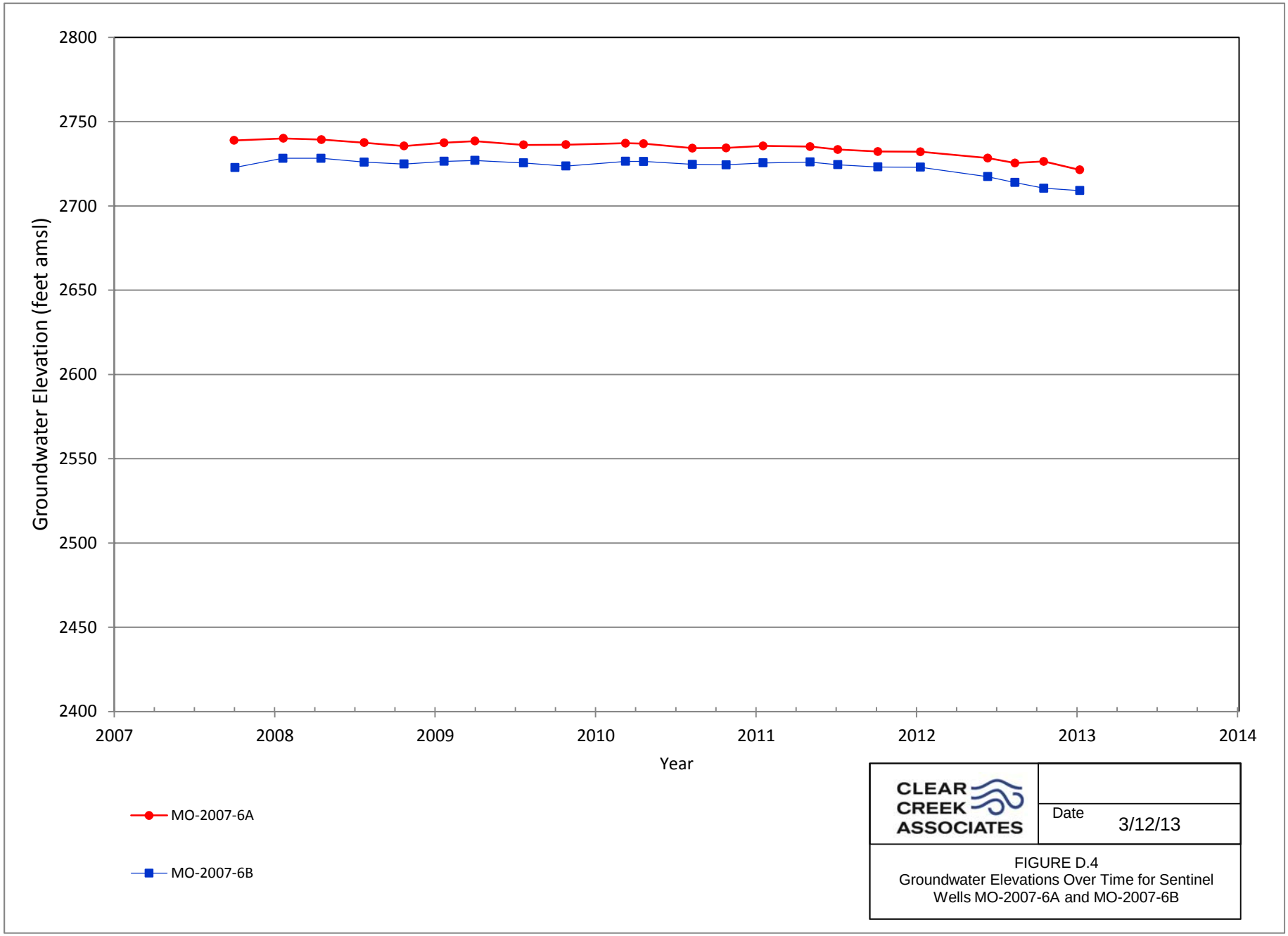
FIGURE D.3
Groundwater Elevations Over Time for Sentinel Well MO-2009-1

N:\Projects\G & K\055039_Sierrita Mitigation Order\Groundwater Monitoring\Groundwater Monitoring Reports\2012 Q4 and 2013 Q1 Semiannual Report\GW Elevation Time Series for Sentinel Wells.xls



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