

Appendix D

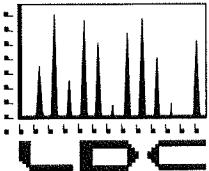
Level IV Data Validation Reports

Appendix D
Level IV Validation Reports
FMI Sierrita Voluntary Remediation Program
(Click On Sample Number or Laboratory ID In Index To Connect To Validation Report)

ACZ Project No.	Sample No.	ACZ Lab ID	Site Location	Additional Analysis
L70791	CP-Q09-0-1	L70791-01	CLEAR Plant	
	CP-Q09-1-3	L70791-02	CLEAR Plant	
	CP-SD-07-0-1.5	L70791-03	CLEAR Plant	
	CP-SD-07-1.5-3.0	L70791-04	CLEAR Plant	
	CP-P12-0-1	L70791-05	CLEAR Plant	
	CP-P12-1-3	L70791-06	CLEAR Plant	
	CP-SD-08-0-1.5	L70791-07	CLEAR Plant	
	CP-SD-08-1.5-3.0	L70791-08	CLEAR Plant	
	CP-SD-10-0-1.5	L70791-09	CLEAR Plant	
	CP-SD-10-1.5-3.0	L70791-10	CLEAR Plant	
	CP-SD-09-0-1.5	L70791-11	CLEAR Plant	
	CP-SD-09-1.5-3.0	L70791-12	CLEAR Plant	
	OD-SD-01-0-1.5	L70791-13	Old D Pond	
	OD-SD-01-1.5-3.0	L70791-14	Old D Pond	
	OD-SD-02-0-1.5	L70791-15	Old D Pond	
	OD-SD-02-1.5-3.0	L70791-16	Old D Pond	
	OD-SD-04-0-1.5	L70791-17	Old D Pond	
	OD-SD-04-1.5-3.0	L70791-18	Old D Pond	
	OD-SD-03-0-1.5	L70791-19	Old D Pond	
	OD-SD-03-1.5-3.0	L70791-20	Old D Pond	
L71134	RP-JS-02-0-1	L71134-01	Rhenium Ponds	
	RP-JS-02-1-3	L71134-02	Rhenium Ponds	
	RP-JS-02-1-3D	L71134-03	Rhenium Ponds	
	RP-JS-02-5-7	L71134-04	Rhenium Ponds	
	RP-JS-02-10-12	L71134-05	Rhenium Ponds	
	RP-JS-02-15-17	L71134-06	Rhenium Ponds	
	RP-JS-01-0-1	L71134-07	Rhenium Ponds	
	RP-JS-01-1-3	L71134-08	Rhenium Ponds	
	RP-JS-01-1-3D	L71134-09	Rhenium Ponds	
	RP-JS-01-5-7	L71134-10	Rhenium Ponds	
	RP-JS-01-10-12	L71134-11	Rhenium Ponds	
	RP-JS-01-15-17	L71134-12	Rhenium Ponds	
	EM-JS-08-0-1	L71134-13	Esperanza Mill	
	EM-JS-08-1-3	L71134-14	Esperanza Mill	
	EM-JS-08-1-3D	L71134-15	Esperanza Mill	
	EM-JS-08-5-7	L71134-16	Esperanza Mill	
	EM-JS-08-10-12	L71134-17	Esperanza Mill	

Appendix D
Level IV Validation Reports
FMI Sierrita Voluntary Remediation Program
(Click On Sample Number or Laboratory ID In Index To Connect To Validation Report)

ACZ Project No.	Sample No.	ACZ Lab ID	Site Location	Additional Analysis
L72871	ST-SB06-0-20	L72871-01	Sierrita Tailing	
	ST-SB06-20-40	L72871-02	Sierrita Tailing	
	ST-SB06-40-60	L72871-03	Sierrita Tailing	
	ST-SB06-60-80	L72871-04	Sierrita Tailing	
	ST-SB06-80-100	L72871-05	Sierrita Tailing	
	ST-SB06-100-120	L72871-06	Sierrita Tailing	
	ST-SB06-120-140	L72871-07	Sierrita Tailing	
	ST-SB06-140-160	L72871-08	Sierrita Tailing	
	ST-SB06-160-180	L72871-09	Sierrita Tailing	
	ST-SB06-180-200	L72871-10	Sierrita Tailing	
	ST-SB06-200-220	L72871-11	Sierrita Tailing	
	ST-SB06-220-240	L72871-12	Sierrita Tailing	
	ST-SB06-240-260	L72871-13	Sierrita Tailing	
	ST-SB06-260-280	L72871-14	Sierrita Tailing	
	ST-SB06-280-300	L72871-15	Sierrita Tailing	
	ST-SB06-300-320	L72871-16	Sierrita Tailing	
	ST-SB06-200-320D	L72871-17	Sierrita Tailing	
	ST-SB06-260-280MSD	L72871-18	Sierrita Tailing	



LABORATORY DATA CONSULTANTS, INC.

7750 El Camino Real, Suite 2L Carlsbad, CA 92009 Phone: 760/634-0437 Fax: 760/634-0439

URS Corporation
333 E. Wetmore Rd. S.400
Tucson, AZ 85705
ATTN: Mr. Steven Vaughn

December 30, 2008

SUBJECT: FMI Gold & Copper-Sierrita, Data Validation

Dear Mr. Vaughn,

Enclosed are the final validation reports for the fraction listed below. These SDGs were received on December 12, 2008. Attachment 1 is a summary of the samples that were reviewed for each analysis.

LDC Project # 19954:

<u>SDG #</u>	<u>Fraction</u>
L70791, L71134, L72871	Metals

The data validation was performed under EPA Level IV guidelines. The analyses were validated using the following documents, as applicable to each method:

- USEPA, Contract Laboratory Program National Functional Guidelines for Inorganic Data Review, October 2004
- EPA SW 846, Third Edition, Test Methods for Evaluating Solid Waste, update 1, July 1992; update IIA, August 1993; update II, September 1994; update IIB, January 1995; update III, December 1996; update IIIA, April 1998; IIIB, November 2004; Update IV, February 2007

Please feel free to contact us if you have any questions.

Sincerely,

Erlinda T. Rauto
Operations Manager/Senior Chemist

Attachment 1

1,261 pages-CD

LDC #19954 (URS Corporation-Tuscon, AZ / FMI Gold & Copper-Sierrita)

Shaded cells indicate Level IV validation (all other cells are Level III validation). These sample counts do not include MS/MSD, and DUPs.

19954ST.wpd

**FMI Gold & Copper-Sierrita
Data Validation Reports
LDC# 19954**

Metals

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: FMI Gold & Copper-Sierrita
Collection Date: July 23 through July 28, 2008
LDC Report Date: December 24, 2008
Matrix: Soil
Parameters: Metals
Validation Level: Level IV
Laboratory: ACZ Laboratories, Inc.
Sample Delivery Group (SDG): L70791

Sample Identification

CP-Q09-0-1	CP-Q09-0-1MS
CP-Q09-1-3	CP-Q09-0-1MSD
CP-SD-07-0-1.5	OD-SD-03-1.5-3.0MS
CP-SD-07-1.5-3.0	OD-SD-03-1.5-3.0MSD
CP-P12-0-1	
CP-P12-1-3	
CP-SD-08-0-1.5	
CP-SD-08-1.5-3.0	
CP-SD-10-0-1.5	
CP-SD-10-1.5-3.0	
CP-SD-09-0-1.5	
CP-SD-09-1.5-3.0	
OD-SD-01-0-1.5	
OD-SD-01-1.5-3.0	
OD-SD-02-0-1.5	
OD-SD-02-1.5-3.0	
OD-SD-04-0-1.5	
OD-SD-04-1.5-3.0	
OD-SD-03-0-1.5	
OD-SD-03-1.5-3.0	

Introduction

This data review covers 24 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B, 6020, and 7000 for Metals. The metals analyzed were Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Thallium, Uranium, and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodices were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met with the following exceptions:

Date	Lab. Reference/ID	Analyte	%R (Limits)	Associated Samples	Flag	A or P
8/14/08	CCV (21:54)	Selenium	111.6 (90-110)	CP-SD-07-1.5-3.0 CP-SD-10-1.5-3.0 CP-SD-09-1.5-3.0	J (all detects)	P

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
PB (prep blank)	Antimony	0.25 mg/Kg	All samples in SDG L70791
ICB/CCB	Antimony Thallium	0.48 ug/L 0.12 ug/L	All samples in SDG L70791
ICB/CCB	Selenium	0.1 ug/L	CP-P12-0-1 CP-P12-1-3 CP-SD-08-0-1.5 CP-SD-08-1.5-3.0 CP-SD-10-0-1.5 CP-SD-09-0-1.5 OD-SD-01-0-1.5 OD-SD-01-1.5-3.0 OD-SD-02-0-1.5 OD-SD-02-1.5-3.0 OD-SD-04-0-1.5 OD-SD-04-1.5-3.0 OD-SD-03-0-1.5 OD-SD-03-1.5-3.0

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
CP-Q09-0-1	Antimony Thallium	0.3 mg/Kg 0.26 mg/Kg	0.3U mg/Kg 0.26U mg/Kg
CP-SD-07-0-1.5	Antimony Thallium	0.2 mg/Kg 0.27 mg/Kg	0.2U mg/Kg 0.27U mg/Kg
CP-SD-07-1.5-3.0	Antimony Thallium	0.2 mg/Kg 0.30 mg/Kg	0.2U mg/Kg 0.30U mg/Kg
CP-P12-0-1	Antimony Thallium	0.9 mg/Kg 0.26 mg/Kg	0.9U mg/Kg 0.26U mg/Kg
CP-P12-1-3	Antimony Selenium Thallium	0.3 mg/Kg 0.19 mg/Kg 0.18 mg/Kg	0.3U mg/Kg 0.19U mg/Kg 0.18U mg/Kg
CP-SD-08-0-1.5	Antimony Thallium	0.2 mg/Kg 0.25 mg/Kg	0.2U mg/Kg 0.25U mg/Kg
CP-SD-08-1.5-3.0	Selenium	0.09 mg/Kg	0.09U mg/Kg
CP-SD-10-0-1.5	Antimony Thallium	0.2 mg/Kg 0.25 mg/Kg	0.2U mg/Kg 0.25U mg/Kg
CP-SD-09-0-1.5	Antimony Thallium	0.3 mg/Kg 0.21 mg/Kg	0.3U mg/Kg 0.21U mg/Kg
CP-SD-09-1.5-3.0	Thallium	0.25 mg/Kg	0.25U mg/Kg
OD-SD-01-0-1.5	Antimony Selenium Thallium	0.3 mg/Kg 0.23 mg/Kg 0.29 mg/Kg	0.3U mg/Kg 0.23U mg/Kg 0.29U mg/Kg
OD-SD-01-1.5-3.0	Selenium Thallium	0.08 mg/Kg 0.28 mg/Kg	0.08U mg/Kg 0.28U mg/Kg
OD-SD-02-0-1.5	Antimony Thallium	0.2 mg/Kg 0.30 mg/Kg	0.2U mg/Kg 0.30U mg/Kg
OD-SD-02-1.5-3.0	Selenium	0.07 mg/Kg	0.07U mg/Kg

Sample	Analyte	Reported Concentration	Modified Final Concentration
OD-SD-04-0-1.5	Antimony Thallium	0.3 mg/Kg 0.30 mg/Kg	0.3U mg/Kg 0.30U mg/Kg
OD-SD-04-1.5-3.0	Selenium Thallium	0.19 mg/Kg 0.26 mg/Kg	0.19U mg/Kg 0.26U mg/Kg
OD-SD-03-0-1.5	Antimony Thallium	0.3 mg/Kg 0.28 mg/Kg	0.3U mg/Kg 0.28U mg/Kg
OD-SD-03-1.5-3.0	Selenium (10X) Thallium	0.4 mg/Kg 0.2 mg/Kg	0.4U mg/Kg 0.2U mg/Kg

No field blanks were identified in this SDG.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
CP-Q09-0-1MS/MSD (All samples in SDG L70791)	Antimony	40.2 (75-125)	40.8 (75-125)	-	J (all detects) UJ (all non-detects)	A
OD-SD-03-1.5-3.0MS/MSD (All samples in SDG L70791)	Barium Manganese	163.1 (75-125) 201.4 (75-125)	162.2 (75-125) 146.6 (75-125)	- -	J (all detects) J (all detects)	A

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Internal Standards

All internal standard percent recoveries (%R) were within QC limits with the following exceptions:

Sample	Internal Standard	%R (Limits)	Analyte	Flag	A or P
CP-Q09-0-1	Bismuth-209 (8/15/08) Bismuth-209 (8/14/08)	120.8 (30-120) 122.0 (30-120)	Thallium Lead Uranium	J (all detects) UJ (all non-detects)	A
OD-SD-01-1.5-3.0	Scandium-45	120.2 (30-120)	Arsenic	J (all detects) UJ (all non-detects)	A
OD-SD-02-0-1.5	Scandium-45	124.5 (30-120)	Arsenic	J (all detects) UJ (all non-detects)	A

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XI. Sample Result Verification

All sample result verifications were acceptable.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

No field duplicates were identified in this SDG.

**FMI Gold & Copper-Sierrita
Metals - Data Qualification Summary - SDG L70791**

SDG	Sample	Analyte	Flag	A or P	ADEQ	Reason
L70791	CP-SD-07-1.5-3.0 CP-SD-10-1.5-3.0 CP-SD-09-1.5-3.0	Selenium	J (all detects)	P	VI	Calibration (ICV %R)
L70791	CP-Q09-0-1 CP-Q09-1-3 CP-SD-07-0-1.5 CP-SD-07-1.5-3.0 CP-P12-0-1 CP-P12-1-3 CP-SD-08-0-1.5 CP-SD-08-1.5-3.0 CP-SD-10-0-1.5 CP-SD-10-1.5-3.0 CP-SD-09-0-1.5 CP-SD-09-1.5-3.0 OD-SD-01-0-1.5 OD-SD-01-1.5-3.0 OD-SD-02-0-1.5 OD-SD-02-1.5-3.0 OD-SD-04-0-1.5 OD-SD-04-1.5-3.0 OD-SD-03-0-1.5 OD-SD-03-1.5-3.0	Antimony	J (all detects) UJ (all non-detects)	A	M2	Matrix spike/Matrix spike duplicates (%R)
L70791	CP-Q09-0-1 CP-Q09-1-3 CP-SD-07-0-1.5 CP-SD-07-1.5-3.0 CP-P12-0-1 CP-P12-1-3 CP-SD-08-0-1.5 CP-SD-08-1.5-3.0 CP-SD-10-0-1.5 CP-SD-10-1.5-3.0 CP-SD-09-0-1.5 CP-SD-09-1.5-3.0 OD-SD-01-0-1.5 OD-SD-01-1.5-3.0 OD-SD-02-0-1.5 OD-SD-02-1.5-3.0 OD-SD-04-0-1.5 OD-SD-04-1.5-3.0 OD-SD-03-0-1.5 OD-SD-03-1.5-3.0	Barium Manganese	J (all detects) J (all detects)	A	M1	Matrix spike/Matrix spike duplicates (%R)
L70791	CP-Q09-0-1	Thallium Lead Uranium	J (all detects) UJ (all non-detects)	A	E6	Internal standards (%R)
L70791	OD-SD-01-1.5-3.0 OD-SD-02-0-1.5	Arsenic	J (all detects) UJ (all non-detects)	A	E6	Internal standards (%R)

FMI Gold & Copper-Sierrita
Metals - Laboratory Blank Data Qualification Summary - SDG L70791

SDG	Sample	Analyte	Modified Final Concentration	A or P	ADEQ
L70791	CP-Q09-0-1	Antimony Thallium	0.3U mg/Kg 0.26U mg/Kg	A	B3
L70791	CP-SD-07-0-1.5	Antimony Thallium	0.2U mg/Kg 0.27U mg/Kg	A	B3
L70791	CP-SD-07-1.5-3.0	Antimony Thallium	0.2U mg/Kg 0.30U mg/Kg	A	B3
L70791	CP-P12-0-1	Antimony Thallium	0.9U mg/Kg 0.26U mg/Kg	A	B3
L70791	CP-P12-1-3	Antimony Selenium Thallium	0.3U mg/Kg 0.19U mg/Kg 0.18U mg/Kg	A	B3
L70791	CP-SD-08-0-1.5	Antimony Thallium	0.2U mg/Kg 0.25U mg/Kg	A	B3
L70791	CP-SD-08-1.5-3.0	Selenium	0.09U mg/Kg	A	B3
L70791	CP-SD-10-0-1.5	Antimony Thallium	0.2U mg/Kg 0.25U mg/Kg	A	B3
L70791	CP-SD-09-0-1.5	Antimony Thallium	0.3U mg/Kg 0.21U mg/Kg	A	B3
L70791	CP-SD-09-1.5-3.0	Thallium	0.25U mg/Kg	A	B3
L70791	OD-SD-01-0-1.5	Antimony Selenium Thallium	0.3U mg/Kg 0.23U mg/Kg 0.29U mg/Kg	A	B3
L70791	OD-SD-01-1.5-3.0	Selenium Thallium	0.08U mg/Kg 0.28U mg/Kg	A	B3
L70791	OD-SD-02-0-1.5	Antimony Thallium	0.2U mg/Kg 0.30U mg/Kg	A	B3
L70791	OD-SD-02-1.5-3.0	Selenium	0.07U mg/Kg	A	B3
L70791	OD-SD-04-0-1.5	Antimony Thallium	0.3U mg/Kg 0.30U mg/Kg	A	B3

SDG	Sample	Analyte	Modified Final Concentration	A or P	ADEQ
L70791	OD-SD-04-1.5-3.0	Selenium Thallium	0.19U mg/Kg 0.26U mg/Kg	A	B3
L70791	OD-SD-03-0-1.5	Antimony Thallium	0.3U mg/Kg 0.28U mg/Kg	A	B3
L70791	OD-SD-03-1.5-3.0	Selenium (10X) Thallium	0.4U mg/Kg 0.2U mg/Kg	A	B3

**FMI Gold & Copper-Sierrita
Metals - Field Blank Data Qualification Summary - SDG L70791**

No Sample Data Qualified in this SDG

FMI Gold & Copper - Sierrita

Project ID: OJ07R9

Sample ID: CP-Q09-0-1

ACZ Sample ID: **L70791-01**

Date Sampled: 07/23/08 10:15

Date Received: 07/29/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	08/15/08 22:41	msh M (M2)(B3)
Arsenic, total (3050)	M6020 ICP-MS	2.3			mg/Kg	0.3	0.5	08/14/08 20:04	erf/msh
Barium, total (3050)	M6010B ICP	120		*	mg/Kg	0.3	2	08/14/08 23:30	aeh J (M1)
Beryllium, total (3050)	M6010B ICP	0.6	B		mg/Kg	0.2	1	08/16/08 1:50	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/14/08 23:30	aeh
Chromium, total (3050)	M6010B ICP	12		*	mg/Kg	1	5	08/14/08 23:30	aeh
Cobalt, total (3050)	M6010B ICP	8			mg/Kg	1	5	08/14/08 23:30	aeh
Copper, total (3050)	M6010B ICP	724		*	mg/Kg	1	5	08/14/08 23:30	aeh
Lead, total (3050)	M6020 ICP-MS	4.61			mg/Kg	0.05	0.3	08/14/08 20:04	erf/msh
Manganese, total (3050)	M6010B ICP	202		*	mg/Kg	0.5	3	08/16/08 1:50	aeh J (M1)
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	08/11/08 14:27	jws
Molybdenum, total (3050)	M6010B ICP	123			mg/Kg	1	5	08/14/08 23:30	aeh
Nickel, total (3050)	M6010B ICP	29			mg/Kg	1	5	08/14/08 23:30	aeh
Selenium, total (3050)	M6020 ICP-MS	0.35			mg/Kg	0.05	0.3	08/14/08 20:04	erf/msh
Thallium, total (3050)	M6020 ICP-MS	0.26	B		mg/Kg	0.05	0.3	08/15/08 22:41	msh M (B3)(E6)
Uranium, total (3050)	M6020 ICP-MS	2.21		*	mg/Kg	0.05	0.3	08/14/08 20:04	erf/msh
Zinc, total (3050)	M6010B ICP	44		*	mg/Kg	1	5	08/14/08 23:30	aeh J (E6)

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	95.9		*	%	0.1	0.5	07/30/08 8:09	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/29/08 21:39	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 12:34	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 11:30	lwt/brd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: CP-Q09-1-3

ACZ Sample ID: L70791-02
Date Sampled: 07/23/08 10:15
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PGL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/15/08 23:01	msh
Arsenic, total (3050)	M6020 ICP-MS	1.5			mg/Kg	0.3	0.5	08/14/08 20:23	erf/msh
Barium, total (3050)	M6010B ICP	247		*	mg/Kg	0.3	2	08/14/08 23:34	aeh
Beryllium, total (3050)	M6010B ICP	0.3	B		mg/Kg	0.2	1	08/16/08 1:54	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/14/08 23:34	aeh
Chromium, total (3050)	M6010B ICP	7		*	mg/Kg	1	5	08/14/08 23:34	aeh
Cobalt, total (3050)	M6010B ICP	5			mg/Kg	1	5	08/14/08 23:34	aeh
Copper, total (3050)	M6010B ICP	499		*	mg/Kg	1	5	08/14/08 23:34	aeh
Lead, total (3050)	M6020 ICP-MS	3.19			mg/Kg	0.05	0.3	08/14/08 20:23	erf/msh
Manganese, total (3050)	M6010B ICP	170		*	mg/Kg	0.5	3	08/16/08 1:54	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 14:34	jws
Molybdenum, total (3050)	M6010B ICP	8			mg/Kg	1	5	08/14/08 23:34	aeh
Nickel, total (3050)	M6010B ICP	22			mg/Kg	1	5	08/14/08 23:34	aeh
Selenium, total (3050)	M6020 ICP-MS	0.14	B		mg/Kg	0.05	0.3	08/14/08 20:23	erf/msh
Thallium, total (3050)	M6020 ICP-MS	0.49			mg/Kg	0.05	0.3	08/15/08 23:01	msh
Uranium, total (3050)	M6020 ICP-MS	2.67		*	mg/Kg	0.05	0.3	08/14/08 20:23	erf/msh
Zinc, total (3050)	M6010B ICP	30		*	mg/Kg	1	5	08/14/08 23:34	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PGL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	97.4		*	%	0.1	0.5	07/30/08 10:27	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PGL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/29/08 22:10	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 13:09	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 11:33	lwt/brd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: CP-SD-07-0-1.5

ACZ Sample ID: L70791-03
Date Sampled: 07/23/08 10:47
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.2	B	*	mg/Kg	0.2	1	08/15/08 23:07	msh U(B3,M2)
Arsenic, total (3050)	M6020 ICP-MS	2.9			mg/Kg	0.3	0.5	08/14/08 20:30	erf/msh
Barium, total (3050)	M6010B ICP	136		*	mg/Kg	0.3	2	08/14/08 23:37	aeh J(CM1)
Beryllium, total (3050)	M6010B ICP	0.9	B		mg/Kg	0.2	1	08/16/08 1:57	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/14/08 23:37	aeh
Chromium, total (3050)	M6010B ICP	14		*	mg/Kg	1	5	08/14/08 23:37	aeh
Cobalt, total (3050)	M6010B ICP	9			mg/Kg	1	5	08/14/08 23:37	aeh
Copper, total (3050)	M6010B ICP	439		*	mg/Kg	1	5	08/14/08 23:37	aeh
Lead, total (3050)	M6020 ICP-MS	7.05			mg/Kg	0.05	0.3	08/14/08 20:30	erf/msh
Manganese, total (3050)	M6010B ICP	298		*	mg/Kg	0.5	3	08/16/08 1:57	aeh J(CM1)
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	08/11/08 14:36	jws
Molybdenum, total (3050)	M6010B ICP	42			mg/Kg	1	5	08/14/08 23:37	aeh
Nickel, total (3050)	M6010B ICP	33			mg/Kg	1	5	08/14/08 23:37	aeh
Selenium, total (3050)	M6020 ICP-MS	0.34			mg/Kg	0.05	0.3	08/14/08 20:30	erf/msh
Thallium, total (3050)	M6020 ICP-MS	0.27	B		mg/Kg	0.05	0.3	08/15/08 23:07	msh U(B3)
Uranium, total (3050)	M6020 ICP-MS	3.45		*	mg/Kg	0.05	0.3	08/14/08 20:30	erf/msh
Zinc, total (3050)	M6010B ICP	45		*	mg/Kg	1	5	08/14/08 23:37	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	94.6		*	%	0.1	0.5	07/30/08 11:37	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/29/08 22:41	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 13:20	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 11:37	lwt/brd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: CP-SD-07-1.5-3.0

ACZ Sample ID: L70791-04
Date Sampled: 07/23/08 10:47
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.2	B	*	mg/Kg	0.2	1	08/15/08 23:26	msh U(B3,M2)
Arsenic, total (3050)	M6020 ICP-MS	0.8			mg/Kg	0.3	0.5	08/14/08 20:49	erf/msh
Barium, total (3050)	M6010B ICP	166		*	mg/Kg	0.3	2	08/14/08 23:40	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	08/16/08 2:01	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/14/08 23:40	aeh
Chromium, total (3050)	M6010B ICP	9		*	mg/Kg	1	5	08/14/08 23:40	aeh
Cobalt, total (3050)	M6010B ICP	11			mg/Kg	1	5	08/14/08 23:40	aeh
Copper, total (3050)	M6010B ICP	180		*	mg/Kg	1	5	08/14/08 23:40	aeh
Lead, total (3050)	M6020 ICP-MS	2.49			mg/Kg	0.05	0.3	08/14/08 20:49	erf/msh
Manganese, total (3050)	M6010B ICP	344		*	mg/Kg	0.5	3	08/16/08 2:01	aeh J(M1)
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 14:38	jws
Molybdenum, total (3050)	M6010B ICP	2	B		mg/Kg	1	5	08/14/08 23:40	aeh
Nickel, total (3050)	M6010B ICP	31			mg/Kg	1	5	08/14/08 23:40	aeh
Selenium, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.05	0.3	08/14/08 20:49	erf/msh
Thallium, total (3050)	M6020 ICP-MS	0.30	B		mg/Kg	0.05	0.3	08/15/08 23:26	msh U(B3)
Uranium, total (3050)	M6020 ICP-MS	2.19		*	mg/Kg	0.05	0.3	08/15/08 23:26	msh
Zinc, total (3050)	M6010B ICP	47		*	mg/Kg	1	5	08/14/08 23:40	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	97.8		*	%	0.1	0.5	07/30/08 12:46	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/29/08 23:12	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 13:32	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 11:40	lwt/brd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: CP-P12-0-1

ACZ Sample ID: L70791-05
Date Sampled: 07/23/08 11:03
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.9	B	*	mg/Kg	0.2	1	08/15/08 23:33	msh NJ(B3,M2)
Arsenic, total (3050)	M6020 ICP-MS	5.5			mg/Kg	0.3	0.5	08/14/08 20:56	erf/msh
Barium, total (3050)	M6010B ICP	81.4		*	mg/Kg	0.3	2	08/14/08 23:44	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.7	B		mg/Kg	0.2	1	08/16/08 2:12	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/14/08 23:44	aeh
Chromium, total (3050)	M6010B ICP	13		*	mg/Kg	1	5	08/14/08 23:44	aeh
Cobalt, total (3050)	M6010B ICP	6			mg/Kg	1	5	08/14/08 23:44	aeh
Copper, total (3050)	M6010B ICP	1680		*	mg/Kg	1	5	08/14/08 23:44	aeh
Lead, total (3050)	M6020 ICP-MS	39.00			mg/Kg	0.05	0.3	08/14/08 20:56	erf/msh
Manganese, total (3050)	M6010B ICP	167		*	mg/Kg	0.5	3	08/16/08 2:12	aeh J(M1)
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	08/11/08 14:40	jws
Molybdenum, total (3050)	M6010B ICP	239			mg/Kg	1	5	08/14/08 23:44	aeh
Nickel, total (3050)	M6010B ICP	31			mg/Kg	1	5	08/14/08 23:44	aeh
Selenium, total (3050)	M6020 ICP-MS	1.48		*	mg/Kg	0.05	0.3	08/28/08 18:30	rac
Thallium, total (3050)	M6020 ICP-MS	0.26	B		mg/Kg	0.05	0.3	08/15/08 23:33	msh NJ(B3)
Uranium, total (3050)	M6020 ICP-MS	3.15		*	mg/Kg	0.05	0.3	08/15/08 23:33	msh
Zinc, total (3050)	M6010B ICP	96		*	mg/Kg	1	5	08/14/08 23:44	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	93.4		*	%	0.1	0.5	07/30/08 13:55	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/29/08 23:43	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 13:43	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 11:44	lwt/brd

Arizona license number: AZ0102

7/30/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: CP-P12-1-3

ACZ Sample ID: L70791-06
Date Sampled: 07/23/08 11:03
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	08/15/08 23:39	msh <i>UJ(B3,M2)</i>
Arsenic, total (3050)	M6020 ICP-MS	3.4			mg/Kg	0.3	0.5	08/14/08 21:02	erf/msh
Barium, total (3050)	M6010B ICP	49.9		*	mg/Kg	0.3	2	08/14/08 23:47	aeh <i>J(M1)</i>
Beryllium, total (3050)	M6010B ICP	0.8	B		mg/Kg	0.2	1	08/16/08 2:16	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/14/08 23:47	aeh
Chromium, total (3050)	M6010B ICP	10		*	mg/Kg	1	5	08/14/08 23:47	aeh
Cobalt, total (3050)	M6010B ICP	3	B		mg/Kg	1	5	08/14/08 23:47	aeh
Copper, total (3050)	M6010B ICP	337		*	mg/Kg	1	5	08/14/08 23:47	aeh
Lead, total (3050)	M6020 ICP-MS	7.98			mg/Kg	0.05	0.3	08/14/08 21:02	erf/msh
Manganese, total (3050)	M6010B ICP	85.0		*	mg/Kg	0.5	3	08/16/08 2:16	aeh <i>J(M1)</i>
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 14:47	jws
Molybdenum, total (3050)	M6010B ICP	9			mg/Kg	1	5	08/14/08 23:47	aeh
Nickel, total (3050)	M6010B ICP	31			mg/Kg	1	5	08/14/08 23:47	aeh
Selenium, total (3050)	M6020 ICP-MS	0.19	B	*	mg/Kg	0.05	0.3	08/28/08 18:32	rac <i>U(B3)</i>
Thallium, total (3050)	M6020 ICP-MS	0.18	B		mg/Kg	0.05	0.3	08/15/08 23:39	msh <i>U(B3)</i>
Uranium, total (3050)	M6020 ICP-MS	1.30		*	mg/Kg	0.05	0.3	08/15/08 23:39	msh
Zinc, total (3050)	M6010B ICP	27		*	mg/Kg	1	5	08/14/08 23:47	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	94.2		*	%	0.1	0.5	07/30/08 15:04	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 0:14	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 13:55	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 11:47	lwt/brd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: CP-SD-08-0-1.5

ACZ Sample ID: L70791-07
Date Sampled: 07/28/08 09:10
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.2	B	*	mg/Kg	0.2	1	08/15/08 23:46	msh <i>W(B3,M2)</i>
Arsenic, total (3050)	M6020 ICP-MS	2.0			mg/Kg	0.3	0.5	08/14/08 21:09	erf/msh
Barium, total (3050)	M6010B ICP	135		*	mg/Kg	0.3	2	08/14/08 23:51	aeh <i>J(M1)</i>
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	08/16/08 2:19	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/14/08 23:51	aeh
Chromium, total (3050)	M6010B ICP	12		*	mg/Kg	1	5	08/14/08 23:51	aeh
Cobalt, total (3050)	M6010B ICP	10			mg/Kg	1	5	08/14/08 23:51	aeh
Copper, total (3050)	M6010B ICP	599		*	mg/Kg	1	5	08/14/08 23:51	aeh
Lead, total (3050)	M6020 ICP-MS	6.87			mg/Kg	0.05	0.3	08/14/08 21:09	erf/msh
Manganese, total (3050)	M6010B ICP	283		*	mg/Kg	0.5	3	08/16/08 2:19	<i>J aeh M(1)</i>
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 14:49	jws
Molybdenum, total (3050)	M6010B ICP	86			mg/Kg	1	5	08/14/08 23:51	aeh
Nickel, total (3050)	M6010B ICP	31			mg/Kg	1	5	08/14/08 23:51	aeh
Selenium, total (3050)	M6020 ICP-MS	0.27	B	*	mg/Kg	0.05	0.3	08/28/08 18:33	rac
Thallium, total (3050)	M6020 ICP-MS	0.25	B		mg/Kg	0.05	0.3	08/15/08 23:46	msh <i>W(B3)</i>
Uranium, total (3050)	M6020 ICP-MS	5.96		*	mg/Kg	0.05	0.3	08/15/08 23:46	msh
Zinc, total (3050)	M6010B ICP	50		*	mg/Kg	1	5	08/14/08 23:51	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	96.0		*	%	0.1	0.5	07/30/08 16:14	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 0:46	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 14:06	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 11:51	lwt/brd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: CP-SD-08-1.5-3.0

ACZ Sample ID: L70791-08
Date Sampled: 07/28/08 09:10
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/15/08 23:52	msh <i>U1(M2)</i>
Arsenic, total (3050)	M6020 ICP-MS	1.2			mg/Kg	0.3	0.5	08/14/08 21:15	erf/msh
Barium, total (3050)	M6010B ICP	164		*	mg/Kg	0.3	2	08/15/08 0:01	aeh <i>J (M1)</i>
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	08/16/08 2:23	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/15/08 0:01	aeh
Chromium, total (3050)	M6010B ICP	11		*	mg/Kg	1	5	08/15/08 0:01	aeh
Cobalt, total (3050)	M6010B ICP	11			mg/Kg	1	5	08/15/08 0:01	aeh
Copper, total (3050)	M6010B ICP	142		*	mg/Kg	1	5	08/15/08 0:01	aeh
Lead, total (3050)	M6020 ICP-MS	3.69			mg/Kg	0.05	0.3	08/14/08 21:15	erf/msh
Manganese, total (3050)	M6010B ICP	300		*	mg/Kg	0.5	3	08/16/08 2:23	aeh <i>J (M1)</i>
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 14:51	jws
Molybdenum, total (3050)	M6010B ICP	9			mg/Kg	1	5	08/15/08 0:01	aeh
Nickel, total (3050)	M6010B ICP	27			mg/Kg	1	5	08/15/08 0:01	aeh
Selenium, total (3050)	M6020 ICP-MS	0.09	B	*	mg/Kg	0.05	0.3	08/28/08 18:38	rac <i>U (B3)</i>
Thallium, total (3050)	M6020 ICP-MS	0.33			mg/Kg	0.05	0.3	08/15/08 23:52	msh
Uranium, total (3050)	M6020 ICP-MS	3.99		*	mg/Kg	0.05	0.3	08/15/08 23:52	msh
Zinc, total (3050)	M6010B ICP	52		*	mg/Kg	1	5	08/15/08 0:01	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	96.4		*	%	0.1	0.5	07/30/08 17:23	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 1:17	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 14:18	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 11:54	lwt/brd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: CP-SD-10-0-1.5

ACZ Sample ID: L70791-09
Date Sampled: 07/28/08 10:00
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.2	B	*	mg/Kg	0.2	1	08/15/08 23:59	msh <i>u5(B3,M2)</i>
Arsenic, total (3050)	M6020 ICP-MS	3.6			mg/Kg	0.3	0.5	08/14/08 21:22	erf/msh
Barium, total (3050)	M6010B ICP	161		*	mg/Kg	0.3	2	08/15/08 0:05	aeh <i>J(M1)</i>
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	08/16/08 2:27	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/15/08 0:05	aeh
Chromium, total (3050)	M6010B ICP	11		*	mg/Kg	1	5	08/15/08 0:05	aeh
Cobalt, total (3050)	M6010B ICP	9			mg/Kg	1	5	08/15/08 0:05	aeh
Copper, total (3050)	M6010B ICP	570		*	mg/Kg	1	5	08/15/08 0:05	aeh
Lead, total (3050)	M6020 ICP-MS	6.23			mg/Kg	0.05	0.3	08/14/08 21:22	erf/msh
Manganese, total (3050)	M6010B ICP	278		*	mg/Kg	0.5	3	08/16/08 2:27	aeh <i>J(M1)</i>
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	08/11/08 14:53	jws
Molybdenum, total (3050)	M6010B ICP	84			mg/Kg	1	5	08/15/08 0:05	aeh
Nickel, total (3050)	M6010B ICP	29			mg/Kg	1	5	08/15/08 0:05	aeh
Selenium, total (3050)	M6020 ICP-MS	0.34		*	mg/Kg	0.05	0.3	08/28/08 18:39	rac
Thallium, total (3050)	M6020 ICP-MS	0.25	B		mg/Kg	0.05	0.3	08/15/08 23:59	msh <i>u(B3)</i>
Uranium, total (3050)	M6020 ICP-MS	4.13		*	mg/Kg	0.05	0.3	08/15/08 23:59	msh
Zinc, total (3050)	M6010B ICP	47		*	mg/Kg	1	5	08/15/08 0:05	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	97.5		*	%	0.1	0.5	07/30/08 18:32	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 1:48	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 14:29	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 11:58	lwt/brd

Arizona license number: AZ0102

7/30/08

FMI Gold & Copper - Sierrita

 Project ID: OJ07R9
 Sample ID: CP-SD-10-1.5-3.0

 ACZ Sample ID: L70791-10
 Date Sampled: 07/28/08 10:00
 Date Received: 07/29/08
 Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/16/08 0:05	msh J(M2)
Arsenic, total (3050)	M6020 ICP-MS	1.2			mg/Kg	0.3	0.5	08/14/08 21:28	erf/msh
Barium, total (3050)	M6010B ICP	193		*	mg/Kg	0.3	2	08/15/08 0:08	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.4	B		mg/Kg	0.2	1	08/16/08 2:30	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/15/08 0:08	aeh
Chromium, total (3050)	M6010B ICP	13		*	mg/Kg	1	5	08/15/08 0:08	aeh
Cobalt, total (3050)	M6010B ICP	12			mg/Kg	1	5	08/15/08 0:08	aeh
Copper, total (3050)	M6010B ICP	269		*	mg/Kg	1	5	08/15/08 0:08	aeh
Lead, total (3050)	M6020 ICP-MS	1.81			mg/Kg	0.05	0.3	08/14/08 21:28	erf/msh
Manganese, total (3050)	M6010B ICP	332		*	mg/Kg	0.5	3	08/16/08 2:30	aeh J(M1)
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 14:55	jws
Molybdenum, total (3050)	M6010B ICP	3	B		mg/Kg	1	5	08/15/08 0:08	aeh
Nickel, total (3050)	M6010B ICP	31			mg/Kg	1	5	08/15/08 0:08	aeh
Selenium, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.05	0.3	08/14/08 21:28	erf/msh
Thallium, total (3050)	M6020 ICP-MS	0.32			mg/Kg	0.05	0.3	08/16/08 0:05	msh
Uranium, total (3050)	M6020 ICP-MS	4.41		*	mg/Kg	0.05	0.3	08/16/08 0:05	msh
Zinc, total (3050)	M6010B ICP	53		*	mg/Kg	1	5	08/15/08 0:08	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	97.6		*	%	0.1	0.5	07/30/08 19:42	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 2:19	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 14:41	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:01	lwt/brd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: CP-SD-09-0-1.5

ACZ Sample ID: **L70791-11**
Date Sampled: 07/28/08 10:39
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	08/16/08 0:11	msh UJ(B3,M2)
Arsenic, total (3050)	M6020 ICP-MS	1.9			mg/Kg	0.3	0.5	08/14/08 21:35	erf/msh
Barium, total (3050)	M6010B ICP	139		*	mg/Kg	0.3	2	08/15/08 0:11	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.4	B		mg/Kg	0.2	1	08/16/08 2:34	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/15/08 0:11	aeh
Chromium, total (3050)	M6010B ICP	11		*	mg/Kg	1	5	08/15/08 0:11	aeh
Cobalt, total (3050)	M6010B ICP	10			mg/Kg	1	5	08/15/08 0:11	aeh
Copper, total (3050)	M6010B ICP	1100		*	mg/Kg	1	5	08/15/08 0:11	aeh
Lead, total (3050)	M6020 ICP-MS	11.30			mg/Kg	0.05	0.3	08/14/08 21:35	erf/msh
Manganese, total (3050)	M6010B ICP	312		*	mg/Kg	0.5	3	08/16/08 2:34	aeh J(M1)
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	08/11/08 14:58	jws
Molybdenum, total (3050)	M6010B ICP	157			mg/Kg	1	5	08/15/08 0:11	aeh
Nickel, total (3050)	M6010B ICP	29			mg/Kg	1	5	08/15/08 0:11	aeh
Selenium, total (3050)	M6020 ICP-MS	0.30		*	mg/Kg	0.05	0.3	08/28/08 18:41	rac
Thallium, total (3050)	M6020 ICP-MS	0.21	B		mg/Kg	0.05	0.3	08/16/08 0:11	msh U(B3)
Uranium, total (3050)	M6020 ICP-MS	2.44		*	mg/Kg	0.05	0.3	08/16/08 0:11	msh
Zinc, total (3050)	M6010B ICP	75		*	mg/Kg	1	5	08/15/08 0:11	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	94.2		*	%	0.1	0.5	07/30/08 20:51	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 2:50	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 14:53	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:05	lwt/brd

Arizona license number: AZ0102



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

Inorganic Analytical Results

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: CP-SD-09-1.5-3.0

ACZ Sample ID: L70791-12
Date Sampled: 07/28/08 10:39
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/16/08 0:24	msh u(M2)
Arsenic, total (3050)	M6020 ICP-MS	0.7			mg/Kg	0.3	0.5	08/14/08 21:48	erf/msh
Barium, total (3050)	M6010B ICP	131		*	mg/Kg	0.3	2	08/15/08 0:15	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.2	B		mg/Kg	0.2	1	08/16/08 2:37	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/15/08 0:15	aeh
Chromium, total (3050)	M6010B ICP	11		*	mg/Kg	1	5	08/15/08 0:15	aeh
Cobalt, total (3050)	M6010B ICP	9			mg/Kg	1	5	08/15/08 0:15	aeh
Copper, total (3050)	M6010B ICP	380		*	mg/Kg	1	5	08/15/08 0:15	aeh
Lead, total (3050)	M6020 ICP-MS	26.60			mg/Kg	0.05	0.3	08/14/08 21:48	erf/msh
Manganese, total (3050)	M6010B ICP	239		*	mg/Kg	0.5	3	08/16/08 2:37	aeh J(M1)
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 15:00	jws
Molybdenum, total (3050)	M6010B ICP	25			mg/Kg	1	5	08/15/08 0:15	aeh
Nickel, total (3050)	M6010B ICP	28			mg/Kg	1	5	08/15/08 0:15	aeh
Selenium, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.05	0.3	08/14/08 21:48	erf/msh
Thallium, total (3050)	M6020 ICP-MS	0.25	B		mg/Kg	0.05	0.3	08/16/08 0:24	msh
Uranium, total (3050)	M6020 ICP-MS	2.46		*	mg/Kg	0.05	0.3	08/16/08 0:24	msh u(B3)
Zinc, total (3050)	M6010B ICP	52		*	mg/Kg	1	5	08/15/08 0:15	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	95.8		*	%	0.1	0.5	07/30/08 22:00	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 3:21	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 15:04	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:08	lwt/brd

Arizona license number: AZ0102

6/17/2010

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: OD-SD-01-0-1.5

ACZ Sample ID: L70791-13
Date Sampled: 07/28/08 10:58
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	POL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	08/16/08 0:43	msh NJ(B3,M2)
Arsenic, total (3050)	M6020 ICP-MS	2.0		*	mg/Kg	0.3	0.5	08/21/08 10:56	msh
Barium, total (3050)	M6010B ICP	184		*	mg/Kg	0.3	2	08/15/08 0:18	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.4	B		mg/Kg	0.2	1	08/16/08 2:41	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/15/08 0:18	aeh
Chromium, total (3050)	M6010B ICP	13		*	mg/Kg	1	5	08/15/08 0:18	aeh
Cobalt, total (3050)	M6010B ICP	11			mg/Kg	1	5	08/15/08 0:18	aeh
Copper, total (3050)	M6010B ICP	361		*	mg/Kg	1	5	08/15/08 0:18	aeh
Lead, total (3050)	M6020 ICP-MS	5.32			mg/Kg	0.05	0.3	08/14/08 22:07	erf/msh
Manganese, total (3050)	M6010B ICP	332		*	mg/Kg	0.5	3	08/16/08 2:41	aeh J(M1)
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	08/11/08 15:03	jws
Molybdenum, total (3050)	M6010B ICP	87			mg/Kg	1	5	08/15/08 0:18	aeh
Nickel, total (3050)	M6010B ICP	30			mg/Kg	1	5	08/15/08 0:18	aeh
Selenium, total (3050)	M6020 ICP-MS	0.23	B	*	mg/Kg	0.05	0.3	08/28/08 18:42	rac
Thallium, total (3050)	M6020 ICP-MS	0.29	B		mg/Kg	0.05	0.3	08/16/08 0:43	msh
Uranium, total (3050)	M6020 ICP-MS	3.11		*	mg/Kg	0.05	0.3	08/16/08 0:43	msh
Zinc, total (3050)	M6010B ICP	51		*	mg/Kg	1	5	08/15/08 0:18	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	POL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	96.0		*	%	0.1	0.5	07/30/08 23:09	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	POL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 3:52	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 15:16	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:12	lwt/brd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: OD-SD-01-1.5-3.0

ACZ Sample ID: L70791-14
Date Sampled: 07/28/08 10:58
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/16/08 0:50	msh J (M2)
Arsenic, total (3050)	M6020 ICP-MS	1.2		*	mg/Kg	0.3	0.5	08/21/08 11:01	msh J (E6)
Barium, total (3050)	M6010B ICP	185		*	mg/Kg	0.3	2	08/15/08 0:22	aeh J (M1)
Beryllium, total (3050)	M6010B ICP		U		mg/Kg	0.2	1	08/16/08 2:45	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/15/08 0:22	aeh
Chromium, total (3050)	M6010B ICP	14		*	mg/Kg	1	5	08/15/08 0:22	aeh
Cobalt, total (3050)	M6010B ICP	10			mg/Kg	1	5	08/15/08 0:22	aeh
Copper, total (3050)	M6010B ICP	125		*	mg/Kg	1	5	08/15/08 0:22	aeh
Lead, total (3050)	M6020 ICP-MS	2.59			mg/Kg	0.05	0.3	08/14/08 22:14	erf/msh
Manganese, total (3050)	M6010B ICP	346		*	mg/Kg	0.5	3	08/16/08 2:45	aeh J (M1)
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 15:05	jws
Molybdenum, total (3050)	M6010B ICP	6			mg/Kg	1	5	08/15/08 0:22	aeh
Nickel, total (3050)	M6010B ICP	29			mg/Kg	1	5	08/15/08 0:22	aeh
Selenium, total (3050)	M6020 ICP-MS	0.08	B	*	mg/Kg	0.05	0.3	08/28/08 18:43	rac J (B3)
Thallium, total (3050)	M6020 ICP-MS	0.28	B		mg/Kg	0.05	0.3	08/16/08 0:50	msh J (B3)
Uranium, total (3050)	M6020 ICP-MS	7.42		*	mg/Kg	0.05	0.3	08/16/08 0:50	msh
Zinc, total (3050)	M6010B ICP	43		*	mg/Kg	1	5	08/15/08 0:22	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	96.4		*	%	0.1	0.5	07/31/08 0:19	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 4:23	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 15:27	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:15	lwt/brd

Arizona license number: AZ0102

Y18120108

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: OD-SD-02-0-1.5

ACZ Sample ID: L70791-15
Date Sampled: 07/28/08 11:11
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.2	B	*	mg/Kg	0.2	1	08/16/08 0:56	msh <i>U(B3,Ma)</i>
Arsenic, total (3050)	M6020 ICP-MS	2.2		*	mg/Kg	0.3	0.5	08/21/08 11:06	msh <i>J(E6)</i>
Barium, total (3050)	M6010B ICP	173		*	mg/Kg	0.3	2	08/15/08 0:25	aeh <i>J(M1)</i>
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	08/16/08 2:56	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/15/08 0:25	aeh
Chromium, total (3050)	M6010B ICP	13		*	mg/Kg	1	5	08/15/08 0:25	aeh
Cobalt, total (3050)	M6010B ICP	12			mg/Kg	1	5	08/15/08 0:25	aeh
Copper, total (3050)	M6010B ICP	376		*	mg/Kg	1	5	08/15/08 0:25	aeh
Lead, total (3050)	M6020 ICP-MS	7.63			mg/Kg	0.05	0.3	08/14/08 22:20	erf/msh
Manganese, total (3050)	M6010B ICP	390		*	mg/Kg	0.5	3	08/16/08 2:56	aeh <i>J(M1)</i>
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	08/11/08 15:08	jws
Molybdenum, total (3050)	M6010B ICP	107			mg/Kg	1	5	08/15/08 0:25	aeh
Nickel, total (3050)	M6010B ICP	32			mg/Kg	1	5	08/15/08 0:25	aeh
Selenium, total (3050)	M6020 ICP-MS	0.42		*	mg/Kg	0.05	0.3	08/28/08 18:45	rac
Thallium, total (3050)	M6020 ICP-MS	0.30			mg/Kg	0.05	0.3	08/16/08 0:56	msh <i>U(B3)</i>
Uranium, total (3050)	M6020 ICP-MS	4.66		*	mg/Kg	0.05	0.3	08/16/08 0:56	msh
Zinc, total (3050)	M6010B ICP	60		*	mg/Kg	1	5	08/15/08 0:25	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	95.1		*	%	0.1	0.5	07/31/08 1:28	bj

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 4:54	bj
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 15:39	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:19	lwt/brd

Arizona license number: AZ0102

4/12/2010

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: OD-SD-02-1.5-3.0

ACZ Sample ID: L70791-16
Date Sampled: 07/28/08 11:11
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/16/08 1:03	msh UJ(M2)
Arsenic, total (3050)	M6020 ICP-MS	0.9		*	mg/Kg	0.3	0.5	08/21/08 11:11	msh
Barium, total (3050)	M6010B ICP	173		*	mg/Kg	0.3	2	08/15/08 0:29	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.2	B		mg/Kg	0.2	1	08/16/08 2:59	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/15/08 0:29	aeh
Chromium, total (3050)	M6010B ICP	9		*	mg/Kg	1	5	08/15/08 0:29	aeh
Cobalt, total (3050)	M6010B ICP	9			mg/Kg	1	5	08/15/08 0:29	aeh
Copper, total (3050)	M6010B ICP	27		*	mg/Kg	1	5	08/15/08 0:29	aeh
Lead, total (3050)	M6020 ICP-MS	1.89			mg/Kg	0.05	0.3	08/14/08 22:26	erf/msh
Manganese, total (3050)	M6010B ICP	320		*	mg/Kg	0.5	3	08/16/08 2:59	aeh J(M1)
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 15:15	jws
Molybdenum, total (3050)	M6010B ICP	3	B		mg/Kg	1	5	08/15/08 0:29	aeh
Nickel, total (3050)	M6010B ICP	26			mg/Kg	1	5	08/15/08 0:29	aeh
Selenium, total (3050)	M6020 ICP-MS	0.07	B	*	mg/Kg	0.05	0.3	08/28/08 18:46	rac J(B3)
Thallium, total (3050)	M6020 ICP-MS	0.32			mg/Kg	0.05	0.3	08/16/08 1:03	msh
Uranium, total (3050)	M6020 ICP-MS	3.37		*	mg/Kg	0.05	0.3	08/16/08 1:03	msh
Zinc, total (3050)	M6010B ICP	41		*	mg/Kg	1	5	08/15/08 0:29	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	97.8	*		%	0.1	0.5	07/31/08 2:37	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 5:25	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 15:50	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:23	lwt/brd

Arizona license number: AZ0102

K-AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: OD-SD-04-0-1.5

ACZ Sample ID: **L70791-17**
Date Sampled: 07/28/08 12:34
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	08/16/08 1:09	msh UJ(B3,M2)
Arsenic, total (3050)	M6020 ICP-MS	3.1		*	mg/Kg	0.3	0.5	08/21/08 11:16	msh
Barium, total (3050)	M6010B ICP	118		*	mg/Kg	0.3	2	08/15/08 0:32	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.4	B		mg/Kg	0.2	1	08/16/08 3:03	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/15/08 0:32	aeh
Chromium, total (3050)	M6010B ICP	11		*	mg/Kg	1	5	08/15/08 0:32	aeh
Cobalt, total (3050)	M6010B ICP	11			mg/Kg	1	5	08/15/08 0:32	aeh
Copper, total (3050)	M6010B ICP	1640		*	mg/Kg	1	5	08/15/08 0:32	aeh
Lead, total (3050)	M6020 ICP-MS	8.86			mg/Kg	0.05	0.3	08/14/08 22:33	erf/msh
Manganese, total (3050)	M6010B ICP	262		*	mg/Kg	0.5	3	08/16/08 3:03	aeh J(M1)
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 15:17	jws
Molybdenum, total (3050)	M6010B ICP	128			mg/Kg	1	5	08/15/08 0:32	aeh
Nickel, total (3050)	M6010B ICP	29			mg/Kg	1	5	08/15/08 0:32	aeh
Selenium, total (3050)	M6020 ICP-MS	0.53		*	mg/Kg	0.05	0.3	08/28/08 18:48	rac
Thallium, total (3050)	M6020 ICP-MS	0.30	B		mg/Kg	0.05	0.3	08/16/08 1:09	msh U(B3)
Uranium, total (3050)	M6020 ICP-MS	4.25		*	mg/Kg	0.05	0.3	08/16/08 1:09	msh
Zinc, total (3050)	M6010B ICP	68		*	mg/Kg	1	5	08/15/08 0:32	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	95.9		*	%	0.1	0.5	07/31/08 3:47	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 5:56	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 16:02	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:26	lwt/brd

Arizona license number: AZ0102

[Handwritten Signature]

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: OD-SD-04-1.5-3.0

ACZ Sample ID: L70791-18
Date Sampled: 07/28/08 12:34
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/16/08 1:16	msh u5(M2)
Arsenic, total (3050)	M6020 ICP-MS	2.1		*	mg/Kg	0.3	0.5	08/21/08 11:31	msh
Barium, total (3050)	M6010B ICP	133		*	mg/Kg	0.3	2	08/15/08 0:43	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.3	B		mg/Kg	0.2	1	08/16/08 3:07	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/15/08 0:43	aeh
Chromium, total (3050)	M6010B ICP	9		*	mg/Kg	1	5	08/15/08 0:43	aeh
Cobalt, total (3050)	M6010B ICP	9			mg/Kg	1	5	08/15/08 0:43	aeh
Copper, total (3050)	M6010B ICP	671		*	mg/Kg	1	5	08/15/08 0:43	aeh
Lead, total (3050)	M6020 ICP-MS	2.20			mg/Kg	0.05	0.3	08/14/08 22:39	erf/msh
Manganese, total (3050)	M6010B ICP	258		*	mg/Kg	0.5	3	08/16/08 3:07	aeh J(M1)
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 15:19	jws
Molybdenum, total (3050)	M6010B ICP	25			mg/Kg	1	5	08/15/08 0:43	aeh
Nickel, total (3050)	M6010B ICP	27			mg/Kg	1	5	08/15/08 0:43	aeh
Selenium, total (3050)	M6020 ICP-MS	0.19	B	*	mg/Kg	0.05	0.3	08/28/08 18:49	rac u(B3)
Thallium, total (3050)	M6020 ICP-MS	0.26	B		mg/Kg	0.05	0.3	08/16/08 1:16	msh u(B3)
Uranium, total (3050)	M6020 ICP-MS	2.18		*	mg/Kg	0.05	0.3	08/16/08 1:16	msh
Zinc, total (3050)	M6010B ICP	48		*	mg/Kg	1	5	08/15/08 0:43	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	97.9		*	%	0.1	0.5	07/31/08 4:56	bji

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 6:27	bji
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 16:13	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:30	lwt/brd

Arizona license number: AZ0102

KAZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: OD-SD-03-0-1.5

ACZ Sample ID: **L70791-19**
Date Sampled: 07/28/08 13:00
Date Received: 07/29/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	08/16/08 1:22	msh WJ(B3,M2)
Arsenic, total (3050)	M6020 ICP-MS	2.7		*	mg/Kg	0.3	0.5	08/21/08 11:36	msh
Barium, total (3050)	M6010B ICP	158		*	mg/Kg	0.3	2	08/15/08 0:46	aeh J(CM1)
Beryllium, total (3050)	M6010B ICP	0.4	B		mg/Kg	0.2	1	08/16/08 3:10	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/15/08 0:46	aeh
Chromium, total (3050)	M6010B ICP	18		*	mg/Kg	1	5	08/15/08 0:46	aeh
Cobalt, total (3050)	M6010B ICP	11			mg/Kg	1	5	08/15/08 0:46	aeh
Copper, total (3050)	M6010B ICP	2350		*	mg/Kg	1	5	08/15/08 0:46	aeh
Lead, total (3050)	M6020 ICP-MS	46.70			mg/Kg	0.05	0.3	08/14/08 22:46	erf/msh
Manganese, total (3050)	M6010B ICP	316		*	mg/Kg	0.5	3	08/16/08 3:10	aeh SC(M1)
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/11/08 15:21	jws
Molybdenum, total (3050)	M6010B ICP	100			mg/Kg	1	5	08/15/08 0:46	aeh
Nickel, total (3050)	M6010B ICP	31			mg/Kg	1	5	08/15/08 0:46	aeh
Selenium, total (3050)	M6020 ICP-MS	0.41		*	mg/Kg	0.05	0.3	08/28/08 18:51	rac
Thallium, total (3050)	M6020 ICP-MS	0.28	B		mg/Kg	0.05	0.3	08/16/08 1:22	msh U(B3)
Uranium, total (3050)	M6020 ICP-MS	7.57		*	mg/Kg	0.05	0.3	08/16/08 1:22	msh
Zinc, total (3050)	M6010B ICP	147		*	mg/Kg	1	5	08/15/08 0:46	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	95.7		*	%	0.1	0.5	07/31/08 6:05	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 6:58	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 16:25	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:33	lwt/brd

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: OD-SD-03-1.5-3.0

ACZ Sample ID: **L70791-20**
Date Sampled: 07/28/08 13:00
Date Received: 07/29/08
Sample Matrix: **Soil**

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.4	2	08/16/08 1:28	msh <i>WJ(M2)</i>
Arsenic, total (3050)	M6020 ICP-MS	2.8		*	mg/Kg	0.5	1	08/21/08 11:41	msh
Barium, total (3050)	M6010B ICP	87.9		*	mg/Kg	0.3	2	08/15/08 0:49	aeh <i>J(M1)</i>
Beryllium, total (3050)	M6010B ICP	0.3	B		mg/Kg	0.2	1	08/16/08 3:14	aeh
Cadmium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.5	2	08/15/08 0:49	aeh
Chromium, total (3050)	M6010B ICP	13		*	mg/Kg	1	5	08/15/08 0:49	aeh
Cobalt, total (3050)	M6010B ICP	8			mg/Kg	1	5	08/15/08 0:49	aeh
Copper, total (3050)	M6010B ICP	4390		*	mg/Kg	1	5	08/15/08 0:49	aeh
Lead, total (3050)	M6020 ICP-MS	253			mg/Kg	0.1	0.5	08/16/08 1:28	msh
Manganese, total (3050)	M6010B ICP	173		*	mg/Kg	0.5	3	08/16/08 3:14	aeh <i>J(M1)</i>
Mercury, total	M7471A CVAA	0.05	B		mg/Kg	0.04	0.2	08/11/08 15:23	jws
Molybdenum, total (3050)	M6010B ICP	145			mg/Kg	1	5	08/15/08 0:49	aeh
Nickel, total (3050)	M6010B ICP	30			mg/Kg	1	5	08/15/08 0:49	aeh
Selenium, total (3050)	M6020 ICP-MS	0.4	B	*	mg/Kg	0.1	0.5	08/28/08 18:55	rac <i>BN(B3)</i>
Thallium, total (3050)	M6020 ICP-MS	0.2	B		mg/Kg	0.1	0.5	08/16/08 1:28	msh <i>BN</i>
Uranium, total (3050)	M6020 ICP-MS	7.8		*	mg/Kg	0.1	0.5	08/16/08 1:28	msh
Zinc, total (3050)	M6010B ICP	201		*	mg/Kg	1	5	08/15/08 0:49	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	95.7		*	%	0.1	0.5	07/31/08 7:14	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				07/30/08 7:29	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/08/08 16:36	mjc/lwt
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/05/08 12:37	lwt/brd

Arizona license number: AZ0102

LDC #: 19954A4

VALIDATION COMPLETENESS WORKSHEET

SDG #: L70791

Level IV

Laboratory: ACZ Laboratories, Inc.

Date: 12-23-08

Page: 1 of 1

Reviewer: MG

2nd Reviewer:

METHOD: Metals (EPA SW 846 Method 6010B/6020/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 7-23-08 through 7-28-08
II.	Calibration	SW	
III.	Blanks	SW	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	SW	MS / MSD
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS / LCSD
VIII.	Internal Standard (ICP-MS)	SW	
IX.	Furnace Atomic Absorption QC	N	not utilized
X.	ICP Serial Dilution	A	
XI.	Sample Result Verification	A	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	N	
XIV.	Field Blanks	N	

Note: A = Acceptable
 N = Not provided/applicable
 SW = See worksheet

ND = No compounds detected
 R = Rinsate
 FB = Field blank

D = Duplicate
 TB = Trip blank
 EB = Equipment blank

Validated Samples:

all soil

1	CP-Q09-0-1	11	CP-SD-09-0-1.5	21	CP-Q09-0-1MS	31	
2	CP-Q09-1-3	12	CP-SD-09-1.5-3.0	22	CP-Q09-0-1MSD	32	
3	CP-SD-07-0-1.5	13	OD-SD-01-0-1.5	23	OD-SD-03-1.5-3.0MS	33	
4	CP-SD-07-1.5-3.0	14	OD-SD-01-1.5-3.0	24	OD-SD-03-1.5-3.0MSD	34	
5	CP-P12-0-1	15	OD-SD-02-0-1.5	25	PBS	35	
6	CP-P12-1-3	16	OD-SD-02-1.5-3.0	26		36	
7	CP-SD-08-0-1.5	17	OD-SD-04-0-1.5	27		37	
8	CP-SD-08-1.5-3.0	18	OD-SD-04-1.5-3.0	28		38	
9	CP-SD-10-0-1.5	19	OD-SD-03-0-1.5	29		39	
10	CP-SD-10-1.5-3.0	20	OD-SD-03-1.5-3.0	30		40	

Notes: _____

LDC #: 19954A4
SDG #: L70791

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: MG
2nd Reviewer:

Method:Metals (EPA SW 846 Method 6010/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times:				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration:				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury and 85-115% for cyanide) QC limits?		✓		
Were all initial calibration correlation coefficients > 0.995? (Level IV only)	✓			
III. Blanks:				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
IV. ICP Interference Check Sample:				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
V. Matrix spike/Matrix spike duplicates:				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL (+/- 2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were < 5X the RL.	✓			
VI. Laboratory control samples:				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			
VII. Furnace Atomic Absorption QC:				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analyses have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	

LOC #: 19954A4
SDG #: L70791

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: MG
2nd Reviewer: W

Validation Area	Yes	No	NA	Findings/Comments
VII. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the IDL?	✓			
Were all percent differences (%Ds) < 10%?	✓			
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.	✓			
VIII. Internal Standards (EPA SW 846 Method 6020)				
Were all the percent recoveries (%R) within the 30-120% of the intensity of the internal standard in the associated initial calibration?	✓			
If the %Rs were outside the criteria, was a reanalysis performed?	✓			
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?	✓			
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Overall Assessment of Field Data				
Overall assessment of data was found to be acceptable.	✓			
XII. Field Duplicates				
Field duplicate pairs were identified in this SDG.		✓		
Target analytes were detected in the field duplicates.			✓	
XIII. Field Blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 19954A4
SDG #: L70791

VALIDATION FINDINGS WORKSHEET

Sample Specific Element Reference

Page: 1 of 1
Reviewer: MG
End reviewer:

All circled elements are applicable to each sample.

Analysis Method

ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,
ICP Trace	S	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,
ICP-MS	↓	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN, U
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,

Comments: Mercury by CVAA if performed

LDC #: 19954A4
SDG #: L70791

VALIDATION FINDINGS WORKSHEET

Calibration

Page: of

Reviewer: MG

2nd Reviewer: L

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

N A Were all instruments calibrated daily, each set-up time, and were the proper number of standards used?

Y N N/A Were all instruments calibrated daily, each set up time, and were the proper verifications made?
Y N N/A Were all initial and continuing calibration verification percent recoveries (%R) within the control limits of 90-110% for all analytes except mercury (80-120%) and cyanide (85-115%)?

LEVEL IV ONLY:

Y N N/A Was a midrange cyanide standard distilled?

Are all correlation coefficients >0.995 ?

See Level IV Initial and Continuing Calibration Recalculation Worksheet for recalculations.

Comments:

LDC #: 19954A4

SDG #: L70791

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Blank concentration units, unless otherwise noted: mg /L

VALIDATION FINDINGS WORKSHEET

Prep Blank/ICB/CCB Findings

Page: 1 of 1

Reviewer: MG

2nd Reviewer: L

Associated Samples: Sb, Ti for all, Se for # 5→9, 11, 13→20

Analyte	Blank Identification										Analyte
	ICB	CCB1	CCB2	CCB3	PB ()	ICB	CCB1	CCB2	CCB3	PB ()	
Al											Al
Sb-15	0.00048										Sb
As											As
Ba											Ba
Be											Be
Cd											Cd
Ca											Ca
Cr											Cr
Co											Co
Cu											Cu
Fe											Fe
Pb											Pb
Mg											Mg
Mn											Mn
Hg											Hg
Ni											Ni
K											K
Se-38	0.0001										Se
Ag											Ag
Na											Na
Tl-15	0.00012										Tl
V											V
Zn											Zn
B											B
Mo											Mo
Sr											Sr

The highest concentration found in the Prep Blank and ICB/CCB for each analyte is circled on this worksheet and transferred to the PB/ICB/CCB Qualified Samples worksheet.

LDC #: 19954A4

SDG #: L70791

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Soil preparation factor applied: 100x ; 5x dil

Sample Concentration units, unless otherwise noted: mg / kg

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

P.B. & Sb TI CCBs for all

Se CCB for # 5 → 9, 11, 13 → 20

Page: 1 of 2

Reviewer: MG

2nd Reviewer: L

Associated Samples: Qual: U B3

Analyte	Sample Identification													
	Maximum PB ^a (mg/Kg)	Maximum PB ^a (ug/L)	Maximum ICB/CCB ^a (ug/L)	Blank Action Limit	1	3	4	5	6	7	8	9	11	12
Al														
Sb	0.25		0.48	1.25	0.3	0.2	0.2	0.9	0.3	0.2		0.2	0.3	
As														
Ba														
Be														
Cd														
Ca														
Cr														
Co														
Cu														
Fe														
Pb														
Mg														
Mn														
Hg														
Mo														
Ni														
K														
Se		0.1	0.25						0.19		0.09			
Ag														
Na														
Tl		0.12	0.30	0.26	0.27	0.30	0.26	0.18	0.25		0.25	0.21	0.25	
V														
Zn														
Sn														
R														

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 19954A4

SDG #: 170791

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Soil preparation factor applied: $100 \times 5 \times d:1$

Sample Concentration units, unless otherwise noted: mg / kg

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Associated Samples:

P.B. & Sb T1 CCBs for all

Se CCB for # 5-9, 11, 13-20

Page: 2 of 2

Reviewer: MG

2nd Reviewer: L

Qual: U B3

Analyte						Sample Identification						
	Maximum PB ^a (mg/Kg)	Maximum PB ^a (ug/l)	Maximum ICB/CCB ^a (ug/l)	Blank Action Limit	13	14	15	16	17	18	19	20
Al												
Sb	0.25		0.48	1.25	0.3		0.2		0.3		0.3	
As												
Ba												
Be												
Cd												
Ca												
Cr												
Co												
Cu												
Fe												
Pb												
Mg												
Mn												
Hg												
Mo												
Ni												
K												
Se		0.1	0.25	0.23	0.08		0.07		0.19		$10 \times d:1$ 0.4	
Ag												
Na												
Tl		0.12	0.30	0.29	0.28	0.30	0.30	0.30	0.26	0.28	0.2	
V												
Zn												
Sn												
R												

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 19954 A4
SDG #: L70791

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates

Page: of

Reviewer: MG

2nd Reviewer: K

METHOD: Trace metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
 Y N N/A Was a matrix spike analyzed for each sample? In G700.

N/A Was a matrix spike analyzed for each matrix in this SDG?
 N/A Were matrices analyzed for each sample?

Y N N Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

YN N/A Were all duplicate sample relative percent differences (RPD) $\leq 20\%$ for water samples and $\leq 35\%$ for soil samples?
LEVEL IV ONLY:

LEVEL IV ONLY:

Y N NA Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

Comments:

LDC #: 19954A4

SDG #: L70791

VALIDATION FINDINGS WORKSHEET

Internal Standards (ICP-MS)

Page: 1 of 1

Reviewer: MG

2nd Reviewer: _____

METHOD: Metals (EPA SW 846 Method 6020)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Were all internal standard percent recoveries within 30-120% of the intensity of the internal standard in the initial calibration standard?

Y N N/A If the response to either of the above questions is no, were the samples reanalyzed as required?

LDC #: 19954A4
SDG #: L70791

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd Reviewer: LM

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated	Reported	Acceptable (Y/N)
					%R	%R	
2302 ICV	ICP (Initial calibration)	Ba	2037.7	2000.	101.9	101.9	Y
1416 ICV	GFAA (Initial calibration)	Hg	9.65	10.02	96.3	96.3	
	CVAA (Initial calibration)						
0205 CCV1	ICP (Continuing calibration)	Mn	1031.6	1000.	103.2	103.2	
	GFAA (Continuing calibration)						
1402 CCV1	CVAA (Continuing calibration)	Hg	9.56	10.02	95.4	95.4	
2149 ICV	ICP/MS (Initial calibration)	Sb	20.30	20.06	101.3	101.3	
2313 CCV1	ICP/MS (Continuing calibration)	Tl	53.19	50.00	106.4	106.4	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 19954A4
SDG #: L70791

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MG
2nd Reviewer: LN

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{\text{Found}}{\text{True}} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation,
True = Concentration of each analyte in the source.

Found = SSR (spiked sample result) - SR (sample result).

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated		Acceptable (Y/N)
					%R / RPD / %D	%R / RPD / %D	
8-16	1951 ICS AB	Be	0.2468 (mg/L)	0.2505 (mg/L)	98.5	98.5	Y
8-14	LCSS	As	254.7 (mg/kg)	225. (mg/kg)	113	not reported	
8-15	0056 23	Cr	(SSR-SR) 53.7 (mg/kg)	50 (mg/kg)	107.4	107.4	
8-16	0321/0325 23/24	Mn	273.7 (mg/kg)	246.3 (mg/kg)	10.54	10.55	
8-15	0049 / 0053 20	Cu	4390. (mg/kg)	4570. (mg/kg)	4.1	4.1	

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 19954A4
SDG #: L70791

VALIDATION FINDINGS WORKSHEET

Sample Calculation Verification

Page: 1 of 2
Reviewer: MG
2nd reviewer: /

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

N N/A Have results been reported and calculated correctly?

Are results within the calibrated range of the instruments and within the linear range of the ICP?

N N/A Are all detection limits below the CRDL?

Detected analyte results for # 1, Sb were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(In. Vol.)(\%S)}$

Recalculation:

RD = Raw data concentration
 FV = Final volume (ml)
 In. Vol. = Initial volume (ml) or weight (G)
 Dil = Dilution factor
 %S = Decimal percent solids

$$\frac{(0.632 \text{ mg/l})(0.050 \text{ L})(5)}{(0.5 \text{ g})} = 0.316 \text{ mg/g or mg/kg}$$

LDC #: 19954A4
SDG #: L70791

VALIDATION FINDINGS WORKSHEET

Sample Calculation Verification

Page: 2 of 2
Reviewer: MG
2nd reviewer: /

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
 N N/A Have results been reported and calculated correctly?

N N/A Are results both reported and calculated correctly?
 N N/A Are results within the calibrated range of the instruments and within the linear range of the ICP?
 N N/A Are all detection limits below the CRDL?

DN NA Are all detection limits below the CRDL?

Detected analyte results for # 20, u were recalculated and verified using the following equation:

$$\text{Concentration} = \frac{(RD)(FV)(Dil)}{(\text{In. Vol.})(\%S)}$$

Recalculation:

$$\frac{(7.818 \text{ mg/L})(0.050 \text{ L})(10)}{(0.5 \text{ g})} = 7.818 \text{ mg/g or mg/kg}$$

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: FMI Gold & Copper-Sierrita

Collection Date: August 12, 2008

LDC Report Date: December 29, 2008

Matrix: Soil

Parameters: Metals

Validation Level: Level IV

Laboratory: ACZ Laboratories, Inc.

Sample Delivery Group (SDG): L71134

Sample Identification

RP-JS-02-0-1 EM-JS-08-10-12MSD

RP-JS-02-1-3

RP-JS-02-1-3D

RP-JS-02-5-7

RP-JS-02-10-12

RP-JS-02-15-17

RP-JS-01-0-1

RP-JS-01-1-3

RP-JS-01-1-3D

RP-JS-01-5-7

RP-JS-01-10-12

RP-JS-01-15-17

EM-JS-08-0-1

EM-JS-08-1-3

EM-JS-08-1-3D

EM-JS-08-5-7

EM-JS-08-10-12

EM-JS-08-5-7MS

EM-JS-08-5-7MSD

EM-JS-08-10-12MS

Introduction

This data review covers 21 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B, 6020, and 7000 for Metals. The metals analyzed were Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Thallium, Uranium, and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodices were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Copper	11 ug/L	RP-JS-02-0-1 RP-JS-02-1-3 RP-JS-02-1-3D RP-JS-02-5-7 RP-JS-02-10-12 RP-JS-02-15-17 RP-JS-01-0-1 RP-JS-01-1-3 RP-JS-01-1-3D RP-JS-01-5-7 RP-JS-01-10-12 RP-JS-01-15-17 EM-JS-08-0-1 EM-JS-08-1-3 EM-JS-08-1-3D EM-JS-08-10-12
ICB/CCB	Lead	0.1 ug/L	EM-JS-08-5-7 EM-JS-08-10-12
ICB/CCB	Thallium	0.21 ug/L	All samples in SDG L71134

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
RP-JS-02-0-1	Thallium	0.25 mg/Kg	0.25U mg/Kg
RP-JS-02-1-3	Thallium	0.11 mg/Kg	0.11U mg/Kg
RP-JS-02-1-3D	Thallium	0.12 mg/Kg	0.12U mg/Kg
RP-JS-02-5-7	Thallium	0.17 mg/Kg	0.17U mg/Kg
RP-JS-02-10-12	Thallium	0.12 mg/Kg	0.12U mg/Kg
RP-JS-02-15-17	Thallium	0.15 mg/Kg	0.15U mg/Kg
RP-JS-01-0-1	Thallium	0.15 mg/Kg	0.15U mg/Kg
RP-JS-01-1-3	Thallium	0.13 mg/Kg	0.13U mg/Kg
RP-JS-01-1-3D	Thallium	0.14 mg/Kg	0.14U mg/Kg
RP-JS-01-5-7	Thallium	0.08 mg/Kg	0.08U mg/Kg
RP-JS-01-10-12	Thallium	0.09 mg/Kg	0.09U mg/Kg
RP-JS-01-15-17	Thallium	0.15 mg/Kg	0.15U mg/Kg
EM-JS-08-0-1	Thallium	0.12 mg/Kg	0.12U mg/Kg
EM-JS-08-1-3	Thallium	0.20 mg/Kg	0.20U mg/Kg
EM-JS-08-1-3D	Thallium	0.17 mg/Kg	0.17U mg/Kg
EM-JS-08-5-7	Thallium	0.22 mg/Kg	0.22U mg/Kg
EM-JS-08-10-12	Thallium	0.17 mg/Kg	0.17U mg/Kg

No field blanks were identified in this SDG.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
EM-JS-08-10-12MS/MSD (All samples in SDG L71134)	Antimony	57.2 (75-125)	62.8 (75-125)	-	J (all detects) UJ (all non-detects)	A
EM-JS-08-5-7MS/MSD (All samples in SDG L71134)	Chromium	-	126.5 (75-125)	-	J (all detects)	A

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Results were within QC limits with the following exceptions:

LCS ID	Analyte	LCS Concentration (Limits)	LCSD Concentration (Limits)	Associated Samples	Flag	A or P
LCS/LCSD	Arsenic	271.1 mg/Kg (181-270)	-	All samples in SDG L71134	J (all detects)	P

VIII. Internal Standards

All internal standard percent recoveries (%R) were within QC limits.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met with the following exceptions:

Diluted Sample	Analyte	%D (Limits)	Associated Samples	Flag	A or P
EM-JS-08-5-7L	Lead	16.4 (\leq 10)	All samples in SDG L71134	J (all detects)	A

XI. Sample Result Verification

All sample result verifications were acceptable.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

Samples RP-JS-02-1-3 and RP-JS-02-1-3D, samples RP-JS-01-1-3 and RP-JS-01-1-3D, and samples EM-JS-08-1-3 and EM-JS-08-1-3D were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)		RPD
	RP-JS-02-1-3	RP-JS-02-1-3D	
Arsenic	3.5	3.7	6
Barium	47.3	49.3	4
Chromium	3	3	0
Cobalt	2	2	0
Copper	74	81	9
Lead	8.50	9.53	11
Manganese	160	169	5
Mercury	0.2U	0.05	200
Molybdenum	121	109	10
Selenium	0.74	0.89	18
Thallium	0.11	0.12	9

Compound	Concentration (mg/Kg)		RPD
	RP-JS-02-1-3	RP-JS-02-1-3D	
Uranium	1.07	1.25	16
Zinc	23	26	12

Compound	Concentration (mg/Kg)		RPD
	RP-JS-01-1-3	RP-JS-01-1-3D	
Arsenic	3.1	3.1	0
Barium	46.1	41.8	10
Beryllium	0.2	0.2U	200
Chromium	4	4	0
Cobalt	5	5	0
Copper	183	181	1
Lead	12.70	13.40	5
Manganese	244	239	2
Molybdenum	86	66	26
Nickel	2	1	67
Selenium	0.80	0.80	0
Thallium	0.13	0.14	7
Uranium	2.44	2.35	4
Zinc	43	42	2

Compound	Concentration (mg/Kg)		RPD
	EM-JS-08-1-3	EM-JS-08-1-3D	
Antimony	0.4	0.6	40
Arsenic	7.7	8.2	6
Barium	47.3	69.5	38
Chromium	2	3	40
Cobalt	5	5	0
Copper	1800	1430	23
Lead	152	51.90	98
Manganese	190	193	2
Mercury	0.09	0.07	25
Molybdenum	315	342	8
Selenium	3.38	2.85	17
Thallium	0.20	0.17	16
Uranium	1.17	1.29	10
Zinc	39	43	10

**FMI Gold & Copper-Sierrita
Metals - Data Qualification Summary - SDG L71134**

SDG	Sample	Analyte	Flag	A or P	ADEQ	Reason
L71134	RP-JS-02-0-1 RP-JS-02-1-3 RP-JS-02-1-3D RP-JS-02-5-7 RP-JS-02-10-12 RP-JS-02-15-17 RP-JS-01-0-1 RP-JS-01-1-3 RP-JS-01-1-3D RP-JS-01-5-7 RP-JS-01-10-12 RP-JS-01-15-17 EM-JS-08-0-1 EM-JS-08-1-3 EM-JS-08-1-3D EM-JS-08-5-7 EM-JS-08-10-12	Antimony	J (all detects) UJ (all non-detects)	A	M2	Matrix spike/Matrix spike duplicates (%R)
L71134	RP-JS-02-0-1 RP-JS-02-1-3 RP-JS-02-1-3D RP-JS-02-5-7 RP-JS-02-10-12 RP-JS-02-15-17 RP-JS-01-0-1 RP-JS-01-1-3 RP-JS-01-1-3D RP-JS-01-5-7 RP-JS-01-10-12 RP-JS-01-15-17 EM-JS-08-0-1 EM-JS-08-1-3 EM-JS-08-1-3D EM-JS-08-5-7 EM-JS-08-10-12	Chromium	J (all detects)	A	M1	Matrix spike/Matrix spike duplicates (%R)
L71134	RP-JS-02-0-1 RP-JS-02-1-3 RP-JS-02-1-3D RP-JS-02-5-7 RP-JS-02-10-12 RP-JS-02-15-17 RP-JS-01-0-1 RP-JS-01-1-3 RP-JS-01-1-3D RP-JS-01-5-7 RP-JS-01-10-12 RP-JS-01-15-17 EM-JS-08-0-1 EM-JS-08-1-3 EM-JS-08-1-3D EM-JS-08-5-7 EM-JS-08-10-12	Arsenic	J (all detects)	A	L1	Laboratory control samples (concentration)

SDG	Sample	Analyte	Flag	A or P	ADEQ	Reason
L71134	RP-JS-02-0-1 RP-JS-02-1-3 RP-JS-02-1-3D RP-JS-02-5-7 RP-JS-02-10-12 RP-JS-02-15-17 RP-JS-01-0-1 RP-JS-01-1-3 RP-JS-01-1-3D RP-JS-01-5-7 RP-JS-01-10-12 RP-JS-01-15-17 EM-JS-08-0-1 EM-JS-08-1-3 EM-JS-08-1-3D EM-JS-08-5-7 EM-JS-08-10-12	Lead	J (all detects)	A	-	ICP serial dilution (%D)

**FMI Gold & Copper-Sierrita
Metals - Laboratory Blank Data Qualification Summary - SDG L71134**

SDG	Sample	Analyte	Modified Final Concentration	A or P	ADEQ
L71134	RP-JS-02-0-1	Thallium	0.25U mg/Kg	A	B3
L71134	RP-JS-02-1-3	Thallium	0.11U mg/Kg	A	B3
L71134	RP-JS-02-1-3D	Thallium	0.12U mg/Kg	A	B3
L71134	RP-JS-02-5-7	Thallium	0.17U mg/Kg	A	B3
L71134	RP-JS-02-10-12	Thallium	0.12U mg/Kg	A	B3
L71134	RP-JS-02-15-17	Thallium	0.15U mg/Kg	A	B3
L71134	RP-JS-01-0-1	Thallium	0.15U mg/Kg	A	B3
L71134	RP-JS-01-1-3	Thallium	0.13U mg/Kg	A	B3
L71134	RP-JS-01-1-3D	Thallium	0.14U mg/Kg	A	B3
L71134	RP-JS-01-5-7	Thallium	0.08U mg/Kg	A	B3
L71134	RP-JS-01-10-12	Thallium	0.09U mg/Kg	A	B3
L71134	RP-JS-01-15-17	Thallium	0.15U mg/Kg	A	B3

SDG	Sample	Analyte	Modified Final Concentration	A or P	ADEQ
L71134	EM-JS-08-0-1	Thallium	0.12U mg/Kg	A	B3
L71134	EM-JS-08-1-3	Thallium	0.20U mg/Kg	A	B3
L71134	EM-JS-08-1-3D	Thallium	0.17U mg/Kg	A	B3
L71134	EM-JS-08-5-7	Thallium	0.22U mg/Kg	A	B3
L71134	EM-JS-08-10-12	Thallium	0.17U mg/Kg	A	B3

**FMI Gold & Copper-Sierrita
Metals - Field Blank Data Qualification Summary - SDG L71134**

No Sample Data Qualified in this SDG

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-02-0-1

ACZ Sample ID: **L71134-01**

Date Sampled: 08/12/08 08:11

Date Received: 08/13/08

Sample Matrix: *Soil*

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.2	B	*	mg/Kg	0.2	1	08/29/08 6:40	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	3.5		*	mg/Kg	0.3	0.5	08/29/08 6:40	rac J(CL1)
Barium, total (3050)	M6010B ICP	303			mg/Kg	0.3	2	08/28/08 3:09	aeh
Beryllium, total (3050)	M6010B ICP	1.6			mg/Kg	0.2	1	08/28/08 3:09	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/28/08 3:09	aeh
Chromium, total (3050)	M6010B ICP	7		*	mg/Kg	1	5	08/28/08 3:09	aeh J(M1)
Cobalt, total (3050)	M6010B ICP	10		*	mg/Kg	1	5	08/28/08 3:09	aeh
Copper, total (3050)	M6010B ICP	63		*	mg/Kg	1	5	08/28/08 3:09	aeh
Lead, total (3050)	M6020 ICP-MS	10.80		*	mg/Kg	0.05	0.3	08/29/08 6:40	rac J
Manganese, total (3050)	M6010B ICP	975		*	mg/Kg	0.5	3	08/28/08 3:09	aeh
Mercury, total	M7471A CVAA	0.04	B		mg/Kg	0.04	0.2	08/23/08 17:15	jws/pmc
Molybdenum, total (3050)	M6010B ICP	6		*	mg/Kg	1	5	08/28/08 3:09	aeh
Nickel, total (3050)	M6010B ICP	6			mg/Kg	1	5	08/28/08 3:09	aeh
Selenium, total (3050)	M6020 ICP-MS	0.34			mg/Kg	0.05	0.3	08/29/08 6:40	rac
Thallium, total (3050)	M6020 ICP-MS	0.25	B		mg/Kg	0.05	0.3	08/29/08 6:40	rac K (B3)
Uranium, total (3050)	M6020 ICP-MS	2.11		*	mg/Kg	0.05	0.3	08/29/08 6:40	rac
Zinc, total (3050)	M6010B ICP	51		*	mg/Kg	1	5	08/28/08 3:09	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	93.3		*	%	0.1	0.5	08/18/08 19:10	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 17:00	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 9:00	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 3:11	lwl/bjl

Arizona license number: AZ0102

12/30/08

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-02-1-3

ACZ Sample ID: **L71134-02**

Date Sampled: 08/12/08 08:11

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/29/08 6:53	rac J (M3)
Arsenic, total (3050)	M6020 ICP-MS	3.5		*	mg/Kg	0.3	0.5	08/29/08 6:53	rac J (L1)
Barium, total (3050)	M6010B ICP	47.3			mg/Kg	0.3	2	08/28/08 3:13	aeh
Beryllium, total (3050)	M6010B ICP		U		mg/Kg	0.2	1	08/28/08 3:13	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/28/08 3:13	aeh
Chromium, total (3050)	M6010B ICP	3	B	*	mg/Kg	1	5	08/28/08 3:13	aeh J (M1)
Cobalt, total (3050)	M6010B ICP	2	B	*	mg/Kg	1	5	08/28/08 3:13	aeh
Copper, total (3050)	M6010B ICP	74		*	mg/Kg	1	5	08/28/08 3:13	aeh
Lead, total (3050)	M6020 ICP-MS	8.50		*	mg/Kg	0.05	0.3	08/29/08 6:53	rac J
Manganese, total (3050)	M6010B ICP	160		*	mg/Kg	0.5	3	08/28/08 3:13	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/23/08 17:17	jws/pmc
Molybdenum, total (3050)	M6010B ICP	121		*	mg/Kg	1	5	08/28/08 3:13	aeh
Nickel, total (3050)	M6010B ICP		U		mg/Kg	1	5	08/28/08 3:13	aeh
Selenium, total (3050)	M6020 ICP-MS	0.74			mg/Kg	0.05	0.3	08/29/08 6:53	rac
Thallium, total (3050)	M6020 ICP-MS	0.11	B		mg/Kg	0.05	0.3	08/29/08 6:53	rac N (B3)
Uranium, total (3050)	M6020 ICP-MS	1.07		*	mg/Kg	0.05	0.3	08/29/08 6:53	rac
Zinc, total (3050)	M6010B ICP	23		*	mg/Kg	1	5	08/28/08 3:13	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	87.8		*	%	0.1	0.5	08/18/08 21:21	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 17:31	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 9:22	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 4:19	Iwt/bjl

Arizona license number: AZ0102

Mr. 2010

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-02-1-3D

ACZ Sample ID: L71134-03

Date Sampled: 08/12/08 08:11

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/29/08 7:00	rac KJ (M2)
Arsenic, total (3050)	M6020 ICP-MS	3.7		*	mg/Kg	0.3	0.5	08/29/08 7:00	rac JC (L1)
Barium, total (3050)	M6010B ICP	49.3			mg/Kg	0.3	2	08/28/08 3:16	aeh
Beryllium, total (3050)	M6010B ICP		U		mg/Kg	0.2	1	08/28/08 3:16	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/28/08 3:16	aeh
Chromium, total (3050)	M6010B ICP	3	B	*	mg/Kg	1	5	08/28/08 3:16	aeh J (M1)
Cobalt, total (3050)	M6010B ICP	2	B	*	mg/Kg	1	5	08/28/08 3:16	aeh
Copper, total (3050)	M6010B ICP	81		*	mg/Kg	1	5	08/28/08 3:16	aeh
Lead, total (3050)	M6020 ICP-MS	9.53		*	mg/Kg	0.05	0.3	08/29/08 7:00	rac J
Manganese, total (3050)	M6010B ICP	169		*	mg/Kg	0.5	3	08/28/08 3:16	aeh
Mercury, total	M7471A CVAA	0.05	B		mg/Kg	0.04	0.2	08/23/08 17:19	jws/pmc
Molybdenum, total (3050)	M6010B ICP	109		*	mg/Kg	1	5	08/28/08 3:16	aeh
Nickel, total (3050)	M6010B ICP		U		mg/Kg	1	5	08/28/08 3:16	aeh
Selenium, total (3050)	M6020 ICP-MS	0.89			mg/Kg	0.05	0.3	08/29/08 7:00	rac
Thallium, total (3050)	M6020 ICP-MS	0.12	B		mg/Kg	0.05	0.3	08/29/08 7:00	rac K (B3)
Uranium, total (3050)	M6020 ICP-MS	1.25		*	mg/Kg	0.05	0.3	08/29/08 7:00	rac
Zinc, total (3050)	M6010B ICP	26		*	mg/Kg	1	5	08/28/08 3:16	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	86.7		*	%	0.1	0.5	08/19/08 1:43	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 18:03	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 9:45	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 5:27	Iwt/bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-02-5-7

ACZ Sample ID: L71134-04

Date Sampled: 08/12/08 08:21

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/29/08 7:20	rac NJ(M2)
Arsenic, total (3050)	M6020 ICP-MS	5.2		*	mg/Kg	0.3	0.5	08/29/08 7:20	rac J(CL1)
Barium, total (3050)	M6010B ICP	188			mg/Kg	0.3	2	08/28/08 3:20	aeh
Beryllium, total (3050)	M6010B ICP	0.8	B		mg/Kg	0.2	1	08/28/08 3:20	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/28/08 3:20	aeh
Chromium, total (3050)	M6010B ICP	4	B	*	mg/Kg	1	5	08/28/08 3:20	aeh J(CM1)
Cobalt, total (3050)	M6010B ICP	10		*	mg/Kg	1	5	08/28/08 3:20	aeh
Copper, total (3050)	M6010B ICP	123		*	mg/Kg	1	5	08/28/08 3:20	aeh
Lead, total (3050)	M6020 ICP-MS	7.69		*	mg/Kg	0.05	0.3	08/29/08 7:20	rac J
Manganese, total (3050)	M6010B ICP	1250		*	mg/Kg	0.5	3	08/28/08 3:20	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/23/08 17:21	jws/pmc
Molybdenum, total (3050)	M6010B ICP	32		*	mg/Kg	1	5	08/28/08 3:20	aeh
Nickel, total (3050)	M6010B ICP	4	B		mg/Kg	1	5	08/28/08 3:20	aeh
Selenium, total (3050)	M6020 ICP-MS	0.70			mg/Kg	0.05	0.3	08/29/08 7:20	rac
Thallium, total (3050)	M6020 ICP-MS	0.17	B		mg/Kg	0.05	0.3	08/29/08 7:20	rac NJ(B3)
Uranium, total (3050)	M6020 ICP-MS	2.12		*	mg/Kg	0.05	0.3	08/29/08 7:20	rac
Zinc, total (3050)	M6010B ICP	71		*	mg/Kg	1	5	08/28/08 3:20	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	86.3		*	%	0.1	0.5	08/19/08 3:54	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 18:34	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 10:07	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 6:35	Iwt/bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-02-10-12

ACZ Sample ID: **L71134-05**

Date Sampled: 08/12/08 08:37

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	08/29/08 7:27	rac J (M2)
Arsenic, total (3050)	M6020 ICP-MS	3.3		*	mg/Kg	0.3	0.5	08/29/08 7:27	rac J (L1)
Barium, total (3050)	M6010B ICP	50.9			mg/Kg	0.3	2	08/28/08 3:23	aeh
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	08/28/08 3:23	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/28/08 3:23	aeh
Chromium, total (3050)	M6010B ICP	2	B	*	mg/Kg	1	5	08/28/08 3:23	aeh J (M1)
Cobalt, total (3050)	M6010B ICP	16		*	mg/Kg	1	5	08/28/08 3:23	aeh
Copper, total (3050)	M6010B ICP	323		*	mg/Kg	1	5	08/28/08 3:23	aeh
Lead, total (3050)	M6020 ICP-MS	14.50		*	mg/Kg	0.05	0.3	08/29/08 7:27	rac J
Manganese, total (3050)	M6010B ICP	713		*	mg/Kg	0.5	3	08/28/08 3:23	aeh
Mercury, total	M7471A CVAA	0.07	B		mg/Kg	0.04	0.2	08/23/08 17:23	jws/pmc
Molybdenum, total (3050)	M6010B ICP	93		*	mg/Kg	1	5	08/28/08 3:23	aeh
Nickel, total (3050)	M6010B ICP	5			mg/Kg	1	5	08/28/08 3:23	aeh
Selenium, total (3050)	M6020 ICP-MS	0.93			mg/Kg	0.05	0.3	08/29/08 7:27	rac
Thallium, total (3050)	M6020 ICP-MS	0.12	B		mg/Kg	0.05	0.3	08/29/08 7:27	rac J (B3)
Uranium, total (3050)	M6020 ICP-MS	9.12		*	mg/Kg	0.05	0.3	08/29/08 7:27	rac
Zinc, total (3050)	M6010B ICP	139		*	mg/Kg	1	5	08/28/08 3:23	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	88.4		*	%	0.1	0.5	08/19/08 6:05	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 19:06	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 10:30	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 7:43	Iwt/bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-02-15-17

ACZ Sample ID: **L71134-06**

Date Sampled: 08/12/08 08:51

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.2	B	*	mg/Kg	0.2	1	08/29/08 7:33	rac J(M ²)
Arsenic, total (3050)	M6020 ICP-MS	3.1		*	mg/Kg	0.3	0.5	08/29/08 7:33	rac J(CL)
Barium, total (3050)	M6010B ICP	47.5			mg/Kg	0.3	2	08/28/08 3:27	aeh
Beryllium, total (3050)	M6010B ICP	0.2	B		mg/Kg	0.2	1	08/28/08 3:27	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/28/08 3:27	aeh
Chromium, total (3050)	M6010B ICP	2	B	*	mg/Kg	1	5	08/28/08 3:27	aeh J(M ¹)
Cobalt, total (3050)	M6010B ICP	7		*	mg/Kg	1	5	08/28/08 3:27	aeh
Copper, total (3050)	M6010B ICP	289		*	mg/Kg	1	5	08/28/08 3:27	aeh
Lead, total (3050)	M6020 ICP-MS	14.70		*	mg/Kg	0.05	0.3	08/29/08 7:33	rac J
Manganese, total (3050)	M6010B ICP	386		*	mg/Kg	0.5	3	08/28/08 3:27	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	08/23/08 17:25	jws/pmc
Molybdenum, total (3050)	M6010B ICP	51		*	mg/Kg	1	5	08/28/08 3:27	aeh
Nickel, total (3050)	M6010B ICP	2	B		mg/Kg	1	5	08/28/08 3:27	aeh
Selenium, total (3050)	M6020 ICP-MS	0.84			mg/Kg	0.05	0.3	08/29/08 7:33	rac
Thallium, total (3050)	M6020 ICP-MS	0.15	B		mg/Kg	0.05	0.3	08/29/08 7:33	rac K(B ³)
Uranium, total (3050)	M6020 ICP-MS	4.35		*	mg/Kg	0.05	0.3	08/29/08 7:33	rac
Zinc, total (3050)	M6010B ICP	64		*	mg/Kg	1	5	08/28/08 3:27	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	83.2		*	%	0.1	0.5	08/19/08 8:15	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 19:37	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 10:52	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 8:51	Iwt/bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-01-0-1

ACZ Sample ID: L71134-07

Date Sampled: 08/12/08 09:21

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/29/08 7:40	rac NJ(M2)
Arsenic, total (3050)	M6020 ICP-MS	3.5		*	mg/Kg	0.3	0.5	08/29/08 7:40	rac J(L1)
Barium, total (3050)	M6010B ICP	127			mg/Kg	0.3	2	08/28/08 3:37	aeh
Beryllium, total (3050)	M6010B ICP	0.6	B		mg/Kg	0.2	1	08/28/08 3:37	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/28/08 3:37	aeh
Chromium, total (3050)	M6010B ICP	4	B	*	mg/Kg	1	5	08/28/08 3:37	aeh
Cobalt, total (3050)	M6010B ICP	5	B	*	mg/Kg	1	5	08/28/08 3:37	aeh
Copper, total (3050)	M6010B ICP	124		*	mg/Kg	1	5	08/28/08 3:37	aeh
Lead, total (3050)	M6020 ICP-MS	11.40		*	mg/Kg	0.05	0.3	08/29/08 7:40	rac J
Manganese, total (3050)	M6010B ICP	271		*	mg/Kg	0.5	3	08/28/08 3:37	aeh
Mercury, total	M7471A CVAA	0.07	B		mg/Kg	0.04	0.2	08/23/08 17:28	jws/pmc
Molybdenum, total (3050)	M6010B ICP	51		*	mg/Kg	1	5	08/28/08 3:37	aeh
Nickel, total (3050)	M6010B ICP	2	B		mg/Kg	1	5	08/28/08 3:37	aeh
Selenium, total (3050)	M6020 ICP-MS	0.91			mg/Kg	0.05	0.3	08/29/08 7:40	rac
Thallium, total (3050)	M6020 ICP-MS	0.15	B		mg/Kg	0.05	0.3	08/29/08 7:40	rac NJ(B3)
Uranium, total (3050)	M6020 ICP-MS	2.64		*	mg/Kg	0.05	0.3	08/29/08 7:40	rac
Zinc, total (3050)	M6010B ICP	40		*	mg/Kg	1	5	08/28/08 3:37	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	91.2		*	%	0.1	0.5	08/19/08 10:26	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 20:09	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 11:15	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 9:59	lwt/bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-01-1-3

ACZ Sample ID: **L71134-08**

Date Sampled: 08/12/08 09:21

Date Received: 08/13/08

Sample Matrix: **Soil**

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/29/08 7:47	rac <i>HJ(M2)</i>
Arsenic, total (3050)	M6020 ICP-MS	3.1		*	mg/Kg	0.3	0.5	08/29/08 7:47	rac <i>J(CU)</i>
Barium, total (3050)	M6010B ICP	46.1			mg/Kg	0.3	2	08/28/08 3:40	aeh
Beryllium, total (3050)	M6010B ICP	0.2	B		mg/Kg	0.2	1	08/28/08 3:40	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/28/08 3:40	aeh
Chromium, total (3050)	M6010B ICP	4	B	*	mg/Kg	1	5	08/28/08 3:40	aeh <i>J(M1)</i>
Cobalt, total (3050)	M6010B ICP	5		*	mg/Kg	1	5	08/28/08 3:40	aeh
Copper, total (3050)	M6010B ICP	183		*	mg/Kg	1	5	08/28/08 3:40	aeh
Lead, total (3050)	M6020 ICP-MS	12.70		*	mg/Kg	0.05	0.3	08/29/08 7:47	rac <i>J</i>
Manganese, total (3050)	M6010B ICP	244		*	mg/Kg	0.5	3	08/28/08 3:40	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/23/08 17:30	jws/pmc
Molybdenum, total (3050)	M6010B ICP	86		*	mg/Kg	1	5	08/28/08 3:40	aeh
Nickel, total (3050)	M6010B ICP	2	B		mg/Kg	1	5	08/28/08 3:40	aeh
Selenium, total (3050)	M6020 ICP-MS	0.80			mg/Kg	0.05	0.3	08/29/08 7:47	rac
Thallium, total (3050)	M6020 ICP-MS	0.13	B		mg/Kg	0.05	0.3	08/29/08 7:47	rac <i>u(B3)</i>
Uranium, total (3050)	M6020 ICP-MS	2.44		*	mg/Kg	0.05	0.3	08/29/08 7:47	rac
Zinc, total (3050)	M6010B ICP	43		*	mg/Kg	1	5	08/28/08 3:40	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	87.8		*	%	0.1	0.5	08/19/08 12:37	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 20:41	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 11:37	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 11:06	lwt/bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-01-1-3D

ACZ Sample ID: **L71134-09**

Date Sampled: 08/12/08 09:21

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst	Comments
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/29/08 7:53	rac	NS(M2)
Arsenic, total (3050)	M6020 ICP-MS	3.1		*	mg/Kg	0.3	0.5	08/29/08 7:53	rac	J (H)
Barium, total (3050)	M6010B ICP	41.8			mg/Kg	0.3	2	08/28/08 3:44	aeh	
Beryllium, total (3050)	M6010B ICP		U		mg/Kg	0.2	1	08/28/08 3:44	aeh	
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/28/08 3:44	aeh	
Chromium, total (3050)	M6010B ICP	4	B	*	mg/Kg	1	5	08/28/08 3:44	aeh	J(CM1)
Cobalt, total (3050)	M6010B ICP	5	B	*	mg/Kg	1	5	08/28/08 3:44	aeh	
Copper, total (3050)	M6010B ICP	181		*	mg/Kg	1	5	08/28/08 3:44	aeh	
Lead, total (3050)	M6020 ICP-MS	13.40		*	mg/Kg	0.05	0.3	08/29/08 7:53	rac	J
Manganese, total (3050)	M6010B ICP	239		*	mg/Kg	0.5	3	08/28/08 3:44	aeh	
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/23/08 17:37	jws/pmc	
Molybdenum, total (3050)	M6010B ICP	66		*	mg/Kg	1	5	08/28/08 3:44	aeh	
Nickel, total (3050)	M6010B ICP	1	B		mg/Kg	1	5	08/28/08 3:44	aeh	
Selenium, total (3050)	M6020 ICP-MS	0.80			mg/Kg	0.05	0.3	08/29/08 7:53	rac	
Thallium, total (3050)	M6020 ICP-MS	0.14	B		mg/Kg	0.05	0.3	08/29/08 7:53	rac	n(B3)
Uranium, total (3050)	M6020 ICP-MS	2.35		*	mg/Kg	0.05	0.3	08/29/08 7:53	rac	
Zinc, total (3050)	M6010B ICP	42		*	mg/Kg	1	5	08/28/08 3:44	aeh	

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	89.2		*	%	0.1	0.5	08/19/08 14:48	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 21:12	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 12:00	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 12:14	lwt/bjl

Arizona license number: AZ0102

Marked for review

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-01-5-7

ACZ Sample ID: **L71134-10**

Date Sampled: 08/12/08 09:40

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/29/08 8:00	rac <i>uj(M2)</i>
Arsenic, total (3050)	M6020 ICP-MS	1.9		*	mg/Kg	0.3	0.5	08/29/08 8:00	rac <i>J(4)</i>
Barium, total (3050)	M6010B ICP	49.0			mg/Kg	0.3	2	08/28/08 3:47	aeh
Beryllium, total (3050)	M6010B ICP		U		mg/Kg	0.2	1	08/28/08 3:47	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/28/08 3:47	aeh
Chromium, total (3050)	M6010B ICP	2	B	*	mg/Kg	1	5	08/28/08 3:47	aeh <i>J(M1)</i>
Cobalt, total (3050)	M6010B ICP	5	B	*	mg/Kg	1	5	08/28/08 3:47	aeh
Copper, total (3050)	M6010B ICP	137		*	mg/Kg	1	5	08/28/08 3:47	aeh
Lead, total (3050)	M6020 ICP-MS	6.43		*	mg/Kg	0.05	0.3	08/29/08 8:00	rac <i>J</i>
Manganese, total (3050)	M6010B ICP	231		*	mg/Kg	0.5	3	08/28/08 3:47	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	08/23/08 17:39	jws/pmc
Molybdenum, total (3050)	M6010B ICP	33		*	mg/Kg	1	5	08/28/08 3:47	aeh
Nickel, total (3050)	M6010B ICP	2	B		mg/Kg	1	5	08/28/08 3:47	aeh
Selenium, total (3050)	M6020 ICP-MS	0.60			mg/Kg	0.05	0.3	08/29/08 8:00	rac
Thallium, total (3050)	M6020 ICP-MS	0.08	B		mg/Kg	0.05	0.3	08/29/08 8:00	rac <i>u(B3)</i>
Uranium, total (3050)	M6020 ICP-MS	1.26		*	mg/Kg	0.05	0.3	08/29/08 8:00	rac
Zinc, total (3050)	M6010B ICP	36		*	mg/Kg	1	5	08/28/08 3:47	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	90.9		*	%	0.1	0.5	08/19/08 16:59	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 21:44	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 12:22	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 13:22	lwt/bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-01-10-12

ACZ Sample ID: L71134-11

Date Sampled: 08/12/08 09:53

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	POL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	08/29/08 8:07	rac HJM2
Arsenic, total (3050)	M6020 ICP-MS	2.6		*	mg/Kg	0.3	0.5	08/29/08 8:07	rac SCLB
Barium, total (3050)	M6010B ICP	50.8			mg/Kg	0.3	2	08/28/08 3:51	aeh
Beryllium, total (3050)	M6010B ICP	0.3	B		mg/Kg	0.2	1	08/28/08 3:51	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/28/08 3:51	aeh
Chromium, total (3050)	M6010B ICP	2	B	*	mg/Kg	1	5	08/28/08 3:51	aeh JCM1
Cobalt, total (3050)	M6010B ICP	5		*	mg/Kg	1	5	08/28/08 3:51	aeh
Copper, total (3050)	M6010B ICP	466		*	mg/Kg	1	5	08/28/08 3:51	aeh
Lead, total (3050)	M6020 ICP-MS	9.69		*	mg/Kg	0.05	0.3	08/29/08 8:07	rac J
Manganese, total (3050)	M6010B ICP	207		*	mg/Kg	0.5	3	08/28/08 3:51	aeh
Mercury, total	M7471A CVAA	0.06	B		mg/Kg	0.04	0.2	08/23/08 17:41	jws/pmc
Molybdenum, total (3050)	M6010B ICP	126		*	mg/Kg	1	5	08/28/08 3:51	aeh
Nickel, total (3050)	M6010B ICP	2	B		mg/Kg	1	5	08/28/08 3:51	aeh
Selenium, total (3050)	M6020 ICP-MS	1.04			mg/Kg	0.05	0.3	08/29/08 8:07	rac
Thallium, total (3050)	M6020 ICP-MS	0.09	B		mg/Kg	0.05	0.3	08/29/08 8:07	rac H(B3)
Uranium, total (3050)	M6020 ICP-MS	2.25		*	mg/Kg	0.05	0.3	08/29/08 8:07	rac
Zinc, total (3050)	M6010B ICP	48		*	mg/Kg	1	5	08/28/08 3:51	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	POL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	85.8		*	%	0.1	0.5	08/19/08 19:10	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	POL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 22:15	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 12:45	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 14:30	Iwt/bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: RP-JS-01-15-17

ACZ Sample ID: L71134-12

Date Sampled: 08/12/08 10:05

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	08/29/08 8:13	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	3.6		*	mg/Kg	0.3	0.5	08/29/08 8:13	rac J(CL)
Barium, total (3050)	M6010B ICP	56.8			mg/Kg	0.3	2	08/28/08 3:54	aeh
Beryllium, total (3050)	M6010B ICP	0.3	B		mg/Kg	0.2	1	08/28/08 3:54	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/28/08 3:54	aeh
Chromium, total (3050)	M6010B ICP	2	B	*	mg/Kg	1	5	08/28/08 3:54	aeh J(M1)
Cobalt, total (3050)	M6010B ICP	6		*	mg/Kg	1	5	08/28/08 3:54	aeh
Copper, total (3050)	M6010B ICP	254		*	mg/Kg	1	5	08/28/08 3:54	aeh
Lead, total (3050)	M6020 ICP-MS	11.30		*	mg/Kg	0.05	0.3	08/29/08 8:13	rac J
Manganese, total (3050)	M6010B ICP	368		*	mg/Kg	0.5	3	08/28/08 3:54	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	08/23/08 17:44	jws/pmc
Molybdenum, total (3050)	M6010B ICP	67		*	mg/Kg	1	5	08/28/08 3:54	aeh
Nickel, total (3050)	M6010B ICP	2	B		mg/Kg	1	5	08/28/08 3:54	aeh
Selenium, total (3050)	M6020 ICP-MS	0.93			mg/Kg	0.05	0.3	08/29/08 8:13	rac
Thallium, total (3050)	M6020 ICP-MS	0.15	B		mg/Kg	0.05	0.3	08/29/08 8:13	rac U(B3)
Uranium, total (3050)	M6020 ICP-MS	4.60		*	mg/Kg	0.05	0.3	08/29/08 8:13	rac
Zinc, total (3050)	M6010B ICP	84		*	mg/Kg	1	5	08/28/08 3:54	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	83.4		*	%	0.1	0.5	08/19/08 21:20	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 22:47	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 13:07	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 15:38	lwt/bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: EM-JS-08-0-1

ACZ Sample ID: **L71134-13**

Date Sampled: 08/12/08 13:28

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	1.1	*		mg/Kg	0.2	1	08/29/08 8:20	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	11.9			mg/Kg	0.3	0.5	08/29/08 8:20	rac J(L1)
Barium, total (3050)	M6010B ICP	55.7			mg/Kg	0.3	2	08/28/08 3:58	aeh
Beryllium, total (3050)	M6010B ICP		U		mg/Kg	0.2	1	08/28/08 3:58	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/28/08 3:58	aeh
Chromium, total (3050)	M6010B ICP	5	B	*	mg/Kg	1	5	08/28/08 3:58	aeh J(M1)
Cobalt, total (3050)	M6010B ICP	4	B	*	mg/Kg	1	5	08/28/08 3:58	aeh
Copper, total (3050)	M6010B ICP	2040		*	mg/Kg	1	5	08/28/08 3:58	aeh
Lead, total (3050)	M6020 ICP-MS	57.00		*	mg/Kg	0.05	0.3	08/29/08 8:20	rac J
Manganese, total (3050)	M6010B ICP	166		*	mg/Kg	0.5	3	08/28/08 3:58	aeh
Mercury, total	M7471A CVAA	0.08	B		mg/Kg	0.04	0.2	08/23/08 17:46	jws/pmc
Molybdenum, total (3050)	M6010B ICP	1240		*	mg/Kg	1	5	08/28/08 3:58	aeh
Nickel, total (3050)	M6010B ICP		U		mg/Kg	1	5	08/28/08 3:58	aeh
Selenium, total (3050)	M6020 ICP-MS	3.24			mg/Kg	0.05	0.3	08/29/08 8:20	rac
Thallium, total (3050)	M6020 ICP-MS	0.12	B		mg/Kg	0.05	0.3	08/29/08 8:20	rac U(B3)
Uranium, total (3050)	M6020 ICP-MS	2.41		*	mg/Kg	0.05	0.3	08/29/08 8:20	rac
Zinc, total (3050)	M6010B ICP	39		*	mg/Kg	1	5	08/28/08 3:58	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	93.9	*		%	0.1	0.5	08/19/08 23:31	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972		*					08/18/08 23:19	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 13:30	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2		*					08/23/08 16:46	lwt/bjl

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:

Sample ID: EM-JS-08-1-3

ACZ Sample ID: L71134-14

Date Sampled: 08/12/08 13:28

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.4	B	*	mg/Kg	0.2	1	08/29/08 8:40	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	7.7		*	mg/Kg	0.3	0.5	08/29/08 8:40	rac J(C4)
Barium, total (3050)	M6010B ICP	47.3			mg/Kg	0.3	2	08/28/08 4:01	aeh
Beryllium, total (3050)	M6010B ICP			U	mg/Kg	0.2	1	08/28/08 4:01	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	08/28/08 4:01	aeh
Chromium, total (3050)	M6010B ICP	2	B	*	mg/Kg	1	5	08/28/08 4:01	aeh J(M1)
Cobalt, total (3050)	M6010B ICP	5	B	*	mg/Kg	1	5	08/28/08 4:01	aeh
Copper, total (3050)	M6010B ICP	1800		*	mg/Kg	1	5	08/28/08 4:01	aeh
Lead, total (3050)	M6020 ICP-MS	152		*	mg/Kg	0.05	0.3	08/29/08 8:40	rac J
Manganese, total (3050)	M6010B ICP	190		*	mg/Kg	0.5	3	08/28/08 4:01	aeh
Mercury, total	M7471A CVAA	0.09	B		mg/Kg	0.04	0.2	08/23/08 17:48	jws/pmc
Molybdenum, total (3050)	M6010B ICP	315		*	mg/Kg	1	5	08/28/08 4:01	aeh
Nickel, total (3050)	M6010B ICP			U	mg/Kg	1	5	08/28/08 4:01	aeh
Selenium, total (3050)	M6020 ICP-MS	3.38			mg/Kg	0.05	0.3	08/29/08 8:40	rac
Thallium, total (3050)	M6020 ICP-MS	0.20	B		mg/Kg	0.05	0.3	08/29/08 8:40	rac J(B3)
Uranium, total (3050)	M6020 ICP-MS	1.17		*	mg/Kg	0.05	0.3	08/29/08 8:40	rac
Zinc, total (3050)	M6010B ICP	39		*	mg/Kg	1	5	08/28/08 4:01	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	91.5		*	%	0.1	0.5	08/20/08 1:42	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/18/08 23:50	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 13:52	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 17:54	Iwt/bjl

Arizona license number: AZ0102

6/17/2008

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: EM-JS-08-1-3D

ACZ Sample ID: L71134-15

Date Sampled: 08/12/08 13:28

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.6	B	*	mg/Kg	0.2	1	08/29/08 8:47	rac J (M2)
Arsenic, total (3050)	M6020 ICP-MS	8.2		*	mg/Kg	0.3	0.5	08/29/08 8:47	rac J (L1)
Barium, total (3050)	M6010B ICP	69.5			mg/Kg	0.3	2	08/28/08 4:04	aeh
Beryllium, total (3050)	M6010B ICP		U		mg/Kg	0.2	1	08/28/08 4:04	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	08/28/08 4:04	aeh
Chromium, total (3050)	M6010B ICP	3	B	*	mg/Kg	1	5	08/28/08 4:04	aeh J (M1)
Cobalt, total (3050)	M6010B ICP	5		*	mg/Kg	1	5	08/28/08 4:04	aeh
Copper, total (3050)	M6010B ICP	1430		*	mg/Kg	1	5	08/28/08 4:04	aeh
Lead, total (3050)	M6020 ICP-MS	51.90		*	mg/Kg	0.05	0.3	08/29/08 8:47	rac J
Manganese, total (3050)	M6010B ICP	193		*	mg/Kg	0.5	3	08/28/08 4:04	aeh
Mercury, total	M7471A CVAA	0.07	B		mg/Kg	0.04	0.2	08/23/08 17:50	jws/pmc
Molybdenum, total (3050)	M6010B ICP	342		*	mg/Kg	1	5	08/28/08 4:04	aeh
Nickel, total (3050)	M6010B ICP		U		mg/Kg	1	5	08/28/08 4:04	aeh
Selenium, total (3050)	M6020 ICP-MS	2.85			mg/Kg	0.05	0.3	08/29/08 8:47	rac
Thallium, total (3050)	M6020 ICP-MS	0.17	B		mg/Kg	0.05	0.3	08/29/08 8:47	rac J (B3)
Uranium, total (3050)	M6020 ICP-MS	1.29		*	mg/Kg	0.05	0.3	08/29/08 8:47	rac
Zinc, total (3050)	M6010B ICP	43		*	mg/Kg	1	5	08/28/08 4:04	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	91.4		*	%	0.1	0.5	08/20/08 3:53	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/19/08 0:22	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 14:15	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 19:02	Iwt/bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: EM-JS-08-5-7

ACZ Sample ID: **L71134-16**

Date Sampled: 08/12/08 13:33

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	13.6	*		mg/Kg	0.2	1	08/29/08 8:53	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	64.8	*		mg/Kg	0.3	0.5	08/29/08 8:53	rac J(L1)
Barium, total (3050)	M6010B ICP	150			mg/Kg	0.3	2	08/28/08 4:08	aeh
Beryllium, total (3050)	M6010B ICP		U		mg/Kg	0.2	1	08/28/08 4:08	aeh
Cadmium, total (3050)	M6010B ICP	5.0			mg/Kg	0.5	2	08/28/08 4:08	aeh
Chromium, total (3050)	M6010B ICP	36	*		mg/Kg	1	5	08/28/08 4:08	aeh J(M1)
Cobalt, total (3050)	M6010B ICP	42	*		mg/Kg	1	5	08/28/08 4:08	aeh
Copper, total (3050)	M6010B ICP	26800	*		mg/Kg	5	30	08/29/08 23:34	aeh
Lead, total (3050)	M6020 ICP-MS	999	*		mg/Kg	0.2	1	09/02/08 20:02	msh J
Manganese, total (3050)	M6010B ICP	932	*		mg/Kg	0.5	3	08/28/08 4:08	aeh
Mercury, total	M7471A CVAA	0.60			mg/Kg	0.04	0.2	08/23/08 17:52	jws/pmc
Molybdenum, total (3050)	M6010B ICP	6470	*		mg/Kg	1	5	08/28/08 4:08	aeh
Nickel, total (3050)	M6010B ICP	33			mg/Kg	1	5	08/28/08 4:08	aeh
Selenium, total (3050)	M6020 ICP-MS	7.85			mg/Kg	0.05	0.3	08/29/08 8:53	rac
Thallium, total (3050)	M6020 ICP-MS	0.22	B		mg/Kg	0.05	0.3	08/29/08 8:53	rac J(B3)
Uranium, total (3050)	M6020 ICP-MS	5.20	*		mg/Kg	0.05	0.3	08/29/08 8:53	rac
Zinc, total (3050)	M6010B ICP	1550	*		mg/Kg	1	5	08/28/08 4:08	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	88.9	*		%	0.1	0.5	08/20/08 6:04	bji

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972		*					08/19/08 0:53	bji
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 14:37	bji
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2		*					08/23/08 20:10	Iwt/bji

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID:

Sample ID: EM-JS-08-10-12

ACZ Sample ID: L71134-17

Date Sampled: 08/12/08 13:56

Date Received: 08/13/08

Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	2.0		*	mg/Kg	0.2	1	08/29/08 9:00	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	16.0		*	mg/Kg	0.3	0.5	08/29/08 9:00	rac J(L1)
Barium, total (3050)	M6010B ICP	77.6			mg/Kg	0.3	2	08/28/08 4:29	aeh
Beryllium, total (3050)	M6010B ICP	0.9	B		mg/Kg	0.2	1	08/28/08 4:29	aeh
Cadmium, total (3050)	M6010B ICP	5.3			mg/Kg	0.5	2	08/28/08 4:29	aeh
Chromium, total (3050)	M6010B ICP	193		*	mg/Kg	1	5	08/28/08 4:29	aeh
Cobalt, total (3050)	M6010B ICP	23		*	mg/Kg	1	5	08/28/08 4:29	aeh
Copper, total (3050)	M6010B ICP	4120		*	mg/Kg	1	5	08/28/08 4:29	aeh
Lead, total (3050)	M6020 ICP-MS	303		*	mg/Kg	0.1	0.5	09/02/08 20:06	msh
Manganese, total (3050)	M6010B ICP	683		*	mg/Kg	0.5	3	08/28/08 4:29	aeh
Mercury, total	M7471A CVAA	0.40			mg/Kg	0.04	0.2	08/23/08 17:55	jws/pmc
Molybdenum, total (3050)	M6010B ICP	2220		*	mg/Kg	1	5	08/28/08 4:29	aeh
Nickel, total (3050)	M6010B ICP	29			mg/Kg	1	5	08/28/08 4:29	aeh
Selenium, total (3050)	M6020 ICP-MS	2.86			mg/Kg	0.05	0.3	08/29/08 9:00	rac
Thallium, total (3050)	M6020 ICP-MS	0.17	B		mg/Kg	0.05	0.3	08/29/08 9:00	rac
Uranium, total (3050)	M6020 ICP-MS	7.78		*	mg/Kg	0.05	0.3	08/29/08 9:00	rac
Zinc, total (3050)	M6010B ICP	741		*	mg/Kg	1	5	08/28/08 4:29	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	90.1		*	%	0.1	0.5	08/20/08 8:15	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				08/19/08 1:25	bjl
Digestion - Hot Plate	M3050B ICP-MS							08/24/08 15:45	bjl
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				08/23/08 21:18	lwt/bjl

Arizona license number: AZ0102

17/28/08

LDC #: 19954B4

VALIDATION COMPLETENESS WORKSHEET

Date: 10-23-08

SDG #: L71134

Level IV

Page: 1 of 1

Laboratory: ACZ Laboratories, Inc.

Reviewer: MG

2nd Reviewer: LM

METHOD: Metals (EPA SW 846 Method 6010B/6020/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 8-12-08
II.	Calibration	A	
III.	Blanks	SW	
IV.	ICP Interference Check Sample (ICS) Analysis	A	
V.	Matrix Spike Analysis	SW	MS / MSD
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	SW	LCS/LCSD
VIII.	Internal Standard (ICP-MS)	A	
IX.	Furnace Atomic Absorption QC	N	not utilized
X.	ICP Serial Dilution	SW	
XI.	Sample Result Verification	A	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	SW	D = 2+3, D = 8+9, D = 14+15
XIV.	Field Blanks	N	

Note: A = Acceptable

ND = No compounds detected

D = Duplicate

N = Not provided/applicable

R = Rinsate

TB = Trip blank

SW = See worksheet

FB = Field blank

EB = Equipment blank

Validated Samples:

all soil

1	RP-JS-02-0-1	11	RP-JS-01-10-12	21	EM-JS-08-10-12MSD	31	
2	RP-JS-02-1-3	12	RP-JS-01-15-17	22	PBS	32	
3	RP-JS-02-1-3D	13	EM-JS-08-0-1	23		33	
4	RP-JS-02-5-7	14	EM-JS-08-1-3	24		34	
5	RP-JS-02-10-12	15	EM-JS-08-1-3D	25		35	
6	RP-JS-02-15-17	16	EM-JS-08-5-7	26		36	
7	RP-JS-01-0-1	17	EM-JS-08-10-12	27		37	
8	RP-JS-01-1-3	18	EM-JS-08-5-7MS	28		38	
9	RP-JS-01-1-3D	19	EM-JS-08-5-7MSD	29		39	
10	RP-JS-01-5-7	20	EM-JS-08-10-12MS	30		40	

Notes:

LDC #: 19954 B4
SDG #: L71134

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: MG
2nd Reviewer:

Method: Metals (EPA SW 846 Method 6010/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times:				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration:				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury and 85-115% for cyanide) QC limits?	✓			
Were all initial calibration correlation coefficients > 0.995? (Level IV only)	✓			
III. Blanks:				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
IV. ICP Interference Check Sample:				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
V. Matrix spike/Matrix spike duplicate:				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL (+/- 2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were < 5X the RL.	✓			
VI. Laboratory control samples:				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?		✓		
VII. Flame Atomic Absorption QC				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analyses have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	

LDC #: 19954B4
SDG #: L71134

VALIDATION FINDINGS CHECKLIST

Page: 2 of 2
Reviewer: MG
2nd Reviewer: ✓

Validation Area	Yes	No	NA	Findings/Comments
VII. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the IDL?	✓			
Were all percent differences (%Ds) < 10%?		✓		
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		✓		
VIII. Internal Standards (EPA SW 846 Method 6020)				
Were all the percent recoveries (%R) within the 30-120% of the intensity of the internal standard in the associated initial calibration?	✓			
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Overall Assessment of Data				
Overall assessment of data was found to be acceptable.	✓			
XII. Field Duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target analytes were detected in the field duplicates.	✓			
XIII. Field Blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 19954B4
SDG #: L71134

VALIDATION FINDINGS WORKSHEET

Sample Specific Element Reference

Page: (of)

Reviewer: MG

2nd reviewer: _____

All circled elements are applicable to each sample.

Analysis Method

ICP		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,
ICP Trace	S	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,
ICP-MS	↓	Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN, U
GFAA		Al, Sb, As, Ba, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Hg, Ni, K, Se, Ag, Na, Ti, V, Zn, Mo, B, Si, CN,

Comments: Mercury by CVAA if performed

LDC #: 19954B4
SDG #: L71134

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)
Blank concentration units, unless otherwise noted: mg /L

VALIDATION FINDINGS WORKSHEET
Prep Blank/ICB/CCB Findings Tl for all
Cu 1 → 15, 17
Pb 16, 17
Associated Samples:

Page: 1 of 1
Reviewer: MG
2nd Reviewer: L

Analyte	Blank Identification										Analyte
	ICB	CCB1	CCB2	CCB3	PB ()	ICB	CCB1	CCB2	CCB3	PB ()	
Al											Al
Sb											Sb
As											As
Ba											Ba
Be											Be
Cd											Cd
Ca											Ca
Cr											Cr
Co											Co
Cu	0.011										Cu
Fe											Fe
Pb	0.0001										Pb
Mg											Mg
Mn											Mn
Hg											Hg
Ni											Ni
K											K
Se											Se
Ag											Ag
Na											Na
Tl	0.00021										Tl
V											V
Zn											Zn
B											B
Mo											Mo
Sr											Sr

The highest concentration found in the Prep Blank and ICB/CCB for each analyte is circled on this worksheet and transferred to the PB/ICB/CCB Qualified Samples worksheet.

LDC #: 19954B4

SDG #: L71134

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Sample Concentration units, unless otherwise noted:

**VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES**

Soil preparation factor applied: 100x ; TI 5.05x d.i.

mg /kg

Associated Samples:

Qual: U B3

Cu for # 1→15, 17

Pb for # 16, 17

TI for all

Page: 1 of 2

Reviewer: MG

2nd Reviewer: L

Analyte	Sample Identification									
	1	2	3	4	5	6	7	8	9	10
Al										
Sb										
As										
Ba										
Be										
Cd										
Ca										
Cr										
Co										
Cu	11.	5.50								
Fe										
Pb	0.1	0.05								
Mg										
Mn										
Hg										
Mo										
Ni										
K										
Se										
Ag										
Na										
Tl	0.21	0.53	0.25	0.11	0.12	0.17	0.12	0.15	0.15	0.13
V										0.08
Zn										
Sn										
R										

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 19954B4

SDG #: L71134

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Sample Concentration units, unless otherwise noted:

**VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES**

Soil preparation factor applied: 100x ; TI 5.05x d/l
Associated Samples:

mg /kg

Qual: U B3

Cu for # 1→15, 17

Pb for # 16, 17

TI for all

Page: 2 of 2

Reviewer: MG

2nd Reviewer: LN

Analyte	Sample Identification							
	11	12	13	14	15	16	17	
Al								
Sb								
As								
Ba								
Be								
Cd								
Ca								
Cr								
Co								
Cu	11.	5.50						
Fe								
Pb	0.1	0.05						
Mg								
Mn								
Hg								
Mo								
Ni								
K								
Se								
Ag								
Na								
TI	0.01	0.53	0.09	0.15	0.12	0.20	0.17	0.22
V								0.17
Zn								
Sn								
B								

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note: a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 19954 B4
SDG #: L71134

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates

Page: of

Reviewer: MG

2nd Reviewer: _____

METHOD: Trace metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
 Y N N/A Was a matrix spike analyzed for each matrix in this SPC?

Was a matrix spike analyzed for each matrix in this SDG?
Y N N/A
Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N A Were all duplicate sample relative percent differences (RPD) $\leq 20\%$ for water samples and $\leq 35\%$ for soil samples?
LEVEL IV ONLY:

LEVEL IV ONLY.

YN NA Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

Comments:

LDC #: 19954 B4

SDG #: L71134

VALIDATION FINDINGS WORKSHEET

Laboratory Control Samples (LCS)

Page: 1 of 1
Reviewer: MG
2nd Reviewer: /

METHOD: Trace Metals (EPA SW 846 Method 6010B/6020/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

N N/A Was a laboratory control sample (LCS) analyzed for each matrix in this SDG?

Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the QC limits?

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

Comments:

LDC #: 19954B4

SDG #: L71134

VALIDATION FINDINGS WORKSHEET

ICP Serial Dilution

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

Page: 1 of 1

Reviewer: ME

2nd Reviewer: /

Please see qualifications below for all questions answered "N". Not applicable questions can be left blank.

Y N N/A If analyte concentrations were $\geq 50X$ the MDL (ICP) or $\geq 100X$ the MDL (ICP-MS)

Were ICP serial dilution percent differences (%D) <10%? (If N/A, leave blank)

Were ICP serial dilution percent differences (%D) ≤10%?
Is there evidence of negative interference? If yes, professional judgement will be used to qualify the data.

LEVEL IV ONLY:

Y N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

Comments:

LDC#: 19954B4
SDG#: L71134

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 3
Reviewer: MG
2nd Reviewer: /

METHOD: Metals (EPA Method 6010B/7000)

- N NA Were field duplicate pairs identified in this SDG?
 N NA Were target analytes detected in the field duplicate pairs?

Compound	Concentration (mg/kg)		RPD	
	2	3		
Arsenic	3.5	3.7	6	
Barium	47.3	49.3	4	
Chromium	3	3	0	
Cobalt	2	2	0	
Copper	74	81	9	
Lead	8.50	9.53	11	
Manganese	160	169	5	
Mercury	0.2U	0.05	200	
Molybdenum	121	109	10	
Selenium	0.74	0.89	18	
Thallium	0.11	0.12	9	
Uranium	1.07	1.25	16	
Zinc	23	26	12	

V:\FIELD DUPLICATES\FD_inorganic\19954B4.WPD

Compound	Concentration (mg/kg)		RPD	
	8	9		
Arsenic	3.1	3.1	0	
Barium	46.1	41.8	10	
Beryllium	0.2	0.2U	200	

LDC#: 19954B4
SDG#: L71134

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 2 of 3
Reviewer: MG
2nd Reviewer: ✓

METHOD: Metals (EPA Method 6010B/7000)

N NA
 N NA

Were field duplicate pairs identified in this SDG?
Were target analytes detected in the field duplicate pairs?

Compound	Concentration (mg/kg)		RPD	
	8	9		
Chromium	4	4	0	
Cobalt	5	5	0	
Copper	183	181	1	
Lead	12.70	13.40	5	
Manganese	244	239	2	
Molybdenum	86	66	26	
Nickel	2	1	67	
Selenium	0.80	0.80	0	
Thallium	0.13	0.14	7	
Uranium	2.44	2.35	4	
Zinc	43	42	2	

V:\FIELD DUPLICATES\FD_inorganic\19954B4.WPD

Compound	Concentration (mg/kg)		RPD	
	14	15		
Antimony	0.4	0.6	40	
Arsenic	7.7	8.2	6	
Barium	47.3	69.5	38	
Chromium	2	3	40	
Cobalt	5	5	0	

LDC#: 19954B4
SDG#: L71134

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 3 of 3
Reviewer: MG
2nd Reviewer:

METHOD: Metals (EPA Method 6010B/7000)

N NA

Were field duplicate pairs identified in this SDG?

N NA

Were target analytes detected in the field duplicate pairs?

Compound	Concentration (mg/kg)		RPD	
	14	15		
Copper	1800	1430	23	
Lead	152	51.90	98	
Manganese	190	193	2	
Mercury	0.09	0.07	25	
Molybdenum	315	342	8	
Selenium	3.38	2.85	17	
Thallium	0.20	0.17	16	
Uranium	1.17	1.29	10	
Zinc	39	43	10	

V:\FIELD DUPLICATES\FD_inorganic\19954B4.WPD

LDC #: 19954 B4
SDG #: L71134

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd Reviewer: [Signature]

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

$$\%R = \frac{\text{Found}}{\text{True}} \times 100$$

Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated	Reported	Acceptable (Y/N)
					%R	%R	
0938 ICV	ICP (Initial calibration)	Be	2060	2000	103	103	Y
	GFAA (Initial calibration)						
1639 ICV	CVAA (Initial calibration)	Hg	10.02	10.02	100	100	
0330 CCV 1	ICP (Continuing calibration)	Cd	990.4	1000	99	99	
	GFAA (Continuing calibration)						
1732 CCV 2	CVAA (Continuing calibration)	Hg	10.05	10.02	100.3	100.3	
0546 ICV	ICP/MS (Initial calibration)	Se	51.02	50.0	102	102	
0897 CCV 2	ICP/MS (Continuing calibration)	U	48.29	50.0	96.6	96.6	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 19954 B4
SDG #: L71134

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MG
2nd Reviewer: L

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{\text{Found}}{\text{True}} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation,
True Found = SSR (spiked sample result) - SR (sample result).
True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated	Reported	Acceptable (Y/N)
					%R / RPD / %D	%R / RPD / %D	
8-28	0249 ICSA B	Co	0.246 (mg/L)	0.2505 (mg/L)	98.2	98.2	Y
8-29	0626 LCS	As	271.1 (mg/kg)	225. (mg/kg)	120	not reported	
8-28	0422 18	Mo	(SSR-SR) 214.4 (mg/kg)	50.5 (mg/kg)	424.6	424.6	
8-28	0423/0425 18/19	Ni	84.7 (mg/kg)	85.6 (mg/kg)	1.06	1.06	
8-28	0408/0418 16	Ba	150 (mg/kg)	153.2 (mg/kg)	2.1	2.2	

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 19954 B4
SDG #: L71134

VALIDATION FINDINGS WORKSHEET

Sample Calculation Verification

Page: 1 of 2
Reviewer: MG
2nd reviewer: /

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

Y N N/A Have results been reported and calculated correctly?

Are results within the calibrated range of the instruments and within the linear range of the ICP?

N N/A Are all detection limits below the CRDL?

Detected analyte results for # 16, As were recalculated and verified using the following equation:

Concentration = $\frac{(RD)(FV)(Dil)}{(\text{In. Vol.})(\%)S}$

Recalculation:

$$\frac{(128.300 \text{ mg/L})(0.050)(5.05)}{0.5 \text{ g}} = 64.79 \text{ mg/g or mg/kg}$$

RD	=	Raw data concentration
FV	=	Final volume (ml)
In. Vol.	=	Initial volume (ml) or weight (G)
Dil	=	Dilution factor
%S	=	Decimal percent solids

LDC #: 19954B4
SDG #: L71134

VALIDATION FINDINGS WORKSHEET

Sample Calculation Verification

Page: 2 of 2
Reviewer: MG
2nd reviewer: M

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
(Y) N N/A Have results been reported and calculated correctly?

Are results been reported and calculated correctly?
Are results within the calibrated range of the instruments and within the linear range of the ICP?
Are all detection limits below the CRDL?

Detected analyte results for # 17, Se were recalculated and verified using the following equation:

Concentration =	$\frac{(RD)(FV)(Dil)}{(In. Vol.)(\%S)}$
RD	= Raw data concentration
FV	= Final volume (ml)
In. Vol.	= Initial volume (ml) or weight (G)
Dil	= Dilution factor
%S	= Decimal percent solids

$$\frac{(5.661 \text{ } \mu\text{g/L})(0.050\text{L})(5.05)}{0.5\text{g}} = 2.859 \text{ } \mu\text{g/g or mg/kg}$$

Laboratory Data Consultants, Inc. Data Validation Report

Project/Site Name: FMI Gold & Copper-Sierrita
Collection Date: October 21 through October 28, 2008
LDC Report Date: December 29, 2008
Matrix: Soil
Parameters: Metals
Validation Level: Level IV
Laboratory: ACZ Laboratories, Inc.

Sample Delivery Group (SDG): L72871

Sample Identification

ST-SB06 0-20	ST-SB06 260-280-MSDMS
ST-SB06 20-40	ST-SB06 260-280-MSDMSD
ST-SB06 40-60	
ST-SB06 60-80	
ST-SB06 80-100	
ST-SB06 100-120	
ST-SB06 120-140	
ST-SB06 140-160	
ST-SB06 160-180	
ST-SB06 180-200	
ST-SB06 200-220	
ST-SB06 220-240	
ST-SB06 240-260	
ST-SB06 260-280	
ST-SB06 280-300	
ST-SB06 300-320	
ST-SB06 300-320-D	
ST-SB06 260-280-MSD	
ST-SB06 0-20MS	
ST-SB06 0-20MSD	

Introduction

This data review covers 22 soil samples listed on the cover sheet including dilutions and reanalysis as applicable. The analyses were per EPA SW 846 Methods 6010B, 6020, and 7000 for Metals. The metals analyzed were Antimony, Arsenic, Barium, Beryllium, Cadmium, Chromium, Cobalt, Copper, Lead, Manganese, Mercury, Molybdenum, Nickel, Selenium, Thallium, Uranium, and Zinc.

This review follows a modified outline of the USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review (October 2004) as there are no current guidelines for the methods stated above.

A qualification summary table is provided at the end of this report if data has been qualified. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from a specified protocol or is of technical advisory nature.

Blanks are summarized in Section III.

Field duplicates are summarized in Section XIII.

The following are definitions of the data qualifiers:

- U Indicates the compound or analyte was analyzed for but not detected at or above the stated limit.
- J Indicates an estimated value.
- R Quality control indicates the data is not usable.
- N Presumptive evidence of presence of the constituent.
- UJ Indicates the compound or analyte was analyzed for but not detected. The sample detection limit is an estimated value.
- A Indicates the finding is based upon technical validation criteria.
- P Indicates the finding is related to a protocol/contractual deviation.
- None Indicates the data was not significantly impacted by the finding, therefore qualification was not required.

I. Technical Holding Times

All technical holding time requirements were met.

The chain-of-custodies were reviewed for documentation of cooler temperatures. All cooler temperatures met validation criteria.

II. Calibration

An initial calibration was performed.

The frequency and analysis criteria of the initial calibration verification (ICV) and continuing calibration verification (CCV) were met.

III. Blanks

Method blanks were reviewed for each matrix as applicable. No contaminant concentrations were found in the initial, continuing and preparation blanks with the following exceptions:

Method Blank ID	Analyte	Maximum Concentration	Associated Samples
ICB/CCB	Thallium	0.18 ug/L	All samples in SDG L72871

Data qualification by the initial, continuing and preparation blanks (ICB/CCB/PBs) was based on the maximum contaminant concentration in the ICB/CCB/PBs in the analysis of each analyte. The sample concentrations were either not detected or were significantly greater (>5X blank contaminants) than the concentrations found in the associated method blanks with the following exceptions:

Sample	Analyte	Reported Concentration	Modified Final Concentration
ST-SB06 0-20	Thallium	0.27 mg/Kg	0.27U mg/Kg
ST-SB06 20-40	Thallium	0.14 mg/Kg	0.14U mg/Kg
ST-SB06 40-60	Thallium	0.21 mg/Kg	0.21U mg/Kg
ST-SB06 60-80	Thallium	0.16 mg/Kg	0.16U mg/Kg
ST-SB06 80-100	Thallium	0.14 mg/Kg	0.14U mg/Kg
ST-SB06 100-120	Thallium	0.14 mg/Kg	0.14U mg/Kg

Sample	Analyte	Reported Concentration	Modified Final Concentration
ST-SB06 120-140	Thallium	0.19 mg/Kg	0.19U mg/Kg
ST-SB06 140-160	Thallium	0.22 mg/Kg	0.22U mg/Kg
ST-SB06 160-180	Thallium	0.28 mg/Kg	0.28U mg/Kg
ST-SB06 180-200	Thallium	0.21 mg/Kg	0.21U mg/Kg
ST-SB06 200-220	Thallium	0.23 mg/Kg	0.23U mg/Kg
ST-SB06 220-240	Thallium	0.34 mg/Kg	0.34U mg/Kg
ST-SB06 240-260	Thallium	0.44 mg/Kg	0.44U mg/Kg
ST-SB06 260-280	Thallium	0.42 mg/Kg	0.42U mg/Kg
ST-SB06 300-320	Thallium	0.15 mg/Kg	0.15U mg/Kg
ST-SB06 300-320-D	Thallium	0.14 mg/Kg	0.14U mg/Kg
ST-SB06 260-280-MSD	Thallium	0.39 mg/Kg	0.39U mg/Kg

No field blanks were identified in this SDG.

IV. ICP Interference Check Sample (ICS) Analysis

The frequency of analysis was met.

The criteria for analysis were met.

V. Matrix Spike Analysis

Matrix spike (MS) and matrix spike duplicate (MSD) samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits with the following exceptions:

Spike ID (Associated Samples)	Analyte	MS (%R) (Limits)	MSD (%R) (Limits)	RPD (Limits)	Flag	A or P
ST-SB06 260-280-MSDMS/MSDMSD (All samples in SDG L72871)	Antimony	50.4 (75-125)	47.6 (75-125)	-	J (all detects) UJ (all non-detects)	A
	Arsenic	65 (75-125)	65.2 (75-125)	-	J (all detects) UJ (all non-detects)	
ST-SB06 0-20MS/MSD (All samples in SDG L72871)	Barium	-	126.1 (75-125)	-	J (all detects)	A
ST-SB06 0-20MS/MSD (All samples in SDG L72871)	Molybdenum	128.6 (75-125)	71 (75-125)	29.42 (\leq 20)	J (all detects) UJ (all non-detects)	A

VI. Duplicate Sample Analysis

Duplicate (DUP) sample analyses were reviewed for each matrix as applicable.

VII. Laboratory Control Samples (LCS)

Laboratory control samples were reviewed for each matrix as applicable. Percent recoveries (%R) and relative percent differences (RPD) were within QC limits.

VIII. Internal Standards

All internal standard percent recoveries (%R) were within QC limits.

IX. Furnace Atomic Absorption QC

Graphite furnace atomic absorption was not utilized in this SDG.

X. ICP Serial Dilution

ICP serial dilution analysis was performed by the laboratory. The analysis criteria were met.

XI. Sample Result Verification

All sample result verifications were acceptable.

XII. Overall Assessment of Data

Data flags are summarized at the end of this report if data has been qualified.

XIII. Field Duplicates

Samples ST-SB06 300-320 and ST-SB06 300-320-D were identified as field duplicates. No metals were detected in any of the samples with the following exceptions:

Compound	Concentration (mg/Kg)		RPD
	ST-SB06 300-320	ST-SB06 300-320-D	
Antimony	0.3	0.3	0
Arsenic	3.2	2.9	10
Barium	78.5	52.6	40
Beryllium	0.7	0.6	15
Chromium	9	9	0
Cobalt	5	6	18
Copper	223	223	0
Lead	9.16	9.05	1
Manganese	212	227	7
Molybdenum	12	11	9
Nickel	6	6	0
Selenium	0.26	0.22	17
Thallium	0.15	0.14	7
Uranium	1.08	1.04	4
Zinc	48	41	16

**FMI Gold & Copper-Sierrita
Metals - Data Qualification Summary - SDG L72871**

SDG	Sample	Analyte	Flag	A or P	ADEQ	Reason
L72871	ST-SB06 0-20 ST-SB06 20-40 ST-SB06 40-60 ST-SB06 60-80 ST-SB06 80-100 ST-SB06 100-120 ST-SB06 120-140 ST-SB06 140-160 ST-SB06 160-180 ST-SB06 180-200 ST-SB06 200-220 ST-SB06 220-240 ST-SB06 240-260 ST-SB06 260-280 ST-SB06 280-300 ST-SB06 300-320 ST-SB06 300-320-D ST-SB06 260-280-MSD	Antimony Arsenic	J (all detects) UJ (all non-detects) J (all detects) UJ (all non-detects)	A	M2	Matrix spike/Matrix spike duplicates (%R)
L72871	ST-SB06 0-20 ST-SB06 20-40 ST-SB06 40-60 ST-SB06 60-80 ST-SB06 80-100 ST-SB06 100-120 ST-SB06 120-140 ST-SB06 140-160 ST-SB06 160-180 ST-SB06 180-200 ST-SB06 200-220 ST-SB06 220-240 ST-SB06 240-260 ST-SB06 260-280 ST-SB06 280-300 ST-SB06 300-320 ST-SB06 300-320-D ST-SB06 260-280-MSD	Barium	J (all detects)	A	M1	Matrix spike/Matrix spike duplicates (%R)
L72871	ST-SB06 0-20 ST-SB06 20-40 ST-SB06 40-60 ST-SB06 60-80 ST-SB06 80-100 ST-SB06 100-120 ST-SB06 120-140 ST-SB06 140-160 ST-SB06 160-180 ST-SB06 180-200 ST-SB06 200-220 ST-SB06 220-240 ST-SB06 240-260 ST-SB06 260-280 ST-SB06 280-300 ST-SB06 300-320 ST-SB06 300-320-D ST-SB06 260-280-MSD	Molybdenum	J (all detects) UJ (all non-detects)	A	M1,M2,R2	Matrix spike/Matrix spike duplicates (%R)(RPD)

**FMI Gold & Copper-Sierrita
Metals - Laboratory Blank Data Qualification Summary - SDG L72871**

SDG	Sample	Analyte	Modified Final Concentration	A or P	ADEQ
L72871	ST-SB06 0-20	Thallium	0.27U mg/Kg	A	B3
L72871	ST-SB06 20-40	Thallium	0.14U mg/Kg	A	B3
L72871	ST-SB06 40-60	Thallium	0.21U mg/Kg	A	B3
L72871	ST-SB06 60-80	Thallium	0.16U mg/Kg	A	B3
L72871	ST-SB06 80-100	Thallium	0.14U mg/Kg	A	B3
L72871	ST-SB06 100-120	Thallium	0.14U mg/Kg	A	B3
L72871	ST-SB06 120-140	Thallium	0.19U mg/Kg	A	B3
L72871	ST-SB06 140-160	Thallium	0.22U mg/Kg	A	B3
L72871	ST-SB06 160-180	Thallium	0.28U mg/Kg	A	B3
L72871	ST-SB06 180-200	Thallium	0.21U mg/Kg	A	B3
L72871	ST-SB06 200-220	Thallium	0.23U mg/Kg	A	B3
L72871	ST-SB06 220-240	Thallium	0.34U mg/Kg	A	B3
L72871	ST-SB06 240-260	Thallium	0.44U mg/Kg	A	B3
L72871	ST-SB06 260-280	Thallium	0.42U mg/Kg	A	B3
L72871	ST-SB06 300-320	Thallium	0.15U mg/Kg	A	B3
L72871	ST-SB06 300-320-D	Thallium	0.14U mg/Kg	A	B3
L72871	ST-SB06 260-280-MSD	Thallium	0.39U mg/Kg	A	B3

**FMI Gold & Copper-Sierrita
Metals - Field Blank Data Qualification Summary - SDG L72871**

No Sample Data Qualified in this SDG

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 0-20

ACZ Sample ID: L72871-01
Date Sampled: 10/21/08 11:48
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	11/11/08 22:21	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	1.2		*	mg/Kg	0.3	1	11/11/08 22:21	rac J
Barium, total (3050)	M6010B ICP	83.6		*	mg/Kg	0.3	2	11/11/08 23:18	aeh J (M1)
Beryllium, total (3050)	M6010B ICP	0.3	B		mg/Kg	0.2	1	11/11/08 23:18	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/11/08 23:18	aeh
Chromium, total (3050)	M6010B ICP	5			mg/Kg	1	5	11/11/08 23:18	aeh
Cobalt, total (3050)	M6010B ICP	5		*	mg/Kg	1	5	11/11/08 23:18	aeh
Copper, total (3050)	M6010B ICP	303		*	mg/Kg	1	5	11/11/08 23:18	aeh
Lead, total (3050)	M6020 ICP-MS	2.45			mg/Kg	0.05	0.3	11/19/08 13:04	rac
Manganese, total (3050)	M6010B ICP	187			mg/Kg	0.5	3	11/11/08 23:18	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	11/18/08 11:25	pmc
Molybdenum, total (3050)	M6010B ICP	48		*	mg/Kg	1	5	11/11/08 23:18	aeh J(M1,M2,R2)
Nickel, total (3050)	M6010B ICP	3	B		mg/Kg	1	5	11/11/08 23:18	aeh
Selenium, total (3050)	M6020 ICP-MS	0.55			mg/Kg	0.05	0.3	11/11/08 22:21	rac
Thallium, total (3050)	M6020 ICP-MS	0.27	B	*	mg/Kg	0.05	0.3	11/11/08 22:21	rac u(B3)
Uranium, total (3050)	M6020 ICP-MS	4.64		*	mg/Kg	0.05	0.3	11/11/08 22:21	rac
Zinc, total (3050)	M6010B ICP	28		*	mg/Kg	1	5	11/11/08 23:18	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	93.3		*	%	0.1	0.5	11/06/08 10:06	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:00	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 8:39	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/07/08 13:00	bjl

Arizona license number: AZ0102

4/30/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 20-40

ACZ Sample ID: L72871-02
Date Sampled: 10/21/08 14:37
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	11/11/08 22:32	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	1.3		*	mg/Kg	0.3	1	11/11/08 22:32	rac J
Barium, total (3050)	M6010B ICP	91.7		*	mg/Kg	0.3	2	11/11/08 23:40	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.3	B		mg/Kg	0.2	1	11/11/08 23:40	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/11/08 23:40	aeh
Chromium, total (3050)	M6010B ICP	5	B		mg/Kg	1	5	11/11/08 23:40	aeh
Cobalt, total (3050)	M6010B ICP	6		*	mg/Kg	1	5	11/11/08 23:40	aeh
Copper, total (3050)	M6010B ICP	454		*	mg/Kg	1	5	11/11/08 23:40	aeh
Lead, total (3050)	M6020 ICP-MS	3.16			mg/Kg	0.05	0.3	11/19/08 13:13	rac
Manganese, total (3050)	M6010B ICP	174			mg/Kg	0.5	3	11/11/08 23:40	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	11/18/08 11:31	pmc
Molybdenum, total (3050)	M6010B ICP	47		*	mg/Kg	1	5	11/11/08 23:40	aeh J(M1,M2)
Nickel, total (3050)	M6010B ICP	3	B		mg/Kg	1	5	11/11/08 23:40	aeh
Selenium, total (3050)	M6020 ICP-MS	0.71			mg/Kg	0.05	0.3	11/11/08 22:32	rac
Thallium, total (3050)	M6020 ICP-MS	0.14	B	*	mg/Kg	0.05	0.3	11/11/08 22:32	rac R2
Uranium, total (3050)	M6020 ICP-MS	3.56		*	mg/Kg	0.05	0.3	11/11/08 22:32	rac
Zinc, total (3050)	M6010B ICP	37		*	mg/Kg	1	5	11/11/08 23:40	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	87.1		*	%	0.1	0.5	11/06/08 12:18	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:05	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 9:33	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/07/08 15:05	bjl

Arizona license number: AZ0102

12/30/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 40-60

ACZ Sample ID: L72871-03
Date Sampled: 10/22/08 09:07
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	11/11/08 22:38	rac u(M2)
Arsenic, total (3050)	M6020 ICP-MS	2.1		*	mg/Kg	0.3	1	11/11/08 22:38	rac J
Barium, total (3050)	M6010B ICP	73.8		*	mg/Kg	0.3	2	11/11/08 23:44	aeh J (M1)
Beryllium, total (3050)	M6010B ICP	0.4	B		mg/Kg	0.2	1	11/11/08 23:44	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/11/08 23:44	aeh
Chromium, total (3050)	M6010B ICP	6			mg/Kg	1	5	11/11/08 23:44	aeh
Cobalt, total (3050)	M6010B ICP	9		*	mg/Kg	1	5	11/11/08 23:44	aeh
Copper, total (3050)	M6010B ICP	387		*	mg/Kg	1	5	11/11/08 23:44	aeh
Lead, total (3050)	M6020 ICP-MS	3.66			mg/Kg	0.05	0.3	11/19/08 13:17	rac
Manganese, total (3050)	M6010B ICP	225			mg/Kg	0.5	3	11/11/08 23:44	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.05	0.2	11/18/08 11:34	pmc
Molybdenum, total (3050)	M6010B ICP	63		*	mg/Kg	1	5	11/11/08 23:44	aeh J(M1 M2) R2
Nickel, total (3050)	M6010B ICP	5	B		mg/Kg	1	5	11/11/08 23:44	aeh
Selenium, total (3050)	M6020 ICP-MS	0.98			mg/Kg	0.05	0.3	11/11/08 22:38	rac
Thallium, total (3050)	M6020 ICP-MS	0.21	B	*	mg/Kg	0.05	0.3	11/11/08 22:38	rac u(B3)
Uranium, total (3050)	M6020 ICP-MS	4.54		*	mg/Kg	0.05	0.3	11/11/08 22:38	rac
Zinc, total (3050)	M6010B ICP	50		*	mg/Kg	1	5	11/11/08 23:44	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	80.9		*	%	0.1	0.5	11/06/08 13:25	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:11	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 9:51	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/07/08 17:11	bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 60-80

ACZ Sample ID: **L72871-04**
Date Sampled: 10/22/08 10:27
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.6	B	*	mg/Kg	0.2	1	11/11/08 22:55	rac
Arsenic, total (3050)	M6020 ICP-MS	3.8		*	mg/Kg	0.3	1	11/11/08 22:55	rac
Barium, total (3050)	M6010B ICP	51.1		*	mg/Kg	0.3	2	11/11/08 23:47	aeh
Beryllium, total (3050)	M6010B ICP	0.3	B		mg/Kg	0.2	1	11/11/08 23:47	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/11/08 23:47	aeh
Chromium, total (3050)	M6010B ICP	4	B		mg/Kg	1	5	11/11/08 23:47	aeh
Cobalt, total (3050)	M6010B ICP	14		*	mg/Kg	1	5	11/11/08 23:47	aeh
Copper, total (3050)	M6010B ICP	788		*	mg/Kg	1	5	11/11/08 23:47	aeh
Lead, total (3050)	M6020 ICP-MS	8.75		*	mg/Kg	0.05	0.3	11/11/08 22:55	rac
Manganese, total (3050)	M6010B ICP	237			mg/Kg	0.5	3	11/11/08 23:47	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	11/18/08 11:36	pmc
Molybdenum, total (3050)	M6010B ICP	46		*	mg/Kg	1	5	11/11/08 23:47	aeh
Nickel, total (3050)	M6010B ICP	4	B		mg/Kg	1	5	11/11/08 23:47	aeh
Selenium, total (3050)	M6020 ICP-MS	1.87			mg/Kg	0.05	0.3	11/11/08 22:55	rac
Thallium, total (3050)	M6020 ICP-MS	0.16	B	*	mg/Kg	0.05	0.3	11/11/08 22:55	rac
Uranium, total (3050)	M6020 ICP-MS	18.40		*	mg/Kg	0.05	0.3	11/11/08 22:55	rac
Zinc, total (3050)	M6010B ICP	51		*	mg/Kg	1	5	11/11/08 23:47	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	93.9		*	%	0.1	0.5	11/06/08 14:31	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:16	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 10:10	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/07/08 19:16	bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 80-100

ACZ Sample ID: L72871-05
Date Sampled: 10/23/08 09:52
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	11/11/08 23:00	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	2.9		*	mg/Kg	0.3	1	11/11/08 23:00	rac
Barium, total (3050)	M6010B ICP	64.3		*	mg/Kg	0.3	2	11/11/08 23:51	aeh
Beryllium, total (3050)	M6010B ICP	0.6	B		mg/Kg	0.2	1	11/11/08 23:51	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/11/08 23:51	aeh
Chromium, total (3050)	M6010B ICP	7			mg/Kg	1	5	11/11/08 23:51	aeh
Cobalt, total (3050)	M6010B ICP	8		*	mg/Kg	1	5	11/11/08 23:51	aeh
Copper, total (3050)	M6010B ICP	844		*	mg/Kg	1	5	11/11/08 23:51	aeh
Lead, total (3050)	M6020 ICP-MS	11.00		*	mg/Kg	0.05	0.3	11/11/08 23:00	rac
Manganese, total (3050)	M6010B ICP	341			mg/Kg	0.5	3	11/11/08 23:51	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	11/18/08 11:38	pmc
Molybdenum, total (3050)	M6010B ICP	102		*	mg/Kg	1	5	11/11/08 23:51	aeh J(M1,M2)
Nickel, total (3050)	M6010B ICP	3	B		mg/Kg	1	5	11/11/08 23:51	aeh
Selenium, total (3050)	M6020 ICP-MS	1.40			mg/Kg	0.05	0.3	11/11/08 23:00	rac
Thallium, total (3050)	M6020 ICP-MS	0.14	B	*	mg/Kg	0.05	0.3	11/11/08 23:00	rac R2
Uranium, total (3050)	M6020 ICP-MS	3.86		*	mg/Kg	0.05	0.3	11/11/08 23:00	rac
Zinc, total (3050)	M6010B ICP	92		*	mg/Kg	1	5	11/11/08 23:51	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	93.6		*	%	0.1	0.5	11/06/08 15:37	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:22	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 10:28	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/07/08 21:22	bjl

Arizona license number: AZ0102

11/06/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 100-120

ACZ Sample ID: L72871-06
Date Sampled: 10/23/08 10:32
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.6	B	*	mg/Kg	0.2	1	11/11/08 23:06	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	2.8		*	mg/Kg	0.3	1	11/11/08 23:06	rac
Barium, total (3050)	M6010B ICP	70.5		*	mg/Kg	0.3	2	11/11/08 23:55	aeh
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	11/11/08 23:55	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/11/08 23:55	aeh
Chromium, total (3050)	M6010B ICP	6			mg/Kg	1	5	11/11/08 23:55	aeh
Cobalt, total (3050)	M6010B ICP	7		*	mg/Kg	1	5	11/11/08 23:55	aeh
Copper, total (3050)	M6010B ICP	509		*	mg/Kg	1	5	11/11/08 23:55	aeh
Lead, total (3050)	M6020 ICP-MS	6.22		*	mg/Kg	0.05	0.3	11/11/08 23:06	rac
Manganese, total (3050)	M6010B ICP	327			mg/Kg	0.5	3	11/11/08 23:55	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	11/18/08 11:45	pmc
Molybdenum, total (3050)	M6010B ICP	59		*	mg/Kg	1	5	11/11/08 23:55	aeh J(M1,M2)
Nickel, total (3050)	M6010B ICP	4	B		mg/Kg	1	5	11/11/08 23:55	aeh
Selenium, total (3050)	M6020 ICP-MS	1.22			mg/Kg	0.05	0.3	11/11/08 23:06	rac
Thallium, total (3050)	M6020 ICP-MS	0.14	B	*	mg/Kg	0.05	0.3	11/11/08 23:06	rac u(B3)
Uranium, total (3050)	M6020 ICP-MS	5.13		*	mg/Kg	0.05	0.3	11/11/08 23:06	rac
Zinc, total (3050)	M6010B ICP	53		*	mg/Kg	1	5	11/11/08 23:55	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	85.1		*	%	0.1	0.5	11/06/08 16:44	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:28	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 10:46	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/07/08 23:28	bjl

Arizona license number: AZ0102

12/30/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 120-140

ACZ Sample ID: L72871-07
Date Sampled: 10/23/08 11:07
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	11/11/08 23:12	rac uj(M2)
Arsenic, total (3050)	M6020 ICP-MS	1.6		*	mg/Kg	0.3	1	11/11/08 23:12	rac J
Barium, total (3050)	M6010B ICP	98.2		*	mg/Kg	0.3	2	11/11/08 23:58	aeh J CM1
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	11/11/08 23:58	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/11/08 23:58	aeh
Chromium, total (3050)	M6010B ICP	7			mg/Kg	1	5	11/11/08 23:58	aeh
Cobalt, total (3050)	M6010B ICP	10		*	mg/Kg	1	5	11/11/08 23:58	aeh
Copper, total (3050)	M6010B ICP	447		*	mg/Kg	1	5	11/11/08 23:58	aeh
Lead, total (3050)	M6020 ICP-MS	4.55		*	mg/Kg	0.05	0.3	11/11/08 23:12	rac
Manganese, total (3050)	M6010B ICP	433			mg/Kg	0.5	3	11/11/08 23:58	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	11/18/08 11:47	pmc
Molybdenum, total (3050)	M6010B ICP	46		*	mg/Kg	1	5	11/11/08 23:58	aeh J(M1 M2) R2
Nickel, total (3050)	M6010B ICP	4	B		mg/Kg	1	5	11/11/08 23:58	aeh
Selenium, total (3050)	M6020 ICP-MS	0.98			mg/Kg	0.05	0.3	11/11/08 23:12	rac
Thallium, total (3050)	M6020 ICP-MS	0.19	B	*	mg/Kg	0.05	0.3	11/11/08 23:12	rac u(B3)
Uranium, total (3050)	M6020 ICP-MS	4.10		*	mg/Kg	0.05	0.3	11/11/08 23:12	rac
Zinc, total (3050)	M6010B ICP	55		*	mg/Kg	1	5	11/11/08 23:58	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	85.2		*	%	0.1	0.5	11/06/08 17:50	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:33	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 11:04	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 1:33	bjl

Arizona license number: AZ0102

10/20/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 140-160

ACZ Sample ID: L72871-08
Date Sampled: 10/23/08 13:37
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	11/11/08 23:17	rac <i>US(M2)</i>
Arsenic, total (3050)	M6020 ICP-MS	1.6		*	mg/Kg	0.3	1	11/11/08 23:17	rac <i>J</i>
Barium, total (3050)	M6010B ICP	95.4		*	mg/Kg	0.3	2	11/12/08 0:02	aeh <i>J(CM1)</i>
Beryllium, total (3050)	M6010B ICP	0.4	B		mg/Kg	0.2	1	11/12/08 0:02	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	11/12/08 0:02	aeh
Chromium, total (3050)	M6010B ICP	11			mg/Kg	1	5	11/12/08 0:02	aeh
Cobalt, total (3050)	M6010B ICP	13		*	mg/Kg	1	5	11/12/08 0:02	aeh
Copper, total (3050)	M6010B ICP	530		*	mg/Kg	1	5	11/12/08 0:02	aeh
Lead, total (3050)	M6020 ICP-MS	12.60		*	mg/Kg	0.05	0.3	11/11/08 23:17	rac
Manganese, total (3050)	M6010B ICP	297			mg/Kg	0.5	3	11/12/08 0:02	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	11/18/08 11:49	pmc
Molybdenum, total (3050)	M6010B ICP	43		*	mg/Kg	1	5	11/12/08 0:02	aeh <i>J(M1 M2 R2)</i>
Nickel, total (3050)	M6010B ICP	9			mg/Kg	1	5	11/12/08 0:02	aeh
Selenium, total (3050)	M6020 ICP-MS	1.44			mg/Kg	0.05	0.3	11/11/08 23:17	rac
Thallium, total (3050)	M6020 ICP-MS	0.22	B	*	mg/Kg	0.05	0.3	11/11/08 23:17	rac <i>U(B3)</i>
Uranium, total (3050)	M6020 ICP-MS	2.58		*	mg/Kg	0.05	0.3	11/11/08 23:17	rac
Zinc, total (3050)	M6010B ICP	50		*	mg/Kg	1	5	11/12/08 0:02	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	89.1		*	%	0.1	0.5	11/06/08 18:56	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:39	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 11:22	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 3:39	bjl

Arizona license number: AZ0102

6/18/2008

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 160-180

ACZ Sample ID: L72871-09
Date Sampled: 10/23/08 14:52
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	11/11/08 23:23	rac KJ(M2)
Arsenic, total (3050)	M6020 ICP-MS	1.6		*	mg/Kg	0.3	1	11/11/08 23:23	rac J
Barium, total (3050)	M6010B ICP	104		*	mg/Kg	0.3	2	11/12/08 0:06	aeh J MI)
Beryllium, total (3050)	M6010B ICP	0.4	B		mg/Kg	0.2	1	11/12/08 0:06	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	11/12/08 0:06	aeh
Chromium, total (3050)	M6010B ICP	14			mg/Kg	1	5	11/12/08 0:06	aeh
Cobalt, total (3050)	M6010B ICP	14		*	mg/Kg	1	5	11/12/08 0:06	aeh
Copper, total (3050)	M6010B ICP	579		*	mg/Kg	1	5	11/12/08 0:06	aeh
Lead, total (3050)	M6020 ICP-MS	4.24		*	mg/Kg	0.05	0.3	11/11/08 23:23	rac
Manganese, total (3050)	M6010B ICP	315			mg/Kg	0.5	3	11/12/08 0:06	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	11/18/08 11:51	pmc
Molybdenum, total (3050)	M6010B ICP	124		*	mg/Kg	1	5	11/12/08 0:06	aeh J(M1,M2) R2
Nickel, total (3050)	M6010B ICP	9			mg/Kg	1	5	11/12/08 0:06	aeh
Selenium, total (3050)	M6020 ICP-MS	1.32			mg/Kg	0.05	0.3	11/11/08 23:23	rac
Thallium, total (3050)	M6020 ICP-MS	0.28	B	*	mg/Kg	0.05	0.3	11/11/08 23:23	rac
Uranium, total (3050)	M6020 ICP-MS	2.99		*	mg/Kg	0.05	0.3	11/11/08 23:23	rac U(B3)
Zinc, total (3050)	M6010B ICP	70		*	mg/Kg	1	5	11/12/08 0:06	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	87.4		*	%	0.1	0.5	11/06/08 20:03	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:45	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 11:40	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 5:45	bjl

Arizona license number: AZ0102

11/20/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 180-200

ACZ Sample ID: L72871-10
Date Sampled: 10/24/08 09:27
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.5	B	*	mg/Kg	0.2	1	11/11/08 23:29	rac
Arsenic, total (3050)	M6020 ICP-MS	2.2		*	mg/Kg	0.3	1	11/11/08 23:29	rac
Barium, total (3050)	M6010B ICP	97.5		*	mg/Kg	0.3	2	11/12/08 0:09	aeh
Beryllium, total (3050)	M6010B ICP	0.4	B		mg/Kg	0.2	1	11/12/08 0:09	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/12/08 0:09	aeh
Chromium, total (3050)	M6010B ICP	10			mg/Kg	1	5	11/12/08 0:09	aeh
Cobalt, total (3050)	M6010B ICP	12		*	mg/Kg	1	5	11/12/08 0:09	aeh
Copper, total (3050)	M6010B ICP	561		*	mg/Kg	1	5	11/12/08 0:09	aeh
Lead, total (3050)	M6020 ICP-MS	7.79		*	mg/Kg	0.05	0.3	11/11/08 23:29	rac
Manganese, total (3050)	M6010B ICP	291			mg/Kg	0.5	3	11/12/08 0:09	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	11/18/08 11:54	pmc
Molybdenum, total (3050)	M6010B ICP	60		*	mg/Kg	1	5	11/12/08 0:09	aeh
Nickel, total (3050)	M6010B ICP	8			mg/Kg	1	5	11/12/08 0:09	aeh
Selenium, total (3050)	M6020 ICP-MS	1.27			mg/Kg	0.05	0.3	11/11/08 23:29	rac
Thallium, total (3050)	M6020 ICP-MS	0.21	B	*	mg/Kg	0.05	0.3	11/11/08 23:29	rac
Uranium, total (3050)	M6020 ICP-MS	3.01		*	mg/Kg	0.05	0.3	11/11/08 23:29	rac
Zinc, total (3050)	M6010B ICP	76		*	mg/Kg	1	5	11/12/08 0:09	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	92.0		*	%	0.1	0.5	11/06/08 21:09	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:50	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 11:58	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 7:50	bjl

Arizona license number: AZ0102

12/30/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 200-220

ACZ Sample ID: L72871-11
Date Sampled: 10/24/08 11:47
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	11/11/08 23:34	rac <i>W5(M2)</i>
Arsenic, total (3050)	M6020 ICP-MS	1.7		*	mg/Kg	0.3	1	11/11/08 23:34	rac <i>J</i>
Barium, total (3050)	M6010B ICP	107		*	mg/Kg	0.3	2	11/12/08 0:13	aeh <i>J (CM1)</i>
Beryllium, total (3050)	M6010B ICP	0.4	B		mg/Kg	0.2	1	11/12/08 0:13	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/12/08 0:13	aeh
Chromium, total (3050)	M6010B ICP	12			mg/Kg	1	5	11/12/08 0:13	aeh
Cobalt, total (3050)	M6010B ICP	13		*	mg/Kg	1	5	11/12/08 0:13	aeh
Copper, total (3050)	M6010B ICP	642		*	mg/Kg	1	5	11/12/08 0:13	aeh
Lead, total (3050)	M6020 ICP-MS	36.90		*	mg/Kg	0.05	0.3	11/11/08 23:34	rac
Manganese, total (3050)	M6010B ICP	301			mg/Kg	0.5	3	11/12/08 0:13	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	11/18/08 11:56	pmc
Molybdenum, total (3050)	M6010B ICP	129		*	mg/Kg	1	5	11/12/08 0:13	aeh <i>J(M1, M2)</i>
Nickel, total (3050)	M6010B ICP	9			mg/Kg	1	5	11/12/08 0:13	aeh
Selenium, total (3050)	M6020 ICP-MS	1.47			mg/Kg	0.05	0.3	11/11/08 23:34	rac
Thallium, total (3050)	M6020 ICP-MS	0.23	B	*	mg/Kg	0.05	0.3	11/11/08 23:34	rac <i>W(B3)</i>
Uranium, total (3050)	M6020 ICP-MS	2.50		*	mg/Kg	0.05	0.3	11/11/08 23:34	rac
Zinc, total (3050)	M6010B ICP	82		*	mg/Kg	1	5	11/12/08 0:13	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	91.3		*	%	0.1	0.5	11/06/08 22:15	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 7:56	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 12:17	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 9:56	bjl

Arizona license number: AZ0102

11/13/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 220-240

ACZ Sample ID: L72871-12
Date Sampled: 10/24/08 14:52
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.2	B	*	mg/Kg	0.2	1	11/11/08 23:40	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	2.1		*	mg/Kg	0.3	1	11/11/08 23:40	rac J(M1)
Barium, total (3050)	M6010B ICP	127		*	mg/Kg	0.3	2	11/12/08 0:24	aeh
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	11/12/08 0:24	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/12/08 0:24	aeh
Chromium, total (3050)	M6010B ICP	24			mg/Kg	1	5	11/12/08 0:24	aeh
Cobalt, total (3050)	M6010B ICP	15		*	mg/Kg	1	5	11/12/08 0:24	aeh
Copper, total (3050)	M6010B ICP	318		*	mg/Kg	1	5	11/12/08 0:24	aeh
Lead, total (3050)	M6020 ICP-MS	4.17		*	mg/Kg	0.05	0.3	11/11/08 23:40	rac
Manganese, total (3050)	M6010B ICP	369			mg/Kg	0.5	3	11/12/08 0:24	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	11/18/08 11:58	pmc
Molybdenum, total (3050)	M6010B ICP	38		*	mg/Kg	1	5	11/12/08 0:24	aeh J(M1, M2)
Nickel, total (3050)	M6010B ICP	16			mg/Kg	1	5	11/12/08 0:24	aeh R2
Selenium, total (3050)	M6020 ICP-MS	1.18			mg/Kg	0.05	0.3	11/11/08 23:40	rac
Thallium, total (3050)	M6020 ICP-MS	0.34		*	mg/Kg	0.05	0.3	11/11/08 23:40	rac
Uranium, total (3050)	M6020 ICP-MS	4.53		*	mg/Kg	0.05	0.3	11/11/08 23:40	rac
Zinc, total (3050)	M6010B ICP	76		*	mg/Kg	1	5	11/12/08 0:24	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	91.0		*	%	0.1	0.5	11/06/08 23:22	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 8:01	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 12:35	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 12:01	bjl

Arizona license number: AZ0102

12/20/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 240-260

ACZ Sample ID: L72871-13
Date Sampled: 10/25/08 10:12
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	11/11/08 23:46	rac J(M ²)
Arsenic, total (3050)	M6020 ICP-MS	1.9		*	mg/Kg	0.3	1	11/11/08 23:46	rac
Barium, total (3050)	M6010B ICP	137		*	mg/Kg	0.3	2	11/12/08 0:27	aeh J(M ¹)
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	11/12/08 0:27	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/12/08 0:27	aeh
Chromium, total (3050)	M6010B ICP	34			mg/Kg	1	5	11/12/08 0:27	aeh
Cobalt, total (3050)	M6010B ICP	14		*	mg/Kg	1	5	11/12/08 0:27	aeh
Copper, total (3050)	M6010B ICP	230		*	mg/Kg	1	5	11/12/08 0:27	aeh
Lead, total (3050)	M6020 ICP-MS	4.30			mg/Kg	0.05	0.3	11/19/08 13:30	rac
Manganese, total (3050)	M6010B ICP	412			mg/Kg	0.5	3	11/12/08 0:27	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	11/18/08 12:00	pmc
Molybdenum, total (3050)	M6010B ICP	32		*	mg/Kg	1	5	11/12/08 0:27	aeh J(M ₁ , M ₂) R ₂)
Nickel, total (3050)	M6010B ICP	22			mg/Kg	1	5	11/12/08 0:27	aeh
Selenium, total (3050)	M6020 ICP-MS	1.01			mg/Kg	0.05	0.3	11/11/08 23:46	rac
Thallium, total (3050)	M6020 ICP-MS	0.44		*	mg/Kg	0.05	0.3	11/11/08 23:46	rac
Uranium, total (3050)	M6020 ICP-MS	2.72		*	mg/Kg	0.05	0.3	11/11/08 23:46	rac K(B ₃)
Zinc, total (3050)	M6010B ICP	73		*	mg/Kg	1	5	11/12/08 0:27	rac

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	88.8		*	%	0.1	0.5	11/07/08 0:28	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 8:07	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 12:53	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 14:07	bjl

Arizona license number: AZ0102

11/30/08

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 260-280

ACZ Sample ID: L72871-14
Date Sampled: 10/26/08 09:07
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	11/12/08 0:03	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	1.7		*	mg/Kg	0.3	1	11/12/08 0:03	rac
Barium, total (3050)	M6010B ICP	126		*	mg/Kg	0.3	2	11/12/08 0:31	aeh J(M1)
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	11/12/08 0:31	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/12/08 0:31	aeh
Chromium, total (3050)	M6010B ICP	33			mg/Kg	1	5	11/12/08 0:31	aeh
Cobalt, total (3050)	M6010B ICP	14		*	mg/Kg	1	5	11/12/08 0:31	aeh
Copper, total (3050)	M6010B ICP	392		*	mg/Kg	1	5	11/12/08 0:31	aeh
Lead, total (3050)	M6020 ICP-MS	6.83		*	mg/Kg	0.05	0.3	11/12/08 0:03	rac
Manganese, total (3050)	M6010B ICP	386			mg/Kg	0.5	3	11/12/08 0:31	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	11/18/08 12:03	pmc
Molybdenum, total (3050)	M6010B ICP	42		*	mg/Kg	1	5	11/12/08 0:31	aeh J(M1, M2)
Nickel, total (3050)	M6010B ICP	21			mg/Kg	1	5	11/12/08 0:31	aeh R2
Selenium, total (3050)	M6020 ICP-MS	1.13			mg/Kg	0.05	0.3	11/12/08 0:03	rac
Thallium, total (3050)	M6020 ICP-MS	0.42		*	mg/Kg	0.05	0.3	11/12/08 0:03	rac
Uranium, total (3050)	M6020 ICP-MS	2.94		*	mg/Kg	0.05	0.3	11/12/08 0:03	rac U(B3)
Zinc, total (3050)	M6010B ICP	73		*	mg/Kg	1	5	11/12/08 0:31	rac

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	89.2		*	%	0.1	0.5	11/07/08 1:34	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 8:13	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 13:11	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 16:13	bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 280-300

ACZ Sample ID: L72871-15
Date Sampled: 10/28/08 09:47
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS		U	*	mg/Kg	0.2	1	11/12/08 0:09	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	1.5		*	mg/Kg	0.3	1	11/12/08 0:09	rac J
Barium, total (3050)	M6010B ICP	171		*	mg/Kg	0.3	2	11/12/08 0:35	aeh J (M1)
Beryllium, total (3050)	M6010B ICP	0.6	B		mg/Kg	0.2	1	11/12/08 0:35	aeh
Cadmium, total (3050)	M6010B ICP		U		mg/Kg	0.5	2	11/12/08 0:35	aeh
Chromium, total (3050)	M6010B ICP	49			mg/Kg	1	5	11/12/08 0:35	aeh
Cobalt, total (3050)	M6010B ICP	17		*	mg/Kg	1	5	11/12/08 0:35	aeh
Copper, total (3050)	M6010B ICP	280		*	mg/Kg	1	5	11/12/08 0:35	aeh
Lead, total (3050)	M6020 ICP-MS	7.50		*	mg/Kg	0.05	0.3	11/12/08 0:09	rac
Manganese, total (3050)	M6010B ICP	456			mg/Kg	0.5	3	11/12/08 0:35	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	11/18/08 12:06	pmc
Molybdenum, total (3050)	M6010B ICP	42		*	mg/Kg	1	5	11/12/08 0:35	aeh J(M1,M2)
Nickel, total (3050)	M6010B ICP	31			mg/Kg	1	5	11/12/08 0:35	aeh
Selenium, total (3050)	M6020 ICP-MS	1.30			mg/Kg	0.05	0.3	11/12/08 0:09	rac
Thallium, total (3050)	M6020 ICP-MS	0.63		*	mg/Kg	0.05	0.3	11/12/08 0:09	rac
Uranium, total (3050)	M6020 ICP-MS	2.42		*	mg/Kg	0.05	0.3	11/12/08 0:09	rac
Zinc, total (3050)	M6010B ICP	91		*	mg/Kg	1	5	11/12/08 0:35	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	89.7		*	%	0.1	0.5	11/07/08 2:41	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 8:18	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 13:29	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 18:18	bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

 Project ID: OJ07R9
 Sample ID: ST-SB06 300-320

 ACZ Sample ID: L72871-16
 Date Sampled: 10/28/08 13:52
 Date Received: 11/05/08
 Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	11/12/08 0:14	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	3.2		*	mg/Kg	0.3	1	11/12/08 0:14	rac J(M1)
Barium, total (3050)	M6010B ICP	78.5		*	mg/Kg	0.3	2	11/12/08 0:38	aeh
Beryllium, total (3050)	M6010B ICP	0.7	B		mg/Kg	0.2	1	11/12/08 0:38	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/12/08 0:38	aeh
Chromium, total (3050)	M6010B ICP	9			mg/Kg	1	5	11/12/08 0:38	aeh
Cobalt, total (3050)	M6010B ICP	5		*	mg/Kg	1	5	11/12/08 0:38	aeh
Copper, total (3050)	M6010B ICP	223		*	mg/Kg	1	5	11/12/08 0:38	aeh
Lead, total (3050)	M6020 ICP-MS	9.16		*	mg/Kg	0.05	0.3	11/12/08 0:14	rac
Manganese, total (3050)	M6010B ICP	212			mg/Kg	0.5	3	11/12/08 0:38	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	11/18/08 12:13	pmc
Molybdenum, total (3050)	M6010B ICP	12		*	mg/Kg	1	5	11/12/08 0:38	aeh J(M1,M2)
Nickel, total (3050)	M6010B ICP	6			mg/Kg	1	5	11/12/08 0:38	aeh R2
Selenium, total (3050)	M6020 ICP-MS	0.26	B		mg/Kg	0.05	0.3	11/12/08 0:14	rac
Thallium, total (3050)	M6020 ICP-MS	0.15	B	*	mg/Kg	0.05	0.3	11/12/08 0:14	rac u(B3)
Uranium, total (3050)	M6020 ICP-MS	1.08		*	mg/Kg	0.05	0.3	11/12/08 0:14	rac
Zinc, total (3050)	M6010B ICP	48		*	mg/Kg	1	5	11/12/08 0:38	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	78.4		*	%	0.1	0.5	11/07/08 3:47	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 8:24	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 13:47	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 20:24	bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 300-320 D

ACZ Sample ID: L72871-17
Date Sampled: 10/28/08 13:52
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.3	B	*	mg/Kg	0.2	1	11/12/08 0:20	rac J(M2)
Arsenic, total (3050)	M6020 ICP-MS	2.9		*	mg/Kg	0.3	1	11/12/08 0:20	rac
Barium, total (3050)	M6010B ICP	52.6		*	mg/Kg	0.3	2	11/12/08 0:42	aeh
Beryllium, total (3050)	M6010B ICP	0.6	B		mg/Kg	0.2	1	11/12/08 0:42	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/12/08 0:42	aeh
Chromium, total (3050)	M6010B ICP	9			mg/Kg	1	5	11/12/08 0:42	aeh
Cobalt, total (3050)	M6010B ICP	6		*	mg/Kg	1	5	11/12/08 0:42	aeh
Copper, total (3050)	M6010B ICP	223		*	mg/Kg	1	5	11/12/08 0:42	aeh
Lead, total (3050)	M6020 ICP-MS	9.05		*	mg/Kg	0.05	0.3	11/12/08 0:20	rac
Manganese, total (3050)	M6010B ICP	227			mg/Kg	0.5	3	11/12/08 0:42	aeh
Mercury, total	M7471A CVAA			U	mg/Kg	0.04	0.2	11/18/08 12:15	pmc
Molybdenum, total (3050)	M6010B ICP	11		*	mg/Kg	1	5	11/12/08 0:42	aeh J(M1, M2)
Nickel, total (3050)	M6010B ICP	6			mg/Kg	1	5	11/12/08 0:42	aeh
Selenium, total (3050)	M6020 ICP-MS	0.22	B		mg/Kg	0.05	0.3	11/12/08 0:20	rac
Thallium, total (3050)	M6020 ICP-MS	0.14	B	*	mg/Kg	0.05	0.3	11/12/08 0:20	rac
Uranium, total (3050)	M6020 ICP-MS	1.04		*	mg/Kg	0.05	0.3	11/12/08 0:20	rac
Zinc, total (3050)	M6010B ICP	41		*	mg/Kg	1	5	11/12/08 0:42	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	90.3		*	%	0.1	0.5	11/07/08 4:53	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 8:30	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 14:05	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/08/08 22:30	bjl

Arizona license number: AZ0102

FMI Gold & Copper - Sierrita

Project ID: OJ07R9
Sample ID: ST-SB06 260-280 MSD

ACZ Sample ID: L72871-18
Date Sampled: 10/26/08 09:07
Date Received: 11/05/08
Sample Matrix: Soil

Metals Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Antimony, total (3050)	M6020 ICP-MS	0.2	B	*	mg/Kg	0.2	1	11/12/08 0:26	rac
Arsenic, total (3050)	M6020 ICP-MS	2.0		*	mg/Kg	0.3	1	11/12/08 0:26	rac
Barium, total (3050)	M6010B ICP	117		*	mg/Kg	0.3	2	11/12/08 0:45	aeh
Beryllium, total (3050)	M6010B ICP	0.5	B		mg/Kg	0.2	1	11/12/08 0:45	aeh
Cadmium, total (3050)	M6010B ICP			U	mg/Kg	0.5	2	11/12/08 0:45	aeh
Chromium, total (3050)	M6010B ICP	30			mg/Kg	1	5	11/12/08 0:45	aeh
Cobalt, total (3050)	M6010B ICP	14		*	mg/Kg	1	5	11/12/08 0:45	aeh
Copper, total (3050)	M6010B ICP	372		*	mg/Kg	1	5	11/12/08 0:45	aeh
Lead, total (3050)	M6020 ICP-MS	6.12		*	mg/Kg	0.05	0.3	11/12/08 0:26	rac
Manganese, total (3050)	M6010B ICP	374			mg/Kg	0.5	3	11/12/08 0:45	aeh
Mercury, total	M7471A CVAA		U		mg/Kg	0.04	0.2	11/18/08 12:17	pmc
Molybdenum, total (3050)	M6010B ICP	66		*	mg/Kg	1	5	11/12/08 0:45	aeh
Nickel, total (3050)	M6010B ICP	20			mg/Kg	1	5	11/12/08 0:45	aeh
Selenium, total (3050)	M6020 ICP-MS	1.26			mg/Kg	0.05	0.3	11/12/08 0:26	rac
Thallium, total (3050)	M6020 ICP-MS	0.39		*	mg/Kg	0.05	0.3	11/12/08 0:26	rac
Uranium, total (3050)	M6020 ICP-MS	2.52		*	mg/Kg	0.05	0.3	11/12/08 0:26	rac
Zinc, total (3050)	M6010B ICP	68		*	mg/Kg	1	5	11/12/08 0:45	aeh

Soil Analysis

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Solids, Percent	CLPSOW390, PART F, D-98	95.6		*	%	0.1	0.5	11/07/08 6:00	bjl

Soil Preparation

Parameter	EPA Method	Result	Qual	XQ	Units	MDL	PQL	Date	Analyst
Air Dry at 34 Degrees C	USDA No. 1, 1972			*				11/06/08 8:35	bjl
Digestion - Hot Plate	M3050B ICP-MS							11/10/08 14:23	mjc
Sieve-2000 um (2.0mm)	ASA No.9, 15-4.2.2			*				11/09/08 0:35	bjl

Arizona license number: AZ0102

LDC #: 19954C4

VALIDATION COMPLETENESS WORKSHEET

Date: 10-24-08

SDG #: L72871

Level IV

Page: 1 of 1

Laboratory: ACZ Laboratories, Inc.

Reviewer: MG

2nd Reviewer: ✓

METHOD: Metals (EPA SW 846 Method 6010B/6020/7000)

The samples listed below were reviewed for each of the following validation areas. Validation findings are noted in attached validation findings worksheets.

	Validation Area		Comments
I.	Technical holding times	A	Sampling dates: 10-21-08 through 10-29-08
II.	Calibration	A	
III.	Blanks	SW	
IV.	ICP Interference Check Sample (ICS) Analysis	SWA	
V.	Matrix Spike Analysis	SW	MS/MSD
VI.	Duplicate Sample Analysis	N	
VII.	Laboratory Control Samples (LCS)	A	LCS/LCSD
VIII.	Internal Standard (ICP-MS)	A	
IX.	Furnace Atomic Absorption QC	N	not utilized
X.	ICP Serial Dilution	A	
XI.	Sample Result Verification	A	
XII.	Overall Assessment of Data	A	
XIII.	Field Duplicates	SW	D = 16 + 17
XIV.	Field Blanks	N	

Note: A = Acceptable
 N = Not provided/applicable
 SW = See worksheet

ND = No compounds detected
 R = Rinsate
 FB = Field blank

D = Duplicate
 TB = Trip blank
 EB = Equipment blank

Validated Samples:
 all soil

1	ST-SB06 0-20	11	ST-SB06 200-220	21	ST-SB06 260-280-MSDMS	31	
2	ST-SB06 20-40	12	ST-SB06 220-240	22	ST-SB06 260-280-MSDMSD	32	
3	ST-SB06 40-60	13	ST-SB06 240-260	23	PBS	33	
4	ST-SB06 60-80	14	ST-SB06 260-280	24		34	
5	ST-SB06 80-100	15	ST-SB06 280-300	25		35	
6	ST-SB06 100-120	16	ST-SB06 300-320	26		36	
7	ST-SB06 120-140	17	ST-SB06 300-320-D	27		37	
8	ST-SB06 140-160	18	ST-SB06 260-280-MSD	28		38	
9	ST-SB06 160-180	19	ST-SB06 0-20MS	29		39	
10	ST-SB06 180-200	20	ST-SB06 0-20MSD	30		40	

Notes: _____

LDC #: 19954C4
SDG #: L72871

VALIDATION FINDINGS CHECKLIST

Page: 1 of 2
Reviewer: MG
2nd Reviewer:

Method:Metals (EPA SW 846 Method 6010/7000/6020)

Validation Area	Yes	No	NA	Findings/Comments
I. Technical holding times:				
All technical holding times were met.	✓			
Cooler temperature criteria was met.	✓			
II. Calibration:				
Were all instruments calibrated daily, each set-up time?	✓			
Were the proper number of standards used?	✓			
Were all initial and continuing calibration verification %Rs within the 90-110% (80-120% for mercury and 85-115% for cyanide) QC limits?	✓			
Were all initial calibration correlation coefficients > 0.995? (Level IV only)	✓			
III. Blanks:				
Was a method blank associated with every sample in this SDG?	✓			
Was there contamination in the method blanks? If yes, please see the Blanks validation completeness worksheet.	✓			
IV. ICP Interference Check Sample:				
Were ICP interference check samples performed daily?	✓			
Were the AB solution percent recoveries (%R) with the 80-120% QC limits?	✓			
V. Matrix spike/Matrix spike duplicates:				
Were a matrix spike (MS) and duplicate (DUP) analyzed for each matrix in this SDG? If no, indicate which matrix does not have an associated MS/MSD or MS/DUP. Soil / Water.	✓			
Were the MS/MSD percent recoveries (%R) and the relative percent differences (RPD) within the 75-125 QC limits? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.		✓		
Were the MS/MSD or duplicate relative percent differences (RPD) ≤ 20% for waters and ≤ 35% for soil samples? A control limit of +/- RL (+/- 2X RL for soil) was used for samples that were ≤ 5X the RL, including when only one of the duplicate sample values were < 5X the RL.		✓		
VI. Laboratory control samples:				
Was an LCS analyzed for this SDG?	✓			
Was an LCS analyzed per extraction batch?	✓			
Were the LCS percent recoveries (%R) and relative percent difference (RPD) within the 80-120% QC limits for water samples and laboratory established QC limits for soils?	✓			
VII. Flame Atomic Absorption QC:				
If MSA was performed, was the correlation coefficients > 0.995?			✓	
Do all applicable analyses have duplicate injections? (Level IV only)			✓	
For sample concentrations > RL, are applicable duplicate injection RSD values < 20%? (Level IV only)			✓	
Were analytical spike recoveries within the 85-115% QC limits?			✓	

LDC #: 19954C4
SDG #: L72871

VALIDATION FINDINGS CHECKLIST

Page 2 of 2
Reviewer: MG
2nd Reviewer: ✓

Validation Area	Yes	No	NA	Findings/Comments
VII. ICP Serial Dilution				
Was an ICP serial dilution analyzed if analyte concentrations were > 50X the IDL?	✓			
Were all percent differences (%Ds) < 10%?	✓			
Was there evidence of negative interference? If yes, professional judgement will be used to qualify the data.		✓		
VIII. Internal Standards (EPA SW 846 Method 6020)				
Were all the percent recoveries (%R) within the 30-120% of the intensity of the internal standard in the associated initial calibration?	✓			
If the %Rs were outside the criteria, was a reanalysis performed?			✓	
IX. Regional Quality Assurance and Quality Control				
Were performance evaluation (PE) samples performed?		✓		
Were the performance evaluation (PE) samples within the acceptance limits?			✓	
X. Sample Result Verification				
Were RLs adjusted to reflect all sample dilutions and dry weight factors applicable to level IV validation?	✓			
XI. Overall Assessment of Data				
Overall assessment of data was found to be acceptable.	✓			
XII. Field duplicates				
Field duplicate pairs were identified in this SDG.	✓			
Target analytes were detected in the field duplicates.	✓			
XIII. Field blanks				
Field blanks were identified in this SDG.		✓		
Target analytes were detected in the field blanks.			✓	

LDC #: 19954C4
SDG #: L72871

VALIDATION FINDINGS WORKSHEET

Sample Specific Element Reference

Page: 1 of 1
Reviewer: MG
2nd reviewer: JW

All circled elements are applicable to each sample.

Comments: Mercury by CVAA if performed

LDC #: 19954C4

SDG #: L72871

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Soil preparation factor applied: $100 \times ; 5 \times d_{1}$

Sample Concentration units, unless otherwise noted: mg / Kg Associated Samples:

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Qual: U B3

Page: 1 of 2

Reviewer: MG

2nd Reviewer: L

Analyte	Sample Identification									
	1	2	3	4	5	6	7	8	9	10
Al										
Sb										
As										
Ba										
Be										
Cd										
Ca										
Cr										
Co										
Cu										
Fe										
Pb										
Mg										
Mn										
Hg										
Mo										
Ni										
K										
Se										
Ag										
Na										
Tl	0.18	0.45	0.27	0.14	0.21	0.16	0.14	0.14	0.19	0.22
V									0.28	0.21
Zn										
Sn										
R										

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".

Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 19954C4

SDG #: L72871

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Sample Concentration units, unless otherwise noted:

VALIDATION FINDINGS WORKSHEET
PB/ICB/CCB QUALIFIED SAMPLES

Soil preparation factor applied: 100x ; 5x dil

mg / Kg

Associated Samples:

Qual : U B3

all

Page: 2 of 2

Reviewer: MG

2nd Reviewer: ✓

Analyte	Sample Identification							
	11	12	13	14	16	17	18	
Al								
Sb								
As								
Ba								
Be								
Cd								
Ca								
Cr								
Co								
Cu								
Fe								
Pb								
Mg								
Mn								
Hg								
Mo								
Ni								
K								
Se								
Ag								
Na								
Tl	0.18	0.45	0.23	0.34	0.44	0.42	0.15	0.14
V								0.39
Zn								
Sn								
B								

Samples with analyte concentrations within five times the associated ICB, CCB or PB concentration are listed above with the identifications from the Validation Completeness Worksheet. These sample results were qualified as not detected, "U".
 Note : a - The listed analyte concentration is the highest ICB, CCB, or PB detected in the analysis of each element.

LDC #: 19954C4
SDG #: L72871

VALIDATION FINDINGS WORKSHEET

Matrix Spike/Matrix Spike Duplicates

METHOD: Trace metals (EPA SW 846 Method 6010/7000)

Page: 1 of 1
Reviewer: MG
2nd Reviewer:

Y N N/A Was a matrix spike analyzed for each matrix in this SDG?

Y (N) N/A Were matrix spike percent recoveries (%R) within the control limits of 75-125? If the sample concentration exceeded the spike concentration by a factor of 4 or more, no action was taken.

Y N N/A Were all duplicate sample relative percent differences (RPD) $\leq 20\%$ for water samples and $\leq 35\%$ for soil samples?
LEVEL IV ONLY:

YANNA - M

Y/N N/A Were recalculated results acceptable? See Level IV Recalculation Worksheet for recalculations.

Comments:

LDC#: 19954C4
SDG#: L72871

VALIDATION FINDINGS WORKSHEET
Field Duplicates

Page: 1 of 1
Reviewer: MG
2nd Reviewer: ✓

METHOD: Metals (EPA Method 6010B/7000)

N NA
 Y N NA

Were field duplicate pairs identified in this SDG?
Were target analytes detected in the field duplicate pairs?

Compound	Concentration (mg/kg)		RPD	
	16	17		
Antimony	0.3	0.3	0	
Arsenic	3.2	2.9	10	
Barium	78.5	52.6	40	
Beryllium	0.7	0.6	15	
Chromium	9	9	0	
Cobalt	5	6	18	
Copper	223	223	0	
Lead	9.16	9.05	1	
Manganese	212	227	7	
Molybdenum	12	11	9	
Nickel	6	6	0	
Selenium	0.26	0.22	17	
Thallium	0.15	0.14	7	
Uranium	1.08	1.04	4	
Zinc	48	41	16	

LDC #: 19954C4
SDG #: L72871

VALIDATION FINDINGS WORKSHEET
Initial and Continuing Calibration Calculation Verification

Page: 1 of 1
Reviewer: MG
2nd Reviewer: L

METHOD: Trace Metals (EPA SW 846 Method 6010/6020/7000)

An initial and continuing calibration verification percent recovery (%R) was recalculated for each type of analysis using the following formula:

%R = Found x 100
True Where, Found = concentration (in ug/L) of each analyte measured in the analysis of the ICV or CCV solution
True = concentration (in ug/L) of each analyte in the ICV or CCV source

Standard ID	Type of Analysis	Element	Found (ug/L)	True (ug/L)	Recalculated	Reported	Acceptable (Y/N)
					%R	%R	
22484 ICV	ICP (Initial calibration)	Cv	1919.	2000.	96	96	Y
	GFAA (Initial calibration)						
1020 ICV	CVAA (Initial calibration)	Hg	10.87	10.0	108.7	108.7	
0016 CCV2	ICP (Continuing calibration)	Mo	998.	1002.	99.6	99.6	
	GFAA (Continuing calibration)						
1208 CCV3	CVAA (Continuing calibration)	Hg	10.23	10.0	102.3	102.3	
2135 ICV	ICP/MS (Initial calibration)	As	50.70	50.0	101.4	101.4	
2351 CCV2	ICP/MS (Continuing calibration)	Tl	49.02	50.0	98	98	

Comments: Refer to Calibration Verification findings worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 19954C4
SDG #: LT2871

VALIDATION FINDINGS WORKSHEET
Level IV Recalculation Worksheet

Page: 1 of 1
Reviewer: MG
2nd Reviewer: L

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Percent recoveries (%R) for an ICP interference check sample, a laboratory control sample and a matrix spike sample were recalculated using the following formula:

$\%R = \frac{\text{Found}}{\text{True}} \times 100$ Where, Found = Concentration of each analyte measured in the analysis of the sample. For the matrix spike calculation,
True Found = SSR (spiked sample result) - SR (sample result).

True = Concentration of each analyte in the source.

A sample and duplicate relative percent difference (RPD) was recalculated using the following formula:

$RPD = \frac{|S-D|}{(S+D)/2} \times 100$ Where, S = Original sample concentration
D = Duplicate sample concentration

An ICP serial dilution percent difference (%D) was recalculated using the following formula:

$\%D = \frac{|I-SDR|}{I} \times 100$ Where, I = Initial Sample Result (mg/L)
SDR = Serial Dilution Result (mg/L) (Instrument Reading x 5)

Sample ID	Type of Analysis	Element	Found / S / I (units)	True / D / SDR (units)	Recalculated	Reported	Acceptable (Y/N)
					%R / RPD / %D	%R / RPD / %D	
11-11 ICSAB	ICP Interference check	Zn	460. (mg/L)	500. (mg/L)	92	92	Y
11-11 LCS	Laboratory control sample	Cd	263.1 (mg/kg)	258. (mg/kg)	102	not reported	
11-12 0031 21	Matrix spike	As	(SSR-SR) 16.3 (mg/kg)	25. (mg/kg)	65	65	
11-11 2325/2329 19/20	Duplicate	Mo	112.3 (mg/kg)	83.5 (mg/kg)	29.42	29.42	
11-11 2318/2322 1	ICP serial dilution	Cu	303. (mg/kg)	321. (mg/kg)	5.9	5.9	

Comments: Refer to appropriate worksheet for list of qualifications and associated samples when reported results do not agree within 10.0% of the recalculated results.

LDC #: 19954C4
SDG #: L72871

VALIDATION FINDINGS WORKSHEET

Sample Calculation Verification

Page: 1 of 2
Reviewer: MG
2nd reviewer: W

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".
 N N/A Have results been reported and calculated correctly?

Are results within the calibrated range of the instruments and within the linear range of the ICP?

N N/A Are all detection limits below the CRDL?

Detected analyte results for # 1, Cu were recalculated and verified using the following equation:

Concentration =	$\frac{(RD)(FV)(Dil)}{(In. Vol.)(%S)}$	Recalculation:
RD	=	Raw data concentration
FV	=	Final volume (ml)
In. Vol.	=	Initial volume (ml) or weight (G)
Dil	=	Dilution factor
%S	=	Decimal percent solids

LDC #: 19954C4
SDG #: L72871

VALIDATION FINDINGS WORKSHEET

Sample Calculation Verification

Page: 2 of 2
Reviewer: MG
2nd reviewer:

METHOD: Trace Metals (EPA SW 846 Method 6010/7000)

Please see qualifications below for all questions answered "N". Not applicable questions are identified as "N/A".

N/A Have results been reported and calculated correctly?

Are results within the calibrated range of the instruments and within the linear range of the ICP?

N N/A Are results within the calibrated range?
 Y N N/A Are all detection limits below the CRDL?

Detected analyte results for # 18, U were recalculated and verified using the following equation:

Concentration =	$\frac{(RD)(FV)(DI)}{(In. Vol.)(\%S)}$
RD =	Raw data concentration
FV =	Final volume (ml)
In. Vol. =	Initial volume (ml) or weight (G)
DI =	Dilution factor
%S =	Decimal percent solids

Recalculation:

$$\frac{(5.031 \text{ mg/L})(0.050L)(5)}{0.5 \text{ g}} = 2.516 \text{ mg/g or mg/kg}$$